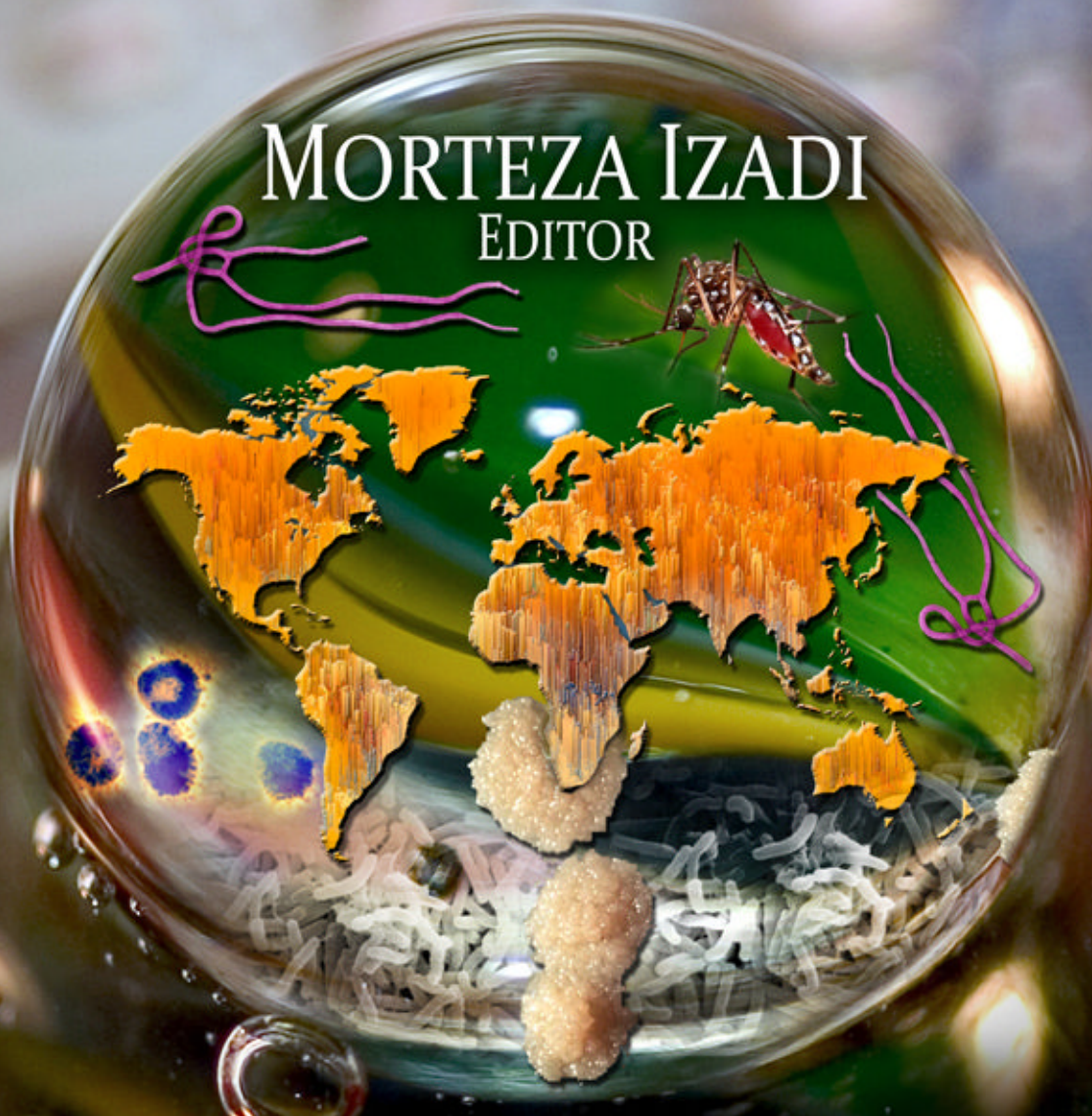


TRAVEL MEDICINE

A Country-to-Country Guide

MORTEZA IZADI
EDITOR

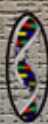


Public Health in the 21st Century

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PUBLIC HEALTH IN THE 21ST CENTURY

TRAVEL MEDICINE

A COUNTRY-TO-COUNTRY GUIDE

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PUBLIC HEALTH IN THE 21ST CENTURY

TRAVEL MEDICINE
A COUNTRY-TO-COUNTRY GUIDE

MORTEZA IZADI
EDITOR



New York

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This publication is designed to provide accurate and authoritative information with regard to the subject matter covered herein. It is sold with the clear understanding that the Publisher is not engaged in rendering legal or any other professional services. If legal or any other expert assistance is required, the services of a competent person should be sought. FROM A DECLARATION OF PARTICIPANTS JOINTLY ADOPTED BY A COMMITTEE OF THE AMERICAN BAR ASSOCIATION AND A COMMITTEE OF PUBLISHERS.

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Preface

To the Doctor

Counseling for an International traveler should be offered according to certain risk assessments. Counseling should start with a thorough evaluation. Prevention strategies should be formulated and medical opinion for each person should be provided according to some risk assessments and travelling schedules. The most effective way for providing educational advice is to utilize a thorough plan (Table 1 and Table 2).

Since many of these medical opinions and educational advice start during the trip, it is recommended that necessary guidelines be given to travelers using a simple language. Global epidemiology related to diseases that concern travelers are constantly changing. Thorough medical information regarding traveling has either been published or is available on the internet.

In order to keep this information up-to-date, doctors should constantly refer to them (Table 2).

Immunization

The issue of choosing which kind of vaccines we should use should be addressed according to the risk of infection with diseases which can be cured by vaccines, the intensity of possible diseases and the risks of the vaccine itself. It is difficult for a doctor to refuse the request for a vaccine which is related to a dangerous disease although the possibility that a traveler may become infected is remote. Among diseases which can be prevented by injecting vaccines, the most notable case - which occurs to non-immune travelers who travel to developing countries - is Hepatitis A with a rate of 0.3% per month and 2 percent in high-risk travelers. The highest risk for becoming infected with Hepatitis B is related to the exiled individuals and people who stay somewhere for a long time. The risk of becoming infected with Hepatitis B is 0.25% percent per month. The risk of becoming infected with typhoid and para-typhoid is 0.03% per month in the Indian subcontinent. This risk is ten times lower in Africa and parts of Latin America. The risk of infection with yellow fever may even reach 0.1% percent per month when travelling to regions in which the disease is epidemic, but in

Table 1. Guideline for a person in travel to developing countries

<p>A. Risk assessment</p> <p>To determine appropriate medical recommendations for the prevention of diseases in travel, some specific factors should be considered. Prepared specific forms are available and generally include the following items:</p> <ol style="list-style-type: none"> 1. Complete and accurate travel plans about the location of the visiting 2. Date of travel for seasonal risk assessment 3. Age 4. History of previous vaccination 5. Underlying illnesses 6. Current medication 7. Pregnancy 8. Allergies 9. The purpose of the trip 10. Risk about contact with blood, body fluids or adventurous contacts outdoors. 11. Urban or rural areas 12. Financial limitations
<p>B. Vaccination</p> <ol style="list-style-type: none"> 1. Routine vaccines: if a passenger has not completed a routine vaccination program, should act according to the early vaccination program. 2. Apply the vaccines that are indicated for each country. 3. For information about the vaccination in each country refer to Table 2. 4. Provide an evaluation list of vaccination to the patient. 5. Record the number and date of the administered vaccines. 6. Make documents about the recommended vaccines which you have not received or additional vaccines that you have received.
<p>C. Run the necessary efforts to prevent malaria (if it is indicated). Read the risk factors of malaria infection in the country of destination. Is a risk of infection according to passenger's travel plans? If yes, are the chemoprophylaxis any against malaria recommend? It is possible that of several drugs with similar effectiveness be indicated for a passenger, select the best according to travel plan.</p>
<p>D. Read about personal protection against the arthropods. Read appropriate program for diarrhea during travel. Read recommendations for precautions related to food and water. Using a quinolone to treat infectious diarrhea. Read and learn to use Lupramid and oral hydration when necessary.</p>
<p>E. Necessary preventive behaviors: a lot of travel related health problems includes diseases preventable by vaccines or disease that can be prevented simply by a series of preventive behaviors.</p> <p>Read the appropriate programs for the followings (not for all destinations):</p> <ol style="list-style-type: none"> 1. Transmitted diseases by blood and venereal disease, including: HIV; 2. Security and crime prevention; 3. Health topic related to swimming 4. Rabies 5. Tuberculosis 6. Equipment needed for a safe travel
<p>F. Discuss about other applied health issues:</p> <ol style="list-style-type: none"> 1. Altitude disease, Motion disease, or jet-lag 2. Read and learn about the preventable infectious diseases in travel. 3. Read about low risk infections (e.g. hemorrhagic fever) that usually have a fearsome feature.

different endemic regions, this risk varies. The risk of becoming infected with meningococcal meningitis, rabies, polio, measles, chicken pox, Japanese encephalitis is not certain for travelers but it seems that the risk of infection with these diseases is low even in highly endemic regions.

Table 2. Information Resources of Travel Medicine

1.	WHO Travel Health www.who.int/it
2.	CDC Travel Health www.cdc.gov/travel
3.	Health Canada, necessary recommendations provider for travel and tropical medicine areas (CATMAT) http://www.hc-sc.gc.ca/pphb-dgsp/tpm-pmv/catmat-ccmtmv/index.html
4.	WHO epidemic News http://www.who.int/csr/don/en/
5.	WHO weekly epidemiological record www.who.int/wer
6.	Weekly report for morbidity and mortality, CDC www.cdc.gov/mmwr
7.	WHO, health topics related to disease www.who.int/health_topics/en/
8.	In-depth special topics resources Centers for Disease Control and Prevention Health Information for International Travel (The "CDC Yellow Book"). U. S. Public Health Service. Atlanta. Full text online at www.cdc.gov/travel/index.htm
9.	WHO. International travel and Health 2012. (WHO "Green Book [formerly yellow]). Available from authorized WHO book agents. Full text online at www.who.int/ith
10.	International Travel Medicine Center of Iran: www.ITMCI.org

The World Health Organization (WHO) publishes a pamphlet each year in January named *International Travel and Health*, which is about necessary vaccines and health guidelines according to different conditions in many countries. These sets of guidelines are published under the title of WHO Weekly Epidemiological Record. International vaccine cards are specific to each person and they cannot be used for other people. Therefore, these cards should be issued for each person and their vaccination information should be recorded daily, monthly and yearly. Children's card and the unemployed people should be filled and signed by their parents, relatives or other people.

General Advice

It takes time for vaccines to take effect inside the body and some vaccines should be injected at different stages and phases. They can be repeated through several days or weeks.

Vaccines are divided into three groups:

Routine Vaccines

These vaccines are generally advised in each country according to the epidemiology of prevalent infection diseases in the country, region and the world.

Recommended Vaccines

These vaccines are recommended for protecting travelers against diseases that are prevalent in other parts of the world and also they are recommended for preventing infectious diseases from spreading on an international level. Which vaccines you need depends on the destination, on whether or not you visit rural areas, on the season that you travel, age, your health condition and your previous vaccination.

Table 3. Vaccines Commonly Used for Travel

Vaccine	Primary	Booster Interval
Cholera, live oral (CVD) 103 103 – HgR	1 dose	6 months
Hepatitis A (Havrix), 1440 enzyme immunoassay U/mL	2 doses, 6 – 12 months apart, IM	Not required
Hepatitis A (VAQTA, AVAXIM, EPAXAL)	2 doses, 6 – 12 months apart, IM	Not required
Hepatitis A/B combined (Twinrix)	3 doses at 0, 1, and 6 – 12 months or 0, 7, 21 days plus booster at 1 year, IM	None required except 12 months (once only, for accelerated schedule)
Hepatitis B (Engerix B): accelerated schedule	3 doses at 0, 1, and 2 months or 0, 7, 21 days plus booster at 1 year, IM	12 months, once only
Hepatitis B (Engerix B or Recombivax): standard schedule	3 doses and 0, 1, and 6 months, IM	Not required
Immune globulin (Hepatitis A prevention)	1 dose IM	Intervals of 3 – 5 months, depending on initial dose
Japanese Encephalitis (JE – VAX)	3 doses, 1 week apart, SC	12 – 18 months (first booster), then 4 years
Japanese Encephalitis (Ixiaro)	2 doses, 1 month	Optimal booster schedule not yet determined
Meningococcus, quadrivalent [menimmune (polysaccharide), menactra, menveo(conjugated)]	1 dose SC	>3 years (optimal booster schedule not yet determine)
Rabies (HDCV), Rabies vaccine absorbed (RVA), or purified chick embryo cell vaccine (PCEC)	3 doses at 0, 7, and 21 or 28 days, IM	Not required except with exposure
Typhoid Ty21a, oral live attenuated (Vivotif)	1 capsule every other day × 4 doses	5 years
Typhoid Vi capsular polysaccharide, injectable (Typhim Vi)	1 dose IM	2 years
Yellow fever	1 dose SC	10 years

Required Vaccines

The only vaccine that is strictly required according to international health regulations is the vaccine for yellow fever that is recommended for travelers who travel to southern parts of African desert and hot countries in South America. The Saudi Arabian government requires the meningococcal vaccine for the annual Hajj. Table 3 provides information on the dose, the way the vaccine should be injected, the necessity for reminder doses and accelerated diets (for

travelers who travel frequently) regarding vaccines which are injected during vacations. What is discussed here is the necessity for injecting different vaccines during the vacation.

Table 4. Malaria Chemoprophylaxis Regimens, According to Geographic Area

Geographic Area	Drug of Choice	Alternatives
Central America (North of Panama), Iraq, Turkey, Northern Argentina, and Paraguay	Chloroquine	Atovaquone/Proguanil Doxycycline Mefloquine Primaquine (except Honduras)
South America, Including Haiti, Dominican Republic, and Panama but Not Northern Argentina or Paraguay; Asia, Including Southeast Asia; Africa; and Oceania	Doxycycline Atovaquone/Proguanil Mefloquine	-
Thai – Myanmar and Thai – Cambodian Borders and Central Vietnam	Atovaquone/Proguanil Doxycycline	

Acknowledgment

In the Name of God

I would like to express the deepest appreciation to my parents, my wife, my brothers, my sisters and my daughter "Sara," who have fervently supported me in pursuing this project. Their invaluable contribution has allowed me to maintain a frame of reference with which I have managed to pursue noble ideas.

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Section I: Africa

Eastern Africa

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²International Travel Medicine Center of Iran, Tehran, Iran

Ethiopia

Population and Geographical Location

Ethiopia is a landlocked country that had a population of 90,873,739 and an area of 1,104,300 km² in 2011. It is bordered by Eritrea in the north, Djibouti and Somalia in the east and southeast, Kenya in the south and Sudan in the west.

Climate and Health Status

Ethiopia has a mountainous climate. It has plateaus with a diverse climate and tropical monsoons with wide topographic-induced variation. The population uses improved drinking-water sources (%): urban 98%, rural 26%, total 38% (2008). The average life expectancy for males and females: 53.64 and 58.81 years, respectively (2011). The main causes of mortality are: infectious and parasitic diseases, cardiovascular disease, injuries and malignant neoplasm. In 2011, the infant mortality rate was 77.12 per 1000 live births. The population of people infected with HIV is 980,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV is 2.1% (2007). General government expenditure on health as a % of total government expenditure in 2007 was 10.2%. In 2008, there was one physician per 50,318 people and there were 2 hospital beds (2008) per 10,000 individuals.

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Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Meningococcal	Recommended	Travel through December to June Long-term presence in crowded areas College-freshman New Soldiers	Before traveling	-	History of severe allergic reaction to dry natural rubber (latex) Age > 55 years	Redness, pain, fever, allergic reaction
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2001	Nationwide	-	-	Poliomyelitis
2004-2005	Bura	-	-	Visceral leishmaniasis
2006	-	8	-	Poliomyelitis
2008		3804	23	Cholera
1999 February-March	Kobo area	-	-	Meningococcal disease
2000 January-April	Amhara, Alamata, Tigray	-	-	Meningococcal disease
2000 July	-	-	-	Anthrax
2000 August	-	6964	330	Meningococcal disease
2001 September	Sidama, Davro, Keffa, South Omo, Amhara and Tigray	3540	166	Meningococcal disease
2002 July	Romiya region in the eastern part	-	-	Anthrax
2004 December	Tigray, Amhara	-	-	Poliomyelitis
2006 April	Gambella , Addis Ababa			Cholera
2007 January	-	52500	570	Cholera
2007 February	Severe in eastern Ogaden (Somali Ethiopia)	-	-	Cholera
2008 March	Suftu area in Dolo Ado woreda of Liben zone in the Somali Region	-	-	Cholera
2008 September	-	2	-	Poliomyelitis
2009 January	Humbo	-	-	Cholera
2009 April	-	-	-	Hepatitis A
2009 August	Addis Ababa	-	-	Cholera
2010 October	-	-	-	Measles

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Schistosomiasis
- Louse-borne typhus is endemic
- Dengue fever
- Cutaneous leishmaniasis
- Hepatitis E
- African trypanosomiasis
- Rift Valley fever
- Lymphatic filariasis
- Onchocerciasis
- Louse-borne relapsing fever
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
991	-	-

Kenya

Population and Geographical Location

In 2011, Kenya had a population of 41,070,934 and an area of 580,367 km². It is located in Eastern Africa, bordering the Indian Ocean, between Somalia and Tanzania.

Climate and Health Status

The climate in Kenya varies from tropical along the coast to arid in the interior. The population uses improved drinking-water sources (%): urban 83%, rural 52%, total 59% (2008). The average life expectancy for males and females: 58.91 and 60.07 years, respectively (2011). The main causes of mortality are: infectious and parasitic diseases, cardiovascular disease, injuries and malignant neoplasm.

In 2011, the infant mortality rate was 52.29 per 1000 live births. The population of people infected with HIV is 1,500,000 but the prevalence rate of 15- to 49-year-old adults with HIV was 6.3% (2009). General government expenditure on health as a % of total government expenditure in 2009 was 5.4%. In 2002, there was one physician per 9,115 people and there were 14 (2004) hospital beds per 10,000 individuals.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria- tetanus	Recommended	All travel who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or sever hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Schistosomiasis
- Marburg fever
- Dengue fever
- Dengue fever
- Cutaneous and diffuse cutaneous leishmaniasis
- Crimean-Congo hemorrhagic fever
- Kenyan tick typhus
- Plague
- O'nyong-nyong
- Anthrax
- Brucellosis (low incidence)
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
122	999	-

Somalia

Population and Geographical Location

In 2011, Somalia had a population of 9,925,640 and an area of 637,657 km². It is located in Eastern Africa.

Somalia is the easternmost country in Africa and is bordered by the Gulf of Aden to the north, the Indian Ocean to the east and south and by Kenya, Ethiopia and Djibouti to the west.

Climate and Health Status

Somalia has a dry climate with high temperatures and little rainfall. Somalia has principally a desert climate. The northeast monsoon starts from December to February. The northern regions have a moderate temperature but the southern regions are very hot. The southwest monsoon starts from May to October, which is torrid in the north and hot in the south. It is also characterized by irregular rainfalls and hot and humid periods (tangambili) between monsoons.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Meningococcal	Recommended	Travel through December to June Long term presence in crowded areas College-freshman New Soldiers	Before traveling	-	History of severe allergic reaction to dry natural rubber (latex) Age > 55 years	Redness, pain, fever, allergic reaction
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions.

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone/Proguanil, Doxycycline, Mefloquine	Confirmed	Everywhere	All travelers younger than 9 months of age	On arrival / If coming from an endemic area and if younger than 1 year old

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg(25lb) Doxycycline should not be prescribed Precautionary measures like bed net and DEET formulation for children older than 2 years
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Malaria	Using Mefloquine in first semester and proguanil in pregnancy is not recommended Preventive instruments like bed net and DEET formulation
	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1998	Gedo, Hiran, and Lower Shabeelle	-	-	Rift Valley fever
2000 January	Bay, Lower Juba, Lower Shabelle, Mogadishu and Mudug	2000	200	Cholera
2000	Boroma, Awdal, Somaliland	200		Cholera
2002 March	Banadir (Mogadishu), Lower Shabelle (Merka), Middle Shabelle (Jilib and Haranka), Hiraan (Belet Weyne) and Bari (Bossasso)	1191	63	Cholera
2005 July	Mogadishu	-	-	Poliomyelitis
2006 August	Mudug region	33	-	Poliomyelitis
2007 January	Southern Somalia	114	51	Rift Valley fever
2007 December	Baidoa bay	-	-	Cholera
2007 February	Hiraan	-	100	Cholera
2008 March	Southern Somalia, Mandera	-	-	Cholera
2009 July	Bay and Lower Shabelle	-	-	Cholera
2009 March	Rage Elle District in Middle Shabelle Region	-	11	Cholera
2010 August	South Central	-	-	Cholera
2010	Southern Somalia	-	-	Visceral leishmaniasis
2010 November	Leego	-	19	Measles

The population uses improved drinking-water sources (%): urban 67%, rural 9%, total 30% (2008). The average life expectancy for males and females: 48.49 and 52.37 years, respectively (2011). The main causes of mortality are: infectious and parasitic diseases, cardiovascular disease, injuries and malignant neoplasm. In 2011, the infant mortality rate is 105.56 cases per 1000 live births, which was one of the highest in the world. The population of people infected with HIV is 34,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.7% (2009). General government expenditure on health as a % of total government expenditure in 2000 was 4.2%. In 2006, there was one physician per 33,085 people and there were 4 (1997) hospital beds per 10,000 individuals. Healthcare is free in Somalia, but in the late 1980s and early 1990's, it lacked sufficient resources due to the influx of refugees from Ethiopia and Somalia and also from civil wars. But after the Civil War, most facilities were destroyed. In this country, healthcare facilities are provided by foreign forces.

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Dengue fever
- Schistosomiasis
- HIV (human immunodeficiency virus)

Emergency Numbers

Currency no emergency number is available.

Tanzania

Population and Geographical Location

In 2011, Tanzania had a population of 42,746,620 and an area of 947,300 km². It is located in East Africa. Tanzania is bordered by Uganda and Kenya to the north, the Indian Ocean to the east, by Mozambique to the south, by Zambia and Malawi to the southwest and by Congo Kinshasa, Burundi and Rwanda to the west.

Climate and Health Status

Its climate ranges from tropical along the coast to temperate in the highlands. The population uses improved drinking-water sources (%): Is not available. The average life expectancy for males and females: 51.34 and 54.42 years, respectively (2011). The main causes of mortality are: infectious and parasitic diseases, cardiovascular disease, injuries and malignant neoplasm.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0, 1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Meningococcal	Recommended	Travel through December to June Long term presence in crowded areas College-freshman New Soldiers	Before traveling	-	History of severe allergic reaction to dry natural rubber (latex) Age > 55 years	Redness, pain, fever, allergic reaction
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone/Proguanil, Doxycycline, Mefloquine	Confirmed	Everywhere	All travelers younger than 9 months of age	On arrival / If coming from an endemic area and if younger than 1 year old

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg(25lb) Doxycycline should not be prescribed Precautionary measures like bed net and DEET formulation for children older than 2 years
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Malaria	Using Mefloquine in first semester and proguanil in pregnancy is not recommended Preventive instruments like bed net and DEET formulation
	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1983	Tanga	-	-	Plague
1996	Bukoba	-	-	O'nyong-nyong fever
1997	-	50000	2500	Cholera
2001 May	Temeke and Ilala	109	3	Cholera
2001 November	-	-	-	Meningococcal disease
2002 July	Kibondo district, western Tanzania	-	-	Meningococcal disease
2002 August	Nduta, Karago, Mtendeli, and Mkugwa	149	9	Meningococcal disease
2006 March	Mainland, Zanzibar	11000	117	Cholera
2006	Dar es Salaam	-	-	Cholera
2006 December	Zanzibar, Pemba	184	-	Measles
2007 September	The Kisima Ngeda, Lake Eyasi in Ngorongoro district, Arusha	-	-	Schistosomiasis
2007 February	Morogoro, Singida, and Arusha, Dar es Salaam, Iringa, Manyara, Mwanza, Pwani, and Tanga	264	109	Rift Valley fever
2007 March	Endoji Village, Mbulu District, in Manyara	-	-	Plague
2008 October	Northern Tanzania	-	-	
2008 April	Kilimanjaro Province	-	-	Cholera
2008 September	Northern Tanzanian region of Mara	-	-	Cholera
2008 October	Southwestern Rukwa	-	-	Cholera
2009 July	Serengeti Park	-	-	
2009 November	Dar es Salaam	-	-	Cholera
2010 January	Mwanza	-	-	Cholera
2010 December	Mbulu, Manyara	-	-	Plague

In 2011, the infant mortality rate was 66.93 per 1000 live births. The population of people infected with HIV is 1,400,000 but the prevalence rate of 15- to 49-year-old adults with HIV is 5.6% (2009). General government expenditure on health as a % of total government expenditure in 2007: Is not available. In 2004, there was one physician per 44,133 people and there were 11 (2008) hospital beds per 10,000 individuals.

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Dengue fever
- Lymphatic filariasis
- Onchocerciasis
- Tick-borne relapsing fever
- Brucellosis
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
999	999	999

Uganda

Population and Geographical Location

In 2011, Uganda had a population of 34,612,250 and an area of 241,038 km². It is located in the eastern section of Central Africa. It is bordered by Sudan to the north, Kenya to the east, by Lake Victoria, Tanzania and Rwanda to the south and Congo (Kinshasa) to the west.

Climate and Health Status

Uganda has a tropical climate. The climate is generally rainy with two dry seasons (December to February, June to August). The northeast regions are semi-arid. The population uses improved drinking-water sources (%): urban 91%, rural 64%, total 67% (2008). The average life expectancy for males and females: 52.17 and 54.33 years, respectively (2011). The main causes of mortality are: infectious and parasitic diseases, cardiovascular disease, injuries and malignant neoplasm. In 2011, the infant mortality rate was 62.47 per 1000 live births. The population of people infected with HIV is 1,200,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV is 6.5% (2009). General government expenditure on health as a % of total government expenditure in 2007: 9.8%

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or sever hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Meningococcal	Recommended	Travel through December to June Long-term presence in crowded areas College-freshman New Soldiers	Before traveling	-	History of severe allergic reaction to dry natural rubber (latex) Age > 55 years	Redness, pain, fever, allergic reaction
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone/Proguanil, Doxycycline, Mefloquine	Confirmed	Everywhere	All travelers younger than 9 months of age	On arrival / If coming from an endemic area and if younger than 1 year old

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg (25lb) Doxycycline should not be prescribed Precautionary measures like bed net and DEET formulation for children older than 2 years
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Malaria	Using Mefloquine in first semester and proguanil in pregnancy is not recommended Preventive instruments like bed net and DEET formulation
	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1982, 1986, 1993	-	-	-	Plague
1996 June	Rakai, Mbarara and Masaka	-	-	O'nyong-nyong fever
1997	Natonwide	40000	1700	Cholera
1998	Nebbi district	49	16	Plague
2000 October	Gulu, Masindi	-	-	Ebola hemorrhagic fever
2001	Arua district	-	-	Plague
2001 February	Gulu district	-	224	Ebola hemorrhagic fever
2004 December	West Nile	Four people		Plague
2006 January	Northeastern parts	514	44	Meningococcal disease
2006 July-December	Arua and Nebbi districts	127	11	Plague
2006 February	Masindi	-	10	Plague
2006 October	Logiri	24	6	Plague
2006 December	Kampala	1000	-	Cholera
2006 October	Rakai, Amuru	-	-	Cholera
2006 August	Yumbe	-	-	Cholera
2006 July	Gulu	-	-	Cholera
2006 June	Hoima, Kibaale and Bundibugyo	-	23	Cholera
2006 April	Maracha County, Agoro Kitgum District	-	-	Cholera
2006 July	Northern Uganda	190	3	Measles

Date	Area	Cases	Mortality	Diseases
2007 December	Mayuge	12	-	African trypanosomiasis
2007 July	Kamwenge	-	1	Marburg hemorrhagic fever
2007 October	-	1	-	Marburg hemorrhagic fever
2007 July and December	Arivu and parts of Upper Madi	255	27	Meningococcal disease
2007 January	Kotido, Moroto, and Nakapiripirit	2728	100	Meningococcal disease
2007 December	Arua, Nyapea, Nebbi			Plague
2007 November	Bordering southern Sudan, Pader, Gulu, Adjumani, Yumbe and Amuru districts			Hepatitis E
2007 November	Bundibugyo District, western Uganda	153	41	Ebola hemorrhagic fever
2007 September	Nile River in Uganda	-	-	Schistosomiasis
2007	Arua, Nebbi	-	-	Cholera
2007 December	Yumbe district	-	-	Cholera
2007 September	Hoima, West Nile, and Buliisa	-	-	Cholera
2007 January	Lake Albert in Ndaiga, Kibaale, Ntungamo, Bunagana in Kisoro	-	-	Cholera
2008 January	Maramagambo Forest	-	-	Marburg hemorrhagic fever
January 2008	Arua district	380	17	Meningococcal
2008 November	Kasese	-	-	Typhoid fever
2008 November	Arua and Nebbi	-	68	Plague
2008 February		2	-	Ebola hemorrhagic fever
2008 September	Kampala	-	-	Cholera
2008 June	Districts of Mbale, Pallisa and Manafwa	-	-	Cholera
2008 May	Butaleja and Kibaale districts	-	-	Cholera
2008 January	Kampala	-	-	Cholera
2009 April	Nationwide	-	-	Acute hemorrhagic conjunctivitis
2009 August	Queen Elizabeth National Park	-	-	African trypanosomiasis
2009 March	Dokolo	120	18	African trypanosomiasis
2009 January	Western and northwestern Uganda	336	42	Meningococcal
2009 May	Pader, Moyo	2	-	Poliomyelitis
2009 December	Kaabong	200	12	Hepatitis E
2009 May	-	1010	160	Hepatitis E
2009	Kasese, Bugiri, Kampala, Bugiri	-	-	Cholera
2010 February	Moroto	28	-	Hepatitis E
2010 May	Tororo, Moroto	-	-	Cholera
2010 February	Manafwa district	-	-	Cholera
2010	Abim, Agago, Kitgum	226	53	Yellow fever

In 2005, there was one physician per 10,298 people and there were 11 (2008) hospital beds per 10,000 individuals. Health services and facilities that were destroyed during the war are gradually being reconstructed. To combat the growing AIDS epidemic, programs have been implemented at the national level to increase public awareness.

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Anthrax
- Lymphatic filariasis
- Onchocerciasis
- Rift Valley fever
- West Nile fever
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
999	999	999

Zambia

Population and Geographical Location

Zambia is a landlocked country that had a population of 13,881,336 and an area of 752,618 Km² in 2011. It is located in the south of Africa. It is bordered by Angola and Congo Kinshasa to the north, by Tanzania to the northeast, Malawi to the east, Mozambique to the southeast, Zimbabwe and Namibia to the south and Angola to the west.

Climate and Health Status

Zambia has a tropical climate characterized by high mountains. The rainy season starts from October to April. The population uses improved drinking-water sources (%): urban 87%, rural 46%, total 60% (2008). The average life expectancy for males and females: 51.13 and 53.63 years, respectively (2011). The main causes of mortality are: infectious and parasitic diseases, cardiovascular disease, malignant neoplasm and injuries. In 2011, the infant mortality rate was 66.6 per 1000 live births. The population of people infected with HIV is 980,000 but the prevalence rate of 15- to 49-year-old adults with HIV is 13.5% (2009). General government expenditure on health as a % of total government expenditure in 2007 was 14.5%.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Meningococcal	Recommended	Travel through December to June Long term presence in crowded areas College-freshman New Soldiers	Before traveling	-	History of severe allergic reaction to dry natural rubber (latex) Age > 55 years	Redness, pain, fever, allergic reaction
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone/Proguanil, Doxycycline, Mefloquine	Confirmed	Everywhere	All travelers younger than 9 months of age	On arrival / If coming from an endemic area and if younger than 1 year old

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg(25lb) Doxycycline should not be prescribed Precautionary measures like bed net and DEET formulation for children older than 2 years
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Malaria	Using Mefloquine in first semester and proguanil in pregnancy is not recommended Preventive instruments like bed net and DEET formulation
	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1997	Namwala	300	26	Plague
2001 March	Petauke	-	3	Plague
2002 November	Western province	-	-	Anthrax
2003 April	Nchelenge	68	3	Cholera
2004	Lusaka	3835	179	Cholera
2004 January	Western province	-	-	Anthrax
2006	All provinces except Western	-	-	Cholera
2006 May	Lusaka	5376	125	Cholera
2006 November	Chiengi	-	-	Cholera
2007 April	Chongwe, Lusaka	-	-	Cholera
2008 March	Lusaka	250	-	Cholera
2008 May	Mpulungu	100	-	Cholera
2008 October	-	-	1	Arena virus
2008 December	Lusaka district, Nameembo	1759	21	Cholera
2009 January	Choma, Solwezi	-	-	Cholera
2009 March	Serenje, Central Province	-	-	Cholera
2009 November	Southern Province	-	-	Cholera
2010 February	Lusaka, Chililabombwe and Kitwe, Copperbelt	-	-	Cholera
2010 April	Nationwide	2000	62	Measles
2010 October	Monze	-	-	Cholera
2010 November	Luangwa Valley	-	-	African trypanosomiasis
2011 January	Sinazongwe	-	-	Cholera

In 2006, there was one physician per 21,389 people and there were 19 (2008) hospital beds per 10,000 individuals. Malaria is a prevalent epidemic disease and cholera periodically spreads throughout the country as well. From the late 1990's many concerns have emerged regarding the spread of the phenomenon of "weak immune systems against viral diseases," such as AIDS.

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Schistosomiasis
- Rift Valley fever
- Gnathostomiasis
- Tick-borne relapsing fever
- Yellow fever
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
999	991	993

Zimbabwe

Population and Geographical Location

In 2011, Zimbabwe had a population of 12,084,304, an area of 390,757 km² and is located in central Africa. It is bordered by Zambia to the northwest, by Mozambique to the northeast and east, by South Africa to the south and by Botswana to the west and northwest.

Climate and Health Status

Its climate is warm, relatively dry and the rainfall is low, moderated by altitude and the rainy season (November to March). The main causes of mortality are: infectious and parasitic diseases, cardiovascular disease, injuries and malignant neoplasm. General government expenditure on health as a % of total government expenditure in 2007: 8.9%

The average life expectancy for males and females is 49.93 and 49.34 years, respectively (2011). In 2004, there was one physician per 5,793 people. Number of hospital beds per 10,000 individuals: 30 (2006).

The population of people with HIV is 1,200,000 but the prevalence rate of 15- to 49-year-old adults with HIV is 14.3% (2009). The population uses improved drinking-water sources (%): urban 99%, rural 72%, total 82% (2008).

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone/Proguanil, Doxycycline, Mefloquine	Confirmed	Everywhere	All travelers younger than 9 months of age	On arrival / If coming from an endemic area and if younger than 1 year old

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1994	Lupane, Matabeleland North and Nkaye	-	-	Meningococcal disease
2006	Harare, Chikomba, Buhera, Chivhu, Gokwe and kwekwe	980	73	Cholera
2006 December	Hurungwe	-	-	Schistosomiasis
2006 April	Zimbabwe	-	-	Chikungunya fever
2008 April	Mashonaland Central	-	-	Cholera
2008 January	Mabvuku and Tafara, two densely populated suburbs east of the capital city of Harare	-	-	Cholera
2008 November	Nationwide	200	6	Anthrax
2009 December	Nationwide	3200	200	Measles
2009 June	Nationwide	98522	4,282	Cholera
2010 January	Masvingo	-	-	Measles
2010 October	Nationwide	-	-	Influenza

In 1980, at the time of independence, Zimbabwe had limited medical facilities; the government and private centers had focused exclusively on the white population. After independence, the government established a broad plan to increase health standards, improve the level of social security and expand coverage for the majority of people.

Zimbabwe is now one of the best examples of health services in Africa, particularly in rural areas.

More than 1000 clinics have been established in this country. AIDS as a major issue is growing; it is estimated that a quarter of the country's adult population would be affected.

In 2011, the infant mortality rate was 29.5 per 1000 live births.

Other Infections

- African trypanosomiasis
- Rift Valley fever
- Leptospirosis
- Tick-borne relapsing fever
- African tick bite fever
- Brucellosis
- Marburg fever,
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
995	994	993

Middle Africa

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Angola

Population and Geographical Location

In 2011, Angola had a population of 13,338,541 and an area of 1,246,700 km². It is located in South-West Africa. Angola is bordered by Countries of the Congo to the north, by the Republic of Congo and Zambia to the east, by Namibia to the south and the Atlantic Ocean to the west.

Climate and Health Status

Angola has a semi-arid climate in the southern regions. The northern regions have a cool, dry season (May to October) and a hot and rainy season (November to April).

The population using improved drinking-water sources (%) is as follows: urban 60%, rural 38%, total 50% (2008). The average life expectancy for males and females is 37.74 and 39.83 years, respectively (2011). The main causes of mortality are infectious and parasitic diseases, injuries, cardiovascular disease and malignant neoplasm.

In 2011, the infant mortality rate was among the highest in the world: 175.9 cases per 1,000 live births.

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Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Meningococcal	Recommended	Travel through December to June Long-term presence in crowded areas College freshman New soldiers	Before traveling	-	History of severe allergic reaction to dry natural rubber (latex) Age > 55 years	Redness, pain, fever, allergic reaction
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Polio-myelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immuno-compromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone/Proguanil, Doxycycline, Mefloquine	Confirmed	Everywhere	All travelers younger than 9 months of age	On arrival / If coming from an endemic area and if younger than one year old

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than two years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breastfeeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg(25lb) Doxycycline should not be prescribed Precautionary measures like bed net and DEET formulation for children older than two years
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third trimester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Malaria	Using Mefloquine in first trimester and proguanil in pregnancy is not recommended Preventive instruments like bed net and DEET formulation
	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first trimester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1999	Luanda Bengo	-	-	Poliomyelitis
2004	Provinces in northwestern Angola	374	329	Marburg hemorrhagic fever
2005	Uige	-	-	Marburg hemorrhagic fever
2005	-	7		Poliomyelitis
2006	Nationwide (except Lunda Sul and Moxico provinces)	62000	2500	Cholera
2007	-	8	-	Poliomyelitis
2008	Nationwide	10507	243	Cholera
2008	-	28		Poliomyelitis
2008	Luanda	-	93	Rabies
2008	Kindeje Zaire province	-	-	Schistosomiasis
2009	-	1250	35	Cholera
2009	Cunene	99		Measles
2009	-	128		Poliomyelitis
2009	Uige	-	6	Rabies
2010	Nationwide	1400	34	Cholera
2010	Luanda	24	-	Poliomyelitis
2010	-	-	78	Rabies
2011	Kwanza Norte province	47		African trypanosomiasis
2011	Calussinga	-	-	Rabies

The population of people infected with HIV is 200,000, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 2% (2009). General government expenditure on health as % of total government expenditure in 2007: 5.3%. In 2004, there was one physician per 11,450 people, and there were eight (2005) hospital beds per 10,000 individuals. This country has a very limited number of trained medical staff.

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Other Infections

- Dengue fever (flu-like illness sometimes complicated by hemorrhage or shock; transmitted by mosquitoes)
- Lymphatic filariasis
- Onchocerciasis
- Rift Valley fever
- Tick-borne relapsing fever
- Plague
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
113	112	115

Cameroon

Population and Geographical Location

In 2011, Cameroon had a population of 19,711,291 and an area of 475,440 km². It is located in Central and Western Africa. It is bordered by Nigeria to the north, Chad to the east, Equatorial Guinea and Gabon to the south and the Gulf of Guinea to the west.

Climate and Health Status

Cameroon's climate ranges from tropical along the coast to semi-arid and hot in north. The population using improved drinking-water sources (%) is as follows: urban 92%, rural 51%, total 74% (2008). The average life expectancy for males and females is 53.52 and 55.28 years, respectively (2011). The main causes of mortality are infectious and parasitic diseases, respiratory infections, cardiovascular disease and injuries. In 2011, the rate of infant mortality was 60.91 cases per 1,000 live births. The population of people infected with HIV is 610,000, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 5.3% (2009).

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immuno-compromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone/Proguanil, Doxycycline, Mefloquine	Confirmed	Everywhere	All travelers younger than 9 months of age	On arrival / If coming from an endemic area and if younger than one year old

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than two years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg(25lb) Doxycycline should not be prescribed Precautionary measures like bed net and DEET formulation for children older than two years
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third trimester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Malaria	Using Mefloquine in first trimester and proguanil in pregnancy is not recommended Preventive instruments like bed net and DEET formulation
	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first trimester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1997-1998	-	-	-	Shigellosis
1998	Provinces of Extreme-Nord, Nord and Littoral	-	-	Cholera
2001	Wum, Mbengwi, Bafut, Bamenda, Ndop	400	30	Meningococcal
2004	Douala town in the Littoral Region	2924	46	Cholera
2006	Bafoussam	-	-	Cholera
2006	Akonolinga	-	-	Cholera
2006	Near the Nigerian border	1	-	Poliomyelitis
2007	Extreme-Nord province	100	10	Meningococcal
2009	Northern part of the country		65 deaths	Cholera
2009	Maroua	160	2	Measles
2010	Littoral, Nord, Ouest, Sud Ouest	10000	597	Cholera
2010	-	1338	6	Measles
2010	Kumba	2	-	Yellow fever
2010	Banjoun and Fantun districts in the Western Region	3	-	Yellow fever
2011	Far North region	13000	59	Cholera
2012	Guider, Bibemi, Gaschiga, Lagdo, Mayo, Oulo and Golombe	23	7	Yellow fever

General government expenditure on health as % of total government expenditure in 2007 was 8.1%.

In 2004, there was one physician per 6,310 people, and there were 15 (2006) hospital beds per 10,000 individuals.

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

- Other Infections
- Chikungunya fever
- African trypanosomiasis
- Lymphatic filariasis
- Onchocerciasis
- Schistosomiasis
- Rift Valley fever
- African tick bite fever (rickettsia infection)
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
112	-	-

Central African Republic

Population and Geographical Location

In 2011, this landlocked country had a population of 4,950,027 and an area of 622,984 km². It is located in Central Africa. The Central African Republic is bordered by Chad to the north, by Sudan to the northeast and east, Congo Kinshasa and Congo Brazzaville to the south and by Cameroon to the West.

Climate and Health Status

The Central African Republic has a tropical climate. It has hot and dry winters, and it has mild to hot and wet summers. The population using improved drinking-water sources (%) is as follows: urban 92%, rural 51%, total 67% (2008). The average life expectancy for males and females is 48.84 and 51.35 years, respectively (2011). The main causes of mortality are infectious and parasitic diseases, cardiovascular disease, respiratory infections and injuries. In 2011, the infant mortality rate was 99.38 per 1,000 live births. The population of people infected with HIV is 130,000, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 4.7% (2009). General government expenditure on health as % of total government expenditure in 2007 was 11.0%. In 2004, there was one physician per 14,955 people, and there were 12 (2006) hospital beds per 10,000 individuals.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third trimesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
Meningo-Coccal	Recommended	Travel through December to June Long-term presence in crowded areas College freshman New soldiers	Before traveling	-	History of severe allergic reaction to dry natural rubber (latex) Age > 55 years	Redness, pain, fever, allergic reaction
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Polio-myelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immuno-compromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone/Proguanil, Doxycycline, Mefloquine	Confirmed	Everywhere	All travelers younger than 9 months of age	On arrival / If coming from an endemic area and if younger than one year old

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than two years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breastfeeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg(25lb) Doxycycline should not be prescribed Precautionary measures like bed net and DEET formulation for children older than two years
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third trimester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Malaria	Using Mefloquine in first trimester and proguanil in pregnancy is not recommended Preventive instruments like bed net and DEET formulation
	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first trimester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2000 January	-	86	14	Meningococcal disease
2001 January-May	Ouham-Pende, Bamingui-Bangora and Haute-Kotto	2052	370	Meningococcal disease
2003 June	Paoua and Bozoum, northwest of the capital city of Bangui	379	23	Shigellosis
2004 November	Nationwide	-	-	Poliomyelitis
2004 March	Nana Bougila and Zere	43	7	Meningococcal
2008 August	Boda, La Lobaye	1	-	Poliomyelitis
2008 May	Bozoum, Ouham-Pende	2	-	Yellow fever
2008 April	-	1	-	Poliomyelitis
2008 February	Ouham, Ouham Pende and Nana-Grebizi	-	-	Meningococcal disease
2009 November	Yaloke-Bossembelle, Ombella, Mpoko Bagamongone, La Lobaye	-	-	Yellow fever
2010	-	31	0	Measles

Emergency Numbers

Police	Medical	Fire
21611300	-	-

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Other Infections

- African trypanosomiasis
- Lymphatic filariasis
- Onchocerciasis
- Schistosomiasis
- Rift Valley fever
- Lassa fever
- Brucellosis
- HIV (human immunodeficiency virus)

Chad

Population and Geographical Location

Chad is a landlocked country, which has a population of 10,758,945 and an area of 1,284,000 km². It is located in Central Africa. It is bordered by Libya to the north, Sudan to the east, the Central African Republic and countries to the south and Cameroon, Nigeria and Niger to the west.

Climate and Health Status

Chad has a tropical climate in southern regions and a desert climate in northern regions. The population using improved drinking-water sources (%) is as follows: urban 67%, rural 44%, total 50% (2008). The average life expectancy for males and females is 47.28 and 49.43 years, respectively (2011). The main causes of mortality are infectious and parasitic diseases, respiratory infections, cardiovascular disease and injuries. In 2011, the infant mortality rate was 95.31 per 1,000 live births. The population of people infected with HIV is 210,000, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 3.4% (2009).

General government expenditure on health as % of total government expenditure in 2007: 13.8%. In 2004, there was one physician per 31,185 people, and there were four (2005) hospital beds per 10,000 individuals.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0, 1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymyxin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age ≥ 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose 4. There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone/Proguanil, Doxycycline, Mefloquine	Confirmed	Everywhere	All travelers younger than 9 months of age	On arrival / If coming from an endemic area and if younger than one year old

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than two years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breastfeeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg(25lb) Doxycycline should not be prescribed Precautionary measures like bed net and DEET formulation for children older than two years
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third trimester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Malaria	Using Mefloquine in first trimester and proguanil in pregnancy is not recommended Preventive instruments like bed net and DEET formulation
	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first trimester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1998	-	3000	-	Meningococcal disease
2001	-	5000	600	Meningococcal disease
2001 June-October	Southwestern part of the country	5244	226	Cholera
2002	Koumra, Gore and Pala	-	-	Meningococcal disease
2004 April	Iriba district	19	4	Meningococcal disease
2004 June	Western Chad	3910	164	Cholera
2004 June	Amer and Djabal camps for Sudanese refugees, Koukou, Am Ouchar, Am-Bitin, Habile, Aradibe)	1442	46	Hepatitis E
2005 April	N'Djamena	-	100	Cholera
2005 January	Districts of Bongor and Moissal	387 cases	53 deaths	Meningococcal disease
2005 January	Brejing, Treijing and Farchana refugee camps	14	-	Meningococcal disease
2005 July	Remote villages of eastern Chad	-	50	Hepatitis E
2006 April	Hadjer-Lamis, N'djamena	1200	-	Cholera
2007 January	-	5	-	Poliomyelitis
2008	-	33	-	Poliomyelitis
Date	Area	Cases	Mortality	Diseases
2009	-	1256	15	Measles
2009 April	-	1165	128	Meningococcal disease
2010	Nationwide	5832	79	Measles
2010 April	-	1531	151	Meningococcal disease
2010 July	-	5787	166	Cholera
2011 March	Benoye, Kello, Laokassy, Melfi, and Moundou	923	57	Meningococcal disease

Emergency Numbers

Police	Medical	Fire
17	-	18

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

- Other Infections
- African trypanosomiasis
- Lymphatic filariasis
- Onchocerciasis
- Schistosomiasis
- Rift Valley fever
- Brucellosis
- HIV (human immunodeficiency virus)

Republic of the Congo

Population and Geographical Location

In 2011, this third largest country in central Africa had a population of 4,243,929 and an area of 342,000 km². It is bordered by Congo and the Central African Republic to the north, Sudan to the northeast, by Uganda, Rwanda, Burundi and Tanzania to the east, Zambia and Angola to the southeast and south and the Gulf of Guinea, Angola and the Congo Brazzaville in the west.

Climate and Health Status

The Republic of the Congo has a tropical climate. The rainy season in this country is from March to June, and the dry season is from June to October. The population using improved drinking-water sources (%) is as follows: urban 95%, rural 34%, total 71% (2008). The average life expectancy for males and females is 53.62 and 56.25 years, respectively (2011). The main causes of mortality are infectious and parasitic diseases, cardiovascular disease, injuries and malignant neoplasm. In 2011, the infant mortality rate was 76.05 per 1,000 live births. The population of people infected with HIV is 77,000, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 3.4% (2009).

General government expenditure on health as % of total government expenditure in 2007 was 5.1%. In 2007, there was one physician per 10,583 people, and there were 16 (2005) hospital beds per 10,000 individuals. AIDS is a developing issue in this country.

Immunization Planning

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone/Proguanil, Doxycycline, Mefloquine	Confirmed	Everywhere	All travelers younger than 9 months of age	On arrival / If coming from an endemic area and if younger than one year old

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2002 April	Mbomo, Kelle	57	43	Ebola hemorrhagic fever
2003 November	Mbomo and Mbandza villages	31	29	Ebola hemorrhagic fever
2003 February-May	Mbomo, Kell	143	128	Ebola hemorrhagic fever
2005 May	Etoumbi, Mbomo, Cuvette Ouest	12	9	Ebola hemorrhagic fever
2007 January	Pointe-Noire	4000	82	Cholera
2007 September	Likouala	-	-	Monkeypox,
2008 November	Kinkakassa village	-	-	Cholera
2008 July	Loudima	127	3	Cholera
2009 April	Mbama	1	-	Yellow fever
2010 November	Pointe Noire, Niari, Bouenza, Brazzaville, Kouilou	409	169	Poliomyelitis

Emergency Numbers

Police	Medical	Fire
242 06 665-4804	-	-

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Other Infections

- Schistosomiasis
- African trypanosomiasis
- Rift Valley fever
- Monkeypox
- Lymphatic filariasis
- Onchocerciasis
- Brucellosis
- HIV (human immunodeficiency virus)

The Democratic Republic of the Congo (Zaire)

Population and Geographical Location

In 2011, the DRC had a population of 71,712,867 and an area of 2,344,858 km². It is the third largest country in the continent of Africa. This Central African country is bordered by the Central African Republic to the north, Sudan to the northeast, Uganda to the east, Rwanda and Burundi and Tanzania to the southeast, Zambia and Angola to the south and the Gulf of Guinea, Angola and Congo Brazzaville to the west.

Climate and Health Status

The Democratic Republic of the Congo has a tropical climate. The climate is hot and humid in equatorial river basin, and it is cooler and drier in southern highlands. It is cooler and wetter in eastern highlands, north of Equator. The wet season is from April to October, the dry season is from December to February; south of Equator—wet season November to March, dry season April to October. The population using improved drinking-water sources (%) is as follows: urban 80%, rural 28%, total 46% (2008). The average life expectancy for males and females is 53.9 and 56.8 years, respectively (2011). The main causes of mortality are infectious and parasitic diseases, cardiovascular disease, injuries and malignant neoplasm.

In 2011, the infant mortality rate was 78.43 per 1,000 live births. The population of people infected with HIV is 500,000 (2009), but the prevalence rate of 15- to 49-year-old adults infected with HIV is not available (unreported). General government expenditure on health as % of total government expenditure in 2007 was 6.4%. In 2004, there was one physician per 12,307 people, and there were eight (2006) hospital beds per 10,000 individuals. The National Institute of Social Security has provided social facilities for workers.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Meningo-coccal	Recommended	Travel through December to June Long-term presence in crowded areas College freshman New soldiers	Before traveling	-	History of severe allergic reaction to dry natural rubber (latex) Age > 55 years	Redness, pain, fever, allergic reaction
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Polio-myelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling	-	Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1996-1997	Katako-Kombe Health Zone, Kasai Oriental	88	-	Monkeypox
1997	Eastern districts	-	200	Meningococcal disease
1997 April	Rwandan	-	1500	Cholera
1998	Tembo, Bandundu	-	30	Meningococcal disease
1998	Katanga, Nord-Kivu, Sud-Kivu and Orientale	13000	800	Cholera
1998 September	-	-	80	Monkeypox
2000 September	Watsa Zone, Durba, Orientale	154	-	Marburg hemorrhagic fever
2001 August	Katana, Bukavu, Idjwi health zones, South-Kivu	893 cases	104 deaths	

Current Outbreaks and Mortality (Continued)

Date	Area	Cases	Mortality	Diseases
2001 November		7000	500	Cholera
2002 October	Equateur	-	-	Monkeypox
2002 October	Bosobolo, Gbadolite, Gemena, and Karawa	5000	700	Influenza
2002-2003	-	74	17	Meningococcal disease
2003	Kinshasa	20000	170	Influenza
Date	Area	Cases	Mortality	Diseases
2003 June	Sud Kivu, Katanga, Kasai Oriental	13452 cases	380	Cholera
2004 May	-	-	-	E. Coli
2004 September	Kinshasa	42564	-	Typhoid fever
2005 February	Zobia, Bas-Uele district, Oriental province,	130	57	Pneumonic plague
2005 October	Eastern part of the country	-	-	Cholera
2006 January	South Kivu, Uvira and Fizi territories	-	-	Cholera
2006 July	-	341	13	Hepatitis E
2006 June	Ituri district, Oriental province	144	22	Pneumonic plague
2006 March	Orientale, Katanga, and Maniema	-	-	Cholera
2006 November	Kivu, Tanganyika lakes	-	-	Cholera
2006 November	-	1174	50	Pneumonic plague
2006 September	Haut-Uele district, Oriental	-	-	Pneumonic plague
2007	Equateur, Orientale, and Bandundu provinces	32		Poliomyelitis
2007 March	-	730	84	Meningococcal disease
2007 May	Malemba-Nkulu territory	3500	150	Measles
2007 November	Rukwanzi Island in Lake Albert, Tchomia health zone, the Ituri district in the northeastern part, in five refugee camps in the Mugunga area west of Goma, the capital city of North Kivu province in the eastern part	-	-	Cholera
2007 September	Kasai Occidental	26	21	Ebola hemorrhagic fever
2008	Katanga, North Kivu, and South Kivu, Goma, Ngungu, Mweso in the Lubumbashi Katanga, Likasi, Katanga, Bukama, Katanga, Rutshuru town			Cholera
2008	-	2	-	Poliomyelitis
2008 December	Kasai Occidental	32	15	Ebola hemorrhagic fever
2008 January-February	Aru district	167	17	
2008 July	Bokungu	-	3	Monkeypox
2009	Goma, North Kivu	-	-	Cholera
2009 December	City of Kisangani	-	-	Meningococcal disease
2009 September	South Kivu province	-	100	Cholera

Date	Area	Cases	Mortality	Diseases
2010	-	3976	13	Measles
2010	Lake Katebe or Lake Wasela, Lualaba River, lake Nzilo	-	-	Schistosomiasis
2010 December	Kikwit	36	15	Poliomyelitis
2010 July	Titule, Base Ouele	-	-	Yellow fever
2010 September	Kasai	7	-	Poliomyelitis
2011 January	Bikoro health zone	114	5	Monkey pox
2011 March	Maniema	90	3	Measles

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Other Infections

- Dengue fever
- Lymphatic filariasis
- Onchocerciasis
- Crimean-Congo hemorrhagic fever
- Rift Valley Fever
- Tick-borne relapsing fever
- Brucellosis
- HIV (human immunodeficiency virus)

Emergency Numbers

Currently no emergency number is available.

Northern Africa

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Algeria

Population and Geographical Location

In 2011, Algeria had a population of 34,994,937 and an area of 2,381,741 km². It is located in North Africa and the southern Mediterranean coast. Algeria is bordered by Tunisia and Libya to the east, Niger and Mali to the south, Mauritania, Sahara and the Maghreb (Morocco) to the west and the Mediterranean Sea to the north.

Algeria has a population of 32,854,000, an area of 2,381,741 km², and it is located in North Africa and the southern Mediterranean coast. Algeria is bordered by Tunisia and Libya to the east, Niger and Mali to the south, Mauritania, Sahara and the Maghreb (Morocco) to the west and the Mediterranean Sea to the north.

Climate and Health Status

Algeria has an arid to semi-arid climate. It has mild, wet winters with hot, dry summers along coast. The weather becomes drier with cold winters and hot summers on high plateaus. Sirocco is a hot, dust/sand-laden wind especially common in summer.

The population using improved drinking-water sources (%) is as follows: urban 85%, rural 79%, total 83% (2008).

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Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immuno-compromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than two years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breastfeeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	

Important Points for Safely Travelling with Children (Continued)

Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg(25lb) Doxycycline should not be prescribed Precautionary measures like bed net and DEET formulation for children older than two years
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third trimester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Malaria	Using Mefloquine in first trimester and proguanil in pregnancy is not recommended Preventive instruments like bed net and DEET formulation
	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first trimester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1996 January	Ain Tay	-	-	Typhoid fever
2003 June	Tafraoui	-	10	Plague
2003 July	Oran	10	1	Plague
2007 August	Djelfa	36	-	Typhoid fever
2009 June	Illizi	-	-	Plague
2010 October	Setif	-	-	Leptospirosis

The average life expectancy for males and females is 72.78 and 76.31 years, respectively (2011).

The main causes of mortality are cardiovascular disease, infectious and parasitic diseases, injuries and malignant neoplasm.

In 2011, the infant mortality rate was 25.81 per 1,000 live births.

The population of people infected with HIV is 18,000, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.1% (2009).

General government expenditure on health as % of total government expenditure in 2007 was 10.7%.

In 2007, there was one physician per 856 people, and there were 19 (2006) hospital beds per 10,000 individuals.

The government has established social welfare programs, covering the elderly, the needy, the disabled and workers.

Specialized health centers are working to eradicate epidemic diseases like malaria and tuberculosis. Other public health problems include widespread malnutrition and ocular disorders such as trachoma, chickenpox and cholera, all of which have been controlled in this country.

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Other Infections

- *Schistosomiasis*
- *Malaria*
- *Brucellosis*
- *Bartonella quintana infections*
- *Louse-borne typhus*
- *Tick-borne relapsing fever*
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
17	14	14

Egypt

Population and Geographical Location

In 2011, Egypt had a population of 82,079,636 and an area of 1,001,450 km². It is located in northeast Africa and in the southeast coast of the Mediterranean Sea. This country is bordered by the Mediterranean Sea in the north, Palestine to the northeast, the Red Sea to the east, Sudan to the south and Libya to the west.

Climate and Health Status

Egypt has a desert climate with hot, dry summers and moderate winters. A small segment of the river Nile, which is 6,695 km in length, is a vital artery for Egypt.

The population using improved drinking-water sources (%) is as follows: urban 100%, rural 98%, total 99% (2008).

The average life expectancy for males and females is 70.07 and 75.38 years, respectively (2011).

The main causes of mortality are cardiovascular disease, infectious and parasitic diseases, malignant neoplasm and injuries.

In 2011, the infant mortality rate was 25.2 per 1,000 live births.

The population of people infected with HIV is 11,000, but the prevalence rate of 15- to 49-year-old adults with HIV was < 0.1% (2009).

General government expenditure on health as % of total government expenditure in 2007 was 7.1%.

In 2005, there was one physician per 456 people, and there were 21 (2007) hospital beds per 10,000 individuals.

In spite of great advances in health in the twentieth century, trustee services and health services in rural areas are not enough.

From 1960, the Egyptian Ministry of Health attempted to launch many "shared rural centers," which are in charge of offering services to 15,000 to 20,000 people.

The purpose of these centers is coordinating medical, educational and social services and rural agricultural councils.

Many improvements have been made to eliminate diseases such as cholera, smallpox and malaria, but diseases like Bilharziasis, a parasitic disease, still have wide prevalence. Comprehensive insurance programs, started in 1959, have considerably developed as well.

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Other Infections

- *Schistosomiasis*
- *Dengue fever*
- *Lymphatic filariasis*
- *Tick-borne relapsing fever*
- *Hepatitis E*
- *Brucellosis*
- *Hepatitis C*
- *Alkhurma hemorrhagic fever*
- *HIV (human immunodeficiency virus)*

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immuno-compromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever		
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements	
Not confirmed	Not seen	Not seen	-	-	

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than two years old should not receive hepatitis A or typhoid vaccines
Nutrition	Using safe food and water Breastfeeding, special food for babies or cow milk Adequate hydration Sunlight protection

Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third trimester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first trimester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1993	Aswan Governorate			Rift Valley fever
2003	Seedy Salim, Kafr Al-Sheikh	45	17	Rift Valley fever
-	Delta	167	60	H5N1 avian influenza ("bird flu")

Emergency Numbers

Police	Medical	Fire
122	123	180

Libya

Population and Geographical Location

In 2011, Libya had a population of 6,597,960 and an area of 1,759,540 km². It is located in North Africa and in the southern coast of the Mediterranean Sea and is the fourth largest country in Africa. Libya is bordered by the Mediterranean Sea to the north, Egypt to the east, Sudan to the southeast, Chad and Niger to the south, Algeria to the west and Tunisia to the northwest.

Climate and Health Status

Libya has no permanent rivers, and it has little rainfall. The climate is hot and dry. Its highest point is called Bette (2,286 m). Its air is polluted because of oil refining, and desertification is also threatening the environment.

The population using improved drinking-water sources (%) is as follows: urban 54%, rural 55%, total 54% (last report in 1990). New statistics are not available (unreported). The average life expectancy for males and females is 75.34 and 80.08 years, respectively (2011).

The main causes of mortality are cardiovascular disease, malignant neoplasm, injuries and infectious and parasitic diseases.

In 2011, the infant mortality rate was 20.09 per 1,000 live births.

The population of people infected with HIV is 10,000, but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.3% (2001). General government expenditure on health as % of total government expenditure in 2007 was 5.4%.

In 2004, there was one physician per 933 people, and there were 37 (2008) hospital beds per 10,000 individuals.

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Other Infections

- *Schistosomiasis*
- *Lymphatic filariasis*
- *Onchocerciasis*
- *Tick-borne relapsing fever*
- *Brucellosis (low incidence)*
- *HIV (human immunodeficiency virus)*

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immuno-compromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever		
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements	
Not confirmed	Not seen	Not seen	-	-	

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than two years old should not receive hepatitis A or typhoid vaccines
Nutrition	Using safe food and water Breastfeeding, special food for babies or cow milk Adequate hydration Sunlight protection

Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common disease	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third trimester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common disease	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first trimester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2009 June	Tobruk	5	-	Plague

Emergency Numbers

Police	Medical	Fire
193	193	193

Morocco

Population and Geographical Location

In 2011, Morocco had a population of 31,968,361 and an area of 446,550 km². It is located in Northwest Africa, south of the Strait of Gibraltar and the Atlantic coast. It is bordered by the Mediterranean Sea (northwest), by Algeria to the east and the southeast, by the Western Sahara to the south and the Atlantic Ocean to the west and northwest.

Climate and Health Status

Morocco's climate is temperate and humid in the mountainous areas, and in other areas, it can be hot, dry or humid. The population using improved drinking-water sources (%) is as follows: urban 98%, rural 60%, total 81% (2008). The average life expectancy for males and females is 72.84 and 79.11 years, respectively (2011). The main causes of mortality are cardiovascular disease, infectious and parasitic diseases, malignant neoplasm and injuries.

In 2011, the infant mortality rate was 27.53 per 1,000 live births.

The population of people infected with HIV is 26,000, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.1% (2009). General government expenditure on health as % of total government expenditure in 2007 was 6.2%.

In 2007, there was one physician per 1,750 people, and there were 11 (2007) hospital beds per 10,000 individuals.

Health services in the cities of Morocco have relatively good standards, but in rural areas, poor conditions exist. To improve conditions, the government has attempted to provide facilities for social security.

Other Infections

- *Schistosomiasis*
- *Lymphatic filariasis*
- *Onchocerciasis*
- *Tick-borne relapsing fever*
- *Brucellosis (low incidence)*
- *West Nile virus (transmitted by mosquitoes)*
- *HIV (human immunodeficiency virus)*

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immuno-compromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Emergency Numbers

Police	Medical	Fire
19	15	15

Sudan

Population and Geographical Location

In 2011, Sudan had a population of 45,047,502 and an area of 2,505,813 km². It is located in Northwest Africa. This country is bordered by the Red Sea to the northeast, Ethiopia and Eritrea to the east, by Kenya, Uganda and Congo (Kinshasa) to the south, by the Central African Republic and Chad to the west and by Libya to the northwest.

This country is divided into three different geographical regions:

- a) The northern plains and deserts.
- b) The smooth central area.
- c) Southern areas with dense forests.

Climate and Health Status

Sudan has a tropical climate in south, and it has an arid desert climate in north. The rainy season in Sudan is from April to October.

The population using improved drinking-water sources (%) is as follows: urban 64%, rural 52%, total 57% (2008).

The average life expectancy for males and females is 54.18 and 56.71 years, respectively (2011).

The main causes of mortality are infectious and parasitic diseases, cardiovascular disease, injuries and malignant neoplasm.

In 2011, the infant mortality rate was 68.07 per 1,000 live births.

The population of people infected with HIV is 260,000, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 1.1% (2009).

General government expenditure on health as % of total government expenditure in 2007 was 6.1%.

In 2006, there was one physician per 4,064 people, and there were seven (2007) hospital beds per 10,000 individuals.

Health services are limited, and they are lacking in quality. In some rural areas, health services are nonexistent. Outbreaks of Leishmaniasis and malaria exist in most regions of the country, and malnutrition is seen in all inhabitants.

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria- tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Meningococcal	Recommended	Travel through December to June Long-term presence in crowded areas College freshman New soldiers	Before traveling	-	History of severe allergic reaction to dry natural rubber (latex) Age > 55 years	Redness, pain, fever, allergic reaction
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immuno-compromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone/Proguanil, Doxycycline, Mefloquine	Confirmed	Everywhere	All travelers younger than 9 months of age	On arrival / If coming from an endemic area and if younger than one year old

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than two years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breastfeeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg(25lb) Doxycycline should not be prescribed Precautionary measures like bed net and DEET formulation for children older than two years
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third trimester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Malaria	Using Mefloquine in first trimester and proguanil in pregnancy is not recommended Preventive instruments like bed net and DEET formulation
	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first trimester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1976 and 1979	-	-	-	Ebola hemorrhagic fever
1998 December	-	22000	1600	Meningococcal disease
2002 November	Southern Sudan	-	-	Visceral leishmaniasis
2003 May	Imatong, Ikotos Torrit	178	27	Yellow fever
2004 May	Nationwide	105	-	Poliomyelitis
2004 May	Darfur	6861	87	Hepatitis E
2004 May	Darfur	1340	11	Shigellosis
2004 May	Yambio, Western Equatoria	17	7	Ebola hemorrhagic fever
2005 March	Sarf Omra, Kabkabia locality, North Darfur State	71	5	Meningococcal disease
2005 February	Blue Nile, Gedarif, Khartoum States			Meningococcal disease
2005 November	South Kordofan, Abu Gebiha, Rashad, Dilling, Kadugli, and Talodi	-	-	Yellow fever
2005 December	-	583	144	Yellow fever
2005 October	South Kordofan	-	-	Dengue fever
2006 February	Yei and Juba in southern Sudan and spread rapidly to six out of ten states	-	-	Cholera
2006 August	States of Khartoum and North Kordofan, White Nile, South Darfur, South Kordofan, Kassala, Red Sea, Al Gezira and River Nile	25000	700	Cholera
2006 August	Western Sudanese region of Darfur			Cholera
2006 September	Mornay in western Darfur			Cholera
2006 November	Greater Yei County, Central Equatorial State	231	16	Meningococcal disease
2006 January	States of West Darfur, Blue Nile, Gedarif, Kassala, South Kordofan and North Kordofan, Warab, Northern and Western Bahr-el Ghazal	6000	400	Meningococcal disease
2006 May	Poultry farms in the Sudan, Juba, Central Equatoria state	-	-	H5N1 avian influenza ("bird flu")
2006 May	Poultry farms in the Sudan, Juba, Central Equatoria state	-	-	H5N1 avian influenza ("bird flu")
2007 November	Gazeera, Kassala, Khartoum, River Nile, Sinnar, White Nile	698	222	Rift Valley fever
2007 January	Nationwide	-	-	Meningococcal
2007 April	Aweil West, Juba, Mundri East, Rumbek, Tonj South, Wulu and Yirol	11000	700	Meningococcal
2007 April	Northern Sudan	775	43	Meningococcal
2008 June	Southern Sudan	9000	44	Cholera
2008 August	Southern Sudan	-	22	Measles
2009 October	Southern Sudan	-	-	Visceral leishmaniasis

Current Outbreaks and Mortality (Continued)

Date	Area	Cases	Mortality	Diseases
2009	Southern part	11	-	Polio
2009	The north (in Khartoum and Port Sudan)	2	-	Polio
2010 May	Northern Bahr el Ghazal State	-	-	Cholera
2010 August	Jonglei state	-	-	Visceral leishmaniasis
2011 January	Unity State in southern Sudan	95	4	Measles

Other Infections

- African trypanosomiasis
- louse-borne relapsing fever
- Ebola hemorrhagic fever
- Schistosomiasis
- Lymphatic filariasis
- Onchocerciasis
- Rift Valley fever
- Brucellosis
- Dengue fever
- Anthrax
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
999	-	-

Tunisia

Population and Geographical Location

In 2011, Tunisia had a population of 10,629,186 and an area of 163,610 km². It is the northernmost country in Africa. It is located in the northern coast of the Mediterranean Sea. Tunisia is bordered by Algeria to the west and Libya to the east.

Climate and Health Status

Tunisia has a humid climate in the northern and eastern regions, and in other areas, it is warm and dry and the rainfall is little.

The population using improved drinking-water sources (%) is as follows: urban 99%, rural 84%, total 94% (2008). The average life expectancy for males and females is 73 and 77.17 years, respectively (2011). The main causes of mortality are cardiovascular disease, injuries, malignant neoplasm and digestive diseases. In 2011, the infant mortality rate was 25.92 per 1,000 live births.

The population of people infected with HIV is 2,400, but the prevalence rate of 15- to 49-year-old adults infected with HIV was < 0.1% (2009).

General government expenditure on health as % of total government expenditure in 2007 was 9.1%. In 2004, there was one physician per 797 people, and there were 20 (2008) hospital beds per 10,000 individuals.

For the people of Tunisia, most of these services are available, and they are free of charge.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immuno-compromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Not seen	-	-

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than two years old should not receive hepatitis A or typhoid vaccines
Nutrition	Using safe food and water Breastfeeding, special food for babies or cow milk Adequate hydration Sunlight protection

Important Points for Safely Travelling with Children (Continued)

Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common disease	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third trimester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common disease	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first trimester

Other Infections

- *Cutaneous leishmaniasis*
- *Onchocerciasis*
- *Lymphatic filariasis*
- *Schistosomiasis*
- *Tick-borne relapsing fever*
- *Brucellosis*
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
197	190	198

Southern Africa

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South Africa

Population and Geographical Location

In 2011, South Africa had a population of 49,004,031 and an area of 1,219,090 km². It is located at the southern end of Africa. South Africa is bordered by Namibia, Botswana, and Zimbabwe to the north, Mozambique, Swaziland and the Indian Ocean to the east, the Indian Ocean to the south and the Atlantic Ocean to the west.

Climate and Health Status

South Africa has a mild and dry climate. Its eastern coastline is hot and humid and mostly semi-arid. The climate is subtropical along the east coast coupled with sunny days and cool nights.

The population using improved drinking water sources (%): urban 99%, rural 78%, total 91% (2008).

The average life expectancy for males and females: 50.24 and 48.39 years, respectively (2011).

The main causes of mortality are: infectious and parasitic diseases, cardiovascular disease, injuries and malignant neoplasm.

In 2011, the infant mortality rate was 43.2 per 1,000 live births.

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Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received the vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers, Those with close contact with the natives, People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately-to-severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine, Those with a negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reactions to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children, Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reactions to a prior dose There is no data about the safety of the typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and with a negative history of chickenpox infection, Those who have received one dose of the vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reactions to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travelling to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to eggs Diseases of the thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone/Proguanil, Doxycycline, Mefloquine	Confirmed	Everywhere	All travelers younger than 9 months of age	On arrival / If coming from an endemic area and if younger than 1 year old

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg(25lb) Doxycycline should not be prescribed Precautionary measures like bed nets and DEET formulations for children older than 2 years
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Malaria	Using Mefloquine in the first semester and proguanil in pregnancy is not recommended Preventive instruments like bed nets and DEET formulations
	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1974, 1976, 1981	-	-	-	Rift Valley fever
1999 February	National Park	3	-	Rift Valley fever
2000 August	Nkomazi area, Mpumalanga	106,159	232	Cholera
2004 February	-	179	5	Cholera
2005 September	Delmas, Mpumalanga	-	-	Typhoid fever
2006 February	Northwest Province	-	-	Myiasis
2007	Limpopo and kwazulu-Natal	-	42	Rabies
2007 March	The coast at Lamberts Bay	-	-	Shellfish poisoning
2008 January-June	Mpumalanga, Gauteng, and Limpopo	18	-	Rift Valley fever
2008 November	Limpopo district	-	-	Cholera
2008 October	Nationwide	-	-	Arenavirus
2008 April	West Coast of South Africa	-	-	Shellfish poisoning
2009 December	Limpopo province	-	-	Malaria
2009 August	Gauteng province	-	-	Measles
2009 March	Nationwide	12,000	59	Cholera
2010 March	Nationwide	221	23	Rift Valley fever
2010	Eastern Cape Province, Northern Cape Province, Western Cape, and North West Province	-	-	Rift Valley fever
2010 April	Tshwane, Gauteng Province, Kwazulu-Natal Province, North West Province, the Western Cape, and the Eastern Cape	9,000	-	Measles

Emergency Numbers

Police	Medical	Fire
10111	10177	10111

There are 5,600,000 people infected with HIV, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 17.8% (2009).

The general government expenditure on health as a percentage of total government expenditures in 2007: 10.8%

In 2004, there was one physician per 1,407 people and there were 28 (2005) hospital beds per 10,000 individuals.

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Other Infections

- Schistosomiasis
- Marburg fever
- Tick-borne relapsing fever
- African tick bite fever
- West Nile fever
- Brucellosis
- Anthrax
- Plague
- HIV (human immunodeficiency virus)

Western Africa

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Ghana

Population and Geographical Location

In 2011, Ghana had a population of 24,791,073 and an area of 238,533 km². It is located in West Africa. It is bordered by Burkina Faso to the north, Togo to the east, the Gulf of Guinea and the Atlantic Ocean to the south and the Ivory Coast to the west.

Climate and Health Status

Ghana has a tropical climate. The weather is warm and comparatively dry along the southeast coast and it is hot and humid in southwest. It is hot and dry in the north.

The population uses improved drinking-water sources (%): urban 90%, rural 74%, total 82%, (2008). The average life expectancy for males and females: 59.78 and 62.25 years, respectively (2011). The main causes of mortality are: infectious and parasitic diseases, cardiovascular disease, injuries and malignant neoplasm.

In 2011, the infant mortality rate was 48.55 per 1000 live births. The population of people infected with HIV is 260,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV was 1.8% (2009).

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Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travel who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Meningococcal	Recommended	Travel through December to June Long term presence in crowded areas College-freshman New Soldiers	Before traveling	-	History of severe allergic reaction to dry natural rubber (latex) Age > 55 years	Redness, pain, fever, allergic reaction
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone/Proguanil, Doxycycline, Mefloquine	Confirmed	Everywhere	All travelers younger than 9 months of age	On arrival / If coming from an endemic area and if younger than 1 year old

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg(25lb) Doxycycline should not be prescribed Precautionary measures like bed net and DEET formulation for children older than 2 years
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Malaria	Using Mefloquine in first semester and proguanil in pregnancy is not recommended Preventive instruments like bed net and DEET formulation
	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester
Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third semester pregnancy	

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1996	Upper East Region	-	-	Yellow fever
1997 March	Brong Ahafo	-	400	Meningococcal disease
1997 April	Village in Bolgatanga	26	14	Anthrax
2002	Bongo, Kessena, West Gonja, Na, Jirapu-Lambus, Gushiegu-Karaga, Techiman, Krachi, East Maprusi, Builsa and Lawra	1400	190	Meningococcal disease
2005 November	Greater Accra, Ashanti	-	-	Cholera
2006 March	Komenda	-	-	Cholera
2007 April	Accra	-	-	Avian influenza ("bird flu")
2007 May	Poultry farm north of Accra	-	-	
2008 September	Greater Accra	-	-	Cholera
2009 October	Bongo	-	-	Rabies
2009 January	Greater Accra, Okaikoi, Ablekuma, Ayawaso, Anyako, Keta	-	-	Cholera
2009 June	Tindongo in the Talensi-Nabdram	-	-	Anthrax
2010 February	The Upper West	96	17	Meningococcal
2010 November	Eastern region of Ghana	-	-	Cholera
2011 January	Southern Ghana	-	-	Cholera
2011 February	Accra	505	6	Cholera

General government expenditure on health as % of total government expenditure in 2007 was 10.7%. In 2008, there was one physician per 9,583 people. Number of hospital beds per 10,000 individuals: 9 (2008)

An Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- *Schistosomiasis*
- *African trypanosomiasis*
- *Anthrax*
- *Lymphatic filariasis*
- *Onchocerciasis*
- *Dengue fever*
- *Brucellosis*
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
191	193	192

Guinea

Population and Geographical Location

In 2011, Guinea had a population of 10,601,009 and an area of 245,857 km². It is located in East Africa. Guinea is bordered by Senegal and Mali to the North, Mali and the Ivory Coast to the east, Liberia and Sierra Leone to the south and the Atlantic Ocean and Guinea-Bissau to the west.

Climate and Health Status

Guinea has a tropical climate. It is always hot, humid.

The population using improved drinking-water sources (%): urban 89%, rural 61%, total 71%, (2008).

The average life expectancy for males and females: 56.63 and 59.64 years, respectively (2011).

The main causes of mortality are: infectious and parasitic diseases, cardiovascular disease, injuries and malignant neoplasm.

In 2011, the infant mortality rate was 61.03 per 1000 live births.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travel who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Meningo coccal	Recommended	Travel through December to June Long term presence in crowded areas College-freshman New Soldiers	Before traveling	-	History of severe allergic reaction to dry natural rubber (latex) Age > 55 years	Redness, pain, fever, allergic reaction
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling	-	Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1996	Bissau and Biombo	10000	100	Cholera
2005 June	Bandim, Bimbo, Sao Domingas, Quinara, and Oio	20000	300	Cholera
2008 May	Nationwide	-	-	Cholera
2008	N'zerekore,	2	-	Yellow fever
2008 December	Faranah	2	-	Yellow fever
2009 January	Nationwide	14000	225	Cholera
2010	-	1013	2	Measles
2009	Malikila, Faralako, Mandiana,	1	-	Yellow fever
2005	Fouta Djalon, Mamou, Dalaba	114	26	Yellow fever
2004 November	Faranah	6	-	Yellow fever
2003 January	Macenta and Kerouane	43	24	Yellow fever
2001 September	Conakry and N'zerekore	-	-	Yellow fever
2000 December	northwestern part of the country	-	200	Yellow fever
2006 March	western region of Kankan	-	-	Meningococcal disease
2002		123	23	Meningococcal disease

The population of people infected with HIV is 79,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV is 1.3% (2009).

General government expenditure on health as % of total government expenditure in 2007 was 4.7%.

In 2005, there was one physician per 11,278 people and there were 3 (2005) hospital beds per 10,000 individuals.

An Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Schistosomiasis
- African trypanosomiasis (sleeping sickness)
- Lymphatic filariasis
- Onchocerciasis
- Rift Valley fever
- Lassa fever
- Dengue fever
- Brucellosis
- HIV (human immunodeficiency virus)

Emergency Numbers

Currently there is no emergency number available.

Ivory Coast

Population and Geographical Location

In 2011, Ivory Coast had a population of 21,504,162 and an area of 322,463 km². It is located in West Africa and the northern coast of the Gulf of Guinea. It is bordered by Mali and Burkina Faso to the north, Ghana to the east, the Gulf of Guinea to the south and Liberia and Guinea to the west.

Climate and Health Status

The Ivory Coast has a tropical climate along the coast. It is semi-arid in the far north. There are three types of weather in Ivory Coast: warm and dry (November to March), hot and dry (March to May), hot and wet (June to October).

The population uses improved drinking - water sources (%): urban 93%, rural 68%, total 80%, (2008).

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travel who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Meningococcal	Recommended	Travel through December to June Long term presence in crowded areas College-freshman New Soldiers	Before traveling	-	History of severe allergic reaction to dry natural rubber (latex) Age > 55 years	Redness, pain, fever, allergic reaction
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone/Proguanil, Doxycycline, Mefloquine	Confirmed	Everywhere	All travelers younger than 9 months of age	On arrival / If coming from an endemic area and if younger than 1 year old

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg(25lb) Doxycycline should not be prescribed Precautionary measures like bed net and DEET formulation for children older than 2 years
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Malaria	Using Mefloquine in first semester and proguanil in pregnancy is not recommended Preventive instruments like bed net and DEET formulation
	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Disease
2001	-	-	-	Cholera
2001 May	Danan and Duekou	4	3	Yellow fever
2001 September	Abidjan	200	20	Yellow fever
2002 Summer				Cholera
2002 January - April	-	244	43	Meningococcal disease
2003 January	Tablguikougly	70	15	Cholera
2005 September	-	-	-	Yellow fever
2006	Nationwide	-	-	Cholera
2006 April	Tengrela	-	-	Meningococcal meningitis
2006 April	Abidjan	-	-	H5N1 avian influenza ("bird flu")
2006 June	San Pedro	-	-	H5N1 avian influenza ("bird flu")
2006 July	Abidjan	-	-	Cholera
2006 October	Korhogo, Ouragahio, central-west	2	-	Yellow fever
2007	Boundiali	36	6	Meningococcal disease
2007 February	Bouake	100	28	Meningococcal disease
2008	-	2	-	Dengue fever
2008 August	Abidjan	19	-	Yellow fever
2009 March	-	5	-	Dengue fever
2009 November	Ordienne	37	21	Yellow fever
2010 first three months	Nationwide	491	3	Measles
2011 January	Seguela, Mankono, Beoumi, Katiola	79	35	Yellow fever
2011 January	Adjame	-	8	Cholera

Emergency Numbers

Police	Medical	Fire
180	-	170

The average life expectancy for males and females: 55.79 and 57.81 years, respectively (2011). The main causes of mortality are: infectious and parasitic diseases, cardiovascular disease, injuries and malignant neoplasm. In 2011, the infant mortality rate was 64.78 per 1000 live births. The population of people infected with HIV is 450,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV was 3.4% (2009). General government expenditure on health as a % of total government expenditure in 2007 was 4.8%. In 2004, there was one physician per 10,333 people and there were 4 (2006) hospital beds per 10,000 individuals. An Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Schistosomiasis
- Ebola hemorrhagic fever
- Anthrax
- African trypanosomiasis
- Lymphatic filariasis
- Onchocerciasis
- Brucellosis
- HIV (human immunodeficiency virus)

Mali

Population and Geographical Location

Mali is a landlocked country that had a population of 14,159,904 and an area of 1,240,192 km² in 2011. It is located in West Africa. Mali is bordered by Mauritania to the north, Algeria to the northeast, Niger to the east and southeast, Burkina Faso, Ivory Coast and Guinea to the south and Senegal and Mauritania to the west.

Climate and Health Status

Mali has subtropical to arid climate. The climate is hot and dry from February to June. It is rainy, humid, and mild from June to November and it is cool and dry from November to February. The population uses improved drinking-water sources (%): urban 81%, rural 44%, total 56%, (2008). The average life expectancy for males and females: 51.01 and 54.26 years, respectively (2011). The main causes of mortality are: infectious and parasitic diseases, cardiovascular disease, injuries and malignant neoplasm.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Meningococcal	Recommended	Travel through December to June Long term presence in crowded areas College-freshman New Soldiers	Before traveling	-	History of severe allergic reaction to dry natural rubber (latex) Age > 55 years	Redness, pain, fever, allergic reaction
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone/Proguanil, Doxycycline, Mefloquine	Confirmed	Everywhere	All travelers younger than 9 months of age	On arrival / If coming from an endemic area and if younger than 1 year old

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg(25lb) Doxycycline should not be prescribed Precautionary measures like bed net and DEET formulation for children older than 2 years
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Malaria	Using Mefloquine in first semester and proguanil in pregnancy is not recommended Preventive instruments like bed net and DEET formulation
	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1981, 1989, and 1994	-	-	-	Meningococcal disease
1996	-	-	More than 300 deaths	Meningococcal disease
2002 April	-	382	33	Meningococcal disease
2002	Ansonga and Niafunke	-	-	Meningococcal disease
2004	Mopti, Segou, Timbouctou, Koulikoro, Sikasso, and Bamako			Cholera
2005 November	Bafoulabe district	53	23	Yellow fever
2005 January	District of Kita			Yellow fever
2005 June - July	Nationwide	158	20	Cholera
2006 April	Sikasso	428	30	Meningococcal disease
2007 March	Mali	73	6	Meningococcal disease
2008 November	Kayes			Dengue fever
2010	Nationwide	774	1	Measles

In 2011, the infant mortality rate was 111.35 per 1000 live births, which was one of the highest in the world.

The population of people infected with HIV is 76,000 but the prevalence rate of 15- to 49-year-old adults with HIV was 1% (2009).

General government expenditure on health as a % of total government expenditure in 2007 was 11.8%.

In 2007, there was one physician per 13,358 people and there were 6 (2008) hospital beds per 10,000 individuals.

An Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Schistosomiasis
- African trypanosomiasis (sleeping sickness)
- Lassa fever
- Lymphatic filariasis
- Onchocerciasis
- Rift Valley fever
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
17	15	18

Mauritania

Population and Geographical Location

In 2011, Mauritania had a population of 3,281,634 and an area of 1,030,700 km². It is located in Northwest Africa and bordering the North Atlantic Ocean, between Senegal and Western Sahara, Algeria in the east, Mali to the east and south and Senegal in the south as well.

Climate and Health Status

Mauritania has a hot and humid climate in the coastal region and the desert region is constantly hot, dry and dusty. The population uses improved drinking-water sources (%): urban 52%, rural 47%, total 49%, (2008).

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Meningococcal	Recommended	Travel through December to June Long term presence in crowded areas College-freshman New Soldiers	Before traveling	-	History of severe allergic reaction to dry natural rubber (latex) Age > 55 years	Redness, pain, fever, allergic reaction
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cypopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone/Proguanil, Doxycycline, Mefloquine	Confirmed	Everywhere	All travelers younger than 9 months of age	On arrival / If coming from an endemic area and if younger than 1 year old

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection

Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg(25lb) Doxycycline should not be prescribed Precautionary measures like bed net and DEET formulation for children older than 2 years
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Malaria	Using Mefloquine in first semester and proguanil in pregnancy is not recommended Preventive instruments like bed net and DEET formulation
	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1998	Southeastern part of the country	300	6	Rift Valley fever
2003	Nouakchott	38	35	Crimean-Congo hemorrhagic fever
2005	Brakna, Guidimakha, and Traza	2600	-	Cholera
2010	Mauritania	-	-	Measles
010	Aoujeft	-	17	Rift valley fever

The average life expectancy for males and females: 58.94 and 63.41 years, respectively (2011).

The main causes of mortality are: infectious and parasitic diseases, cardiovascular disease, injuries and malignant neoplasm.

In 2011, the infant mortality rate was 60.42 per 1000 live births.

The population of people infected with HIV is 14,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.7% (2009).

General government expenditure on health as a % of total government expenditure in 2007: 5.3%

The number of physician is not reported and there were 4 (2006) hospital beds per 10,000 individuals.

An Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Schistosomiasis
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
117	-	118

Niger

Population and Geographical Location

In 2011, Niger had a population of 16,468,886 and an area of 1,267,000 km². It is the sixth largest country in Africa. This country is located in Northwest Africa and is landlocked. It is bordered by Libya to the north, by Algeria to the northwest, by Mali to the west, by Burkina Faso to the southwest and by Chad to the east.

Niger is mainly a desert (northern areas); however, the southern areas contain tropical grasslands. Its average altitude is approximately 350 meters.

Climate and Health Status

Niger has a desert climate. The climate is mostly hot, dry, dusty and tropical in southernmost areas. The population uses improved drinking-water sources (%): urban 96%, rural 39%, total 48%, (2008). The average life expectancy for males and females: 52.13 and 54.7 years, respectively (2011).

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	1. Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Meningococcal	Recommended	Travel through December to June Long term presence in crowded areas College-freshman New Soldiers	Before traveling	-	History of severe allergic reaction to dry natural rubber (latex) Age > 55 years	2. Redness, pain, fever, allergic reaction
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	3. Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	4. Myalgia, allergic reaction

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	5. Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	6. Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	7. Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	8. Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	9. Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone/Proguanil, Doxycycline, Mefloquine	Confirmed	Everywhere	All travelers younger than 9 months of age	On arrival / If coming from an endemic area and if younger than 1 year old

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg(25lb) Doxycycline should not be prescribed Precautionary measures like bed net and DEET formulation for children older than 2 years
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Common diseases	Malaria	Using Mefloquine in first semester and proguanil in pregnancy is not recommended Preventive instruments like bed net and DEET formulation
	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester
Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2011	Nationwide	1630	1	Measles
2010	Nationwide	352	1	Measles
2009	Nationwide	11609	472	Meningococcal disease
2006	-	84	14	Meningococcal disease
2006	Madarounfa and Guidan-Roundji	614	44	Meningococcal disease
2003	Magaria, Aguié and Matameye	2056	195	Meningococcal disease
2002	Diffa	3518	308	Meningococcal disease
2001	Gay, Boboye, Doutchi, Madoua	8000	600	Meningococcal disease
2011	Nationwide	1008	26	Cholera
2010	Diffa, Maradi, Tahoua, and Zinder	976	70	Cholera
2008	Tahoua and Maradi	1000	70	Cholera
2006	-	1200	79	Cholera
2006	Tillabéri and Maradi	147	22	Cholera
2005	Bouza, Tahoua, Tillabéri	431	44	Cholera
2004	Tillabéri	137	5	Cholera

The main causes of mortality are: infectious and parasitic diseases, injuries, cardiovascular disease and malignant neoplasm.

In 2011, the infant mortality rate was among the highest in the world: 112.22 cases per 1000 live births. The population of people infected with HIV is 61,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.8% (2009). General government expenditure on health as a % of total government expenditure in 2007 was 12.4%.

In 2008, there was one physician per 57,184 people and there were 3 (2005) hospital beds per 10,000 individuals. Niger and the World Health Organization have worked together to eliminate common diseases such as malaria, yaws and intestinal worms.

The Niger government is attempting to revise and improve its labor and health laws, how hospitals are managed and its clinics and health centers. Many social welfare services such as care for the elderly, disabled and orphans are managed by a complex social system of traditional tribes.

The annual rate of population increase is approximately 3%.

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Schistosomiasis
- Lymphatic filariasis
- Onchocerciasis
- Rift Valley fever
- Brucellosis
- HIV (human immunodeficiency virus) infection is reported, but travelers are not at risk

Emergency Numbers

Currently there is no emergency number available.

Nigeria

Population and Geographical Location

In 2011, Nigeria had a population of 155,215,573 and an area of 923,768 km². It is located in West Africa along the coast of the Atlantic Ocean and the Gulf of Guinea. Nigeria is bordered by Niger to the north, by Lake Chad to the east, Cameroon to the east and the northeast, the Gulf of Guinea to the south and Benin to the west.

Climate and Health Status

The climate in Nigeria is varied. It is equatorial in the south, tropical in the center and arid in the north.

The population uses improved drinking - water sources (%): urban 75%, rural 42%, total 58%, (2008).

The average life expectancy for males and females: 46.76 and 48.41 years, respectively (2011).

The main causes of mortality are: infectious and parasitic diseases, cardiovascular disease, injuries and malignant neoplasm.

General government expenditure on health as a % of total government expenditure in 2007 was 6.5%.

In 2008, there was one physician per 2,803 people and there were 5 hospital beds (2004) per 10,000 individuals.

The population of people infected with HIV is 3,300,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV was 3.6% (2009).

In 2011, the infant mortality rate was 91.54 per 1000 live births.

In this country, access to health services is only possible for rich residents in large cities. The common diseases in Nigeria are malaria and yellow fever.

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Onchocerciasis
- Schistosomiasis
- HIV (human immunodeficiency virus)
- Dengue fever
- African trypanosomiasis
- Leptospirosis
- Lymphatic filariasis
- Rift Valley fever
- West Nile fever
- Brucellosis
- Myiasis

Emergency Numbers

Police	Medical	Fire
199	199	199

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Meningococcal	Recommended	Travel through December to June Long term presence in crowded areas College-freshman New Soldiers	Before traveling	-	History of severe allergic reaction to dry natural rubber (latex) Age > 55 years	Redness, pain, fever, allergic reaction
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone/Proguanil, Doxycycline, Mefloquine	Confirmed	Everywhere	All travelers younger than 9 months of age	On arrival / If coming from an endemic area and if younger than 1 year old

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines			
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection			
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections			
Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg(25lb) Doxycycline should not be prescribed Precautionary measures like bed net and DEET formulation for children older than 2 years		
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary		

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third semester pregnancy			
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration			
Common diseases	Malaria	Using Mefloquine in first semester and proguanil in pregnancy is not recommended Preventive instruments like bed net and DEET formulation		
	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester		

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1996	Kano, Bauchi, Kaduna, Katsina, Kebbi, Sokoto, and Jigawa	17000	2500	Meningococcal disease
2004 March	Jigwa	327	46	Meningococcal disease
2004 November	Kano and Edo States	1616	126	Cholera
2005 December	Delta	-	-	Cholera
2005 October	Borno	-	-	Cholera
2005 February	Adamawa state	1100	76	Measles
2006	Bauchi, Jigawa, Kaduna, Kano and Katsina	1129	-	Poliomyelitis
2006 September	Borno	-	-	Cholera
2006 January	Ogun and Lagos	-	-	Cholera
2006 February	Poultry farms	-	-	H5N1 avian influenza ("bird flu")
2007		116		Poliomyelitis
2007 November	Ajakajak	-		Cholera
2007 October	Makurdi, Bauchi			Cholera
2007 January	Delta State, Oshimili South, Oshimili North, Aniocha South, Bomadi and Burutu	-	-	Cholera
2007 December	Zaria and Kaduna	-	200	Measles
2007 June	Borno	-	-	Measles
2008 March and June	Edo, Plateau, Lagos, Ogun, Nasarawa, Taraba, Borno, and Anambra	2	2	Lassa fever
2008	Nationwide	229	30	Lassa fever
2008 June	Northern Nigeria			Poliomyelitis
2008	-	783		Poliomyelitis
2008 December	Kula in Rivers state,	-	-	Cholera
2008 October	Gombe and Sokoto	-	-	Cholera
2008 September	Katsina, Zamfara, Bauchi, and Kano	-	-	Cholera
2008 July	Kaduna	-	-	Cholera
2008 March	Central Benue	-	-	Cholera
2008 February	Northern Cross River state	-	-	Cholera
2008 January	Gbajimba in Benue State	-	-	Cholera
2008 October	Katsina State	50000	400	Malaria
2008 July	Katsina, Kano, Kebbi, and Gombe			H5N1 avian influenza ("bird flu")
2009 February	Bauchi, Gombe, Katsina, Jigawa, and Yobe	47902	2148	Meningococcal disease
2009 February	Federal capital territory	390	55	Lassa fever
2009 January	-	-	1	Lassa fever

Date	Area	Cases	Mortality	Diseases
2009	-	388	-	Poliomyelitis
2009 November	Borno and Taraba	-	-	Cholera
2009 August	Adamawa	-	-	Cholera
2009 January	Ndiagu-Anagu, Ebonyi State, Dokogi			Cholera
2010	-	3	-	Poliomyelitis
2010 August	Bauchi and Borno	-	-	Cholera
2010 May	Ibwa	-	-	Cholera
2010 January	Opobo	-	-	Cholera
2010	Bayelsa State	4700	26	Measles

Senegal

Population and Geographical Location

In 2011, Senegal had a population of 12,643,799 and an area of 196,722 km². It is located in West Africa and in the eastern coast of the Atlantic Ocean. It is bordered by Mauritania to the north and the northeast, Mali to the east, Guinea and Guinea Bissau to the south and Gambia and the Atlantic Ocean to the west.

Climate and Health Status

Senegal has a tropical, hot and humid climate. The rainy season (May to November) has strong southeast winds and the dry season (December to April) is dominated by hot, dry, Harmattan wind. The population uses improved drinking-water sources (%): urban 92%, rural 52%, total 69%, (2008). Average life expectancy for males and females: 57.85 and 61.77 years, respectively (2011). The main causes of mortality are: infectious and parasitic diseases, respiratory infections, cardiovascular disease and injuries. In 2011, the infant mortality rate was 56.42 per 1000 live births. The population of people infected with HIV is 59,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.9% (2009).

General government expenditure on health as a % of total government expenditure in 2007 was 12.1%. In 2008, there was one physician per 17,063 people and there were 3 (2008) hospital beds per 10,000 individuals.

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Trichinellosis
- Louse-borne relapsing fever
- African trypanosomiasis
- Lymphatic filariasis
- Onchocerciasis
- Tick-borne relapsing fever
- Crimean-Congo hemorrhagic fever
- Schistosomiasis
- Rift Valley fever
- HIV (human immunodeficiency virus)

Emergency Numbers

Currently there is no emergency number available.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Meningococcal	Recommended	Travel through December to June Long term presence in crowded areas College-freshman New Soldiers	Before traveling	-	History of severe allergic reaction to dry natural rubber (latex) Age > 55 years	Redness, pain, fever, allergic reaction
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone/Proguanil, Doxycycline, Mefloquine	Confirmed	Everywhere	All travelers younger than 9 months of age	On arrival / If coming from an endemic area and if younger than 1 year old

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg(25lb) Doxycycline should not be prescribed Precautionary measures like bed net and DEET formulation for children older than 2 years
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Malaria	Using Mefloquine in first semester and proguanil in pregnancy is not recommended Preventive instruments like bed net and DEET formulation
	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1999 February	Kaolack, Fatick and Kolda	3000	400	Meningococcal disease
2002 October	Touba, Mbacke, Bambey, Diourbel, Gossas, Fatick, Guinguineo, Fatick, Darou Mousty, Kebemer, Louga, Khombole, Thiadiaye, Thies, Tambacounda, Sedhiou, Kolda, Dakar	60	11	Meningococcal disease
2002 January	Touba	-	-	Yellow fever
2002		121	7	Yellow fever
2004 October	Dakar	861	6	Meningococcal disease
2005 January	Dakar, Diourbel, Fatick, Kaolack, Saint Louis, Tambacounda, Thies	23235	303	Cholera
2005	Royal Marines	-	-	Cholera
2005 October	District of Goudiri	-	2	Chikungunya fever
2007	Saint-Louis, Touba, Louga, Thies, Dakar, Diourbel, Fatick, and Kaolack	2200		Chikungunya fever
2007 March	Touba			Cholera
2009 November	Kedungo Region and Dakar			Cholera
2010	-	560	0	Dengue fever

Sierra Leone

Population and Geographical Location

In 2011, Sierra Leone had a population of 5,363,669 and an area of 71,740 km². It is located in West Africa.

It is bordered by Guinea to the north and northeast, Liberia to the east and the Atlantic Ocean to the south and the west.

Climate and Health Status

The coastal strip is plain, low and swampy and it is covered with tropical forests. Summer is the rainy season (May to December) and winter is the dry season (December to April).

The population uses improved drinking-water sources (%): urban 86%, rural 26%, total 49%, (2008). The average life expectancy for males and females: 53.69 and 58.65 years, respectively (2011).

The main causes of mortality are: infectious and parasitic diseases, injuries, cardiovascular disease and malignant neoplasm. In 2011, the infant mortality rate was 78.38 per 1000 live births.

This is the highest in the world.

The population of people infected with HIV is 49,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV is 1.6% (2009).

General government expenditure on health as a % of total government expenditure in 2007 was 7.8%. In 2008, there was one physician per 56,460 people and there were 4 (2006) hospital beds per 10,000 individuals.

Sierra Leone does not have enough staff and or equipment for healthcare. An Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Schistosomiasis
- African trypanosomiasis
- Lymphatic filariasis
- Onchocerciasis
- Dengue fever
- HIV (human immunodeficiency virus)

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Mefloquine Doxycycline Atovaquone/Proguanil	Confirmed	Everywhere	All above 9 months	If from an endemic region

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg(25lb) Doxycycline should not be prescribed Precautionary measures like bed net and DEET formulation for children older than 2 years
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Malaria	Using Mefloquine in first semester and proguanil in pregnancy is not recommended Preventive instruments like bed net and DEET formulation
	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1997 - 1998	Kenema district	800	150	Lassa fever
1998 September	-	-	-	Cholera
1999 September	-	-	-	Cholera
1999 November	Nationwide	-	-	Shigella flexneri
2000 July	Kenema		1	Lassa fever
2000 February	Daru	1	-	Lassa fever
2003 August	Tonkolili, Bombali, Kenema, Koinadugu, Porto Loko, Kambia and Kono	90	-	Yellow fever
2004 April	Eastern part of Sierra Leone	-		Lassa fever
2004 August	New Jersey resident after four months in Liberia and Sierra Leone	-	1	Lassa fever
2005 December	Delken, Bonthe	1000	-	Cholera
2006 July	-	1	-	Lassa fever
2007 September	Kambia, Kenema, Newton			Cholera
2007 January	-	1746	170	Cholera
2008 December	Bo	2	-	Yellow fever
2010	-	351	1	Measles

Emergency Numbers

Police	Medical	Fire
019	999	999

Togo

Population and Geographical Location

Togo is a long narrow country with a population of 6,771,993 and an area of 56,785 km². It is located in North Africa and it is bordered by Burkina Faso in the north, Benin to the east, the Gulf of Benin to the south and Ghana to the west.

Climate and Health Status

Togo has a tropical, hot and humid climate in the south and a semi-arid climate in the north.

The population uses improved drinkingwater sources (%): urban 87%, rural 41%, total 60%, (2008).

The average life expectancy for males and females: 60.19 and 65.3 years, respectively (2011).

The main causes of mortality are: infectious and parasitic diseases, cardiovascular disease, injuries and malignant neoplasm.

In 2011, the infant mortality rate was 51.48 per 1000 live births.

The population of people infected with HIV is 120,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV was 3.2% (2009).

General government expenditure on health as a % of total government expenditure in 2007 was 7.7%.

In 2008, there was one physician per 19,404 people and there were 9 (2005) hospital beds per 10,000 individuals.

An Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Schistosomiasis
- African trypanosomiasis
- Cholera
- Dengue fever

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Meningococcal	Recommended	Travel through December to June Long term presence in crowded areas College-freshman New Soldiers	Before traveling	-	History of severe allergic reaction to dry natural rubber (latex) Age > 55 years	Redness, pain, fever, allergic reaction
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone/Proguanil, Doxycycline, Mefloquine	Confirmed	Everywhere	All travelers younger than 9 months of age	On arrival / If coming from an endemic area and if younger than 1 year old

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines		
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection		
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections		
Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg(25lb) Doxycycline should not be prescribed Precautionary measures like bed net and DEET formulation for children older than 2 years	
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary	

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Malaria	Using Mefloquine in first semester and proguanil in pregnancy is not recommended Preventive instruments like bed net and DEET formulation
	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1996 November	Savanes	-	-	Meningococcal disease
2002 January - April	Assoli, Tchamba, Sotouboua, Blitta, and Wawa	-	-	Meningococcal disease
2006 December	Dankpen, Kara, Oti, Savanes	3	-	Yellow fever
2007 January	Kozah, Kara, Lacs, Maritime	2	-	Yellow fever
2007 June	Poultry farm in Maritime province, south Togo	-	-	H5N1 avian influenza ("bird flu")
2007 August	Lacs, Golfe and Zio			H5N1 avian influenza ("bird flu")

Emergency Numbers

Police	Medical	Fire
101	-	-

Section II: America

The Caribbean

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Cuba

Population and Geographical Location

In 2011, Cuba had a population of 11,087,330 and an area of 110,860 km². It is located in the Caribbean Sea and the western waters of the Atlantic Ocean. This country is comprised of the large island of Cuba, a smaller island which is called Pinus, and 1,600 other islets and reefs.

Climate and Health Status

Cuba has a tropical climate, moderated by trade winds. The dry season starts from November to April and the rainy season starts from May to October. The population using improved drinking water sources (%): urban 96%, rural 89%, total 94% (2008). The average life expectancy for males and females: 75.46 and 80.08 years, respectively (2011). The main causes of mortality are: cardiovascular disease, malignant neoplasm, injuries and digestive diseases. In 2011, the infant mortality rate was 4.9 deaths per 1,000 live births. There are 7,100 people infected with HIV, but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.1% (2009).

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Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received the vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reactions from previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old, Hypersensitivity to vaccine components, Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers, Those with close contact with the natives, People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately-to- severely ill patients, Those with a history of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine, Those with a negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reactions to gelatin or neomycin, Pregnancy, Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children, Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B, Pregnancy, Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reactions	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old, Injectable vaccine is approved for children over 2 years old, Severe local or systemic reactions to a prior dose, There is no data about the safety of the typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and with a negative history of chickenpox infection, Those who have received one dose of the vaccine with negative blood test results for chickenpox immunity	Before traveling	-	Pregnancy, Known severe immunodeficiency, History of immediate hyper sensitivity reactions to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia

Malaria			Yellow fever		
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements	
Not confirmed	Not seen	Not seen	-	-	

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections

Important Points for Safely Traveling with Children (Continued)

Common disease	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary
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Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common disease	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2001- 2002	Havana	3000	-	Dengue fever
2006	Cerro, Playa, Centro Habana, Arroyo Naranjo, and Santiago de Cuba	-	-	Dengue fever

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

The general government expenditure on health as a percentage of total government expenditures in 2007 was 14.5%. In 2007, there was one physician per 158 people and there were 60 hospital beds per 10,000 individuals. The above statistics represent the best examples of industrial countries in South America. These successes are the result of feedback from government policies for increasing the level of education and health in the country. About 95% of the people are vaccinated against 11 diseases, including include polio, diphtheria and measles.

Other Infections

- West Nile virus
- Viral Meningo Encephalitis
- Leptospirosis
- Brucellosis
- Fascioliasis
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
106	-	105

Dominican Republic

Population and Geographical Location

In 2011, the Dominican Republic had a population of 9,956,648 and an area of 48,670 km². It is located in Central America and in the northern border of the Caribbean Sea. This country is on the eastern half of the island of Hispaniola, which is a part of the Greater Antilles. The Dominican Republic is bordered by Haiti to the east.

Climate and Health Status

The Dominican Republic has a maritime tropical climate with little seasonal temperature variation. Seasonal variation in rainfall. The population using improved drinking - water sources (%): urban 87%, rural 84%, total 86% (2008). The average life expectancy for males and females: 75.16 and 79.55 years, respectively (2011). The main causes of mortality are: cardiovascular disease, infectious and parasitic diseases, malignant neoplasm and injuries.

In 2011, the infant mortality rate was 22.22 deaths per 1,000 live births. There are 57,000 people infected with HIV, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.9% (2009).

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received the vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reactions from previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old, Hypersensitivity to vaccine components, Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Those with close contact with the natives, People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately-to- severely ill patients, Those with a history of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine, Those with a negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reactions to gelatin or neomycin, Pregnancy, Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children, Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B, Pregnancy, Immunodeficiency,	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reactions	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old, Injectible vaccine is approved for children over 2 years old, Severe local or systemic reactions to a prior dose, There is no data about the safety of typhoid vaccines in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection, Those who have received one dose of vaccine with negative blood test results to chickenpox immunity	Before traveling	-	Pregnancy, Known severe immunodeficiency, History of immediate hyper sensitivity reactions to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travelling to eastern regions of the Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling	-	Immunocompromised patients, Pregnancy, Allergic reaction to eggs Diseases of the thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Chloroquine	-	All areas (including resort areas) except the cities of Santiago and Santo Domingo. Risk is greatest in the western provinces near the Haitian border, including Castanuelas, Hondo Valle, Pepillo Salcedo, Monte Cristi, Dajabon, Elias Pina, and Valverde Mao	-	Not necessary

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common disease	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common disease	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2000	Bavaro Beach	-	-	Malaria
2000		13	-	Poliomyelitis

Date	Area	Cases	Mortality	Diseases
2004 April	Santo Domingo	20	-	Mycobacterium abscessus infections
2004 November	Punta Cana resort Area in La Altagracia	20	-	Malaria
2005 September and October	-	2	-	Malaria
2006	-	6,143	53	Dengue fever
2007 First eleven months of	-	9,000	30	Dengue fever
2007 November	Hurricane Noel, Ozama River, Santo Domingo, San Cristobal, Barahona	200	25	Leptospirosis
2007 October-November	Punta Cana	12	-	Malaria
2008	-	3,600	-	Dengue fever
2008 February	-	1	-	Malaria
2008 October	-	40,000	-	Viral conjunctivitis ("pink-eye")
2009 September	Northern part	-	-	Dengue fever
2009 October	Bahoruco and Barahona	-	-	Leptospirosis
2009 November	-	5,000	44	Dengue fever
2010 June	Santiago	21,000	41	Dengue fever

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

The general government expenditure on health as a percentage of total government expenditures in 2007 was 9.2%. In 2000, there was one physician per 627 people and there were 10 (2008) hospital beds per 10,000 individuals. They have constructed a surface water collection system, waste factories and water channels and directed them to all parts of the large cities. Many public institutions were established in order to increase access to safe water. Governmental programs are responsible for some health services, but the government is not responsible for the welfare system.

Other Infections

- Diffuse cutaneous leishmaniasis
- Schistosomiasis
- Brucellosis
- Lymphatic filariasis
- Eastern equine encephalitis
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
911	911	911

Jamaica

Population and Geographical Location

In 2011, Jamaica had a population of 2,868,380 and an area of 10,991 km². It is located in Central America and in the Caribbean Sea.

Climate and Health Status

Jamaica has a hot, humid, rainy and mild climate in the eastern highlands. The population using improved drinking water sources (%): urban 98%, rural 89%, total 94% (2008). The average life expectancy for males and females: 71.79 and 75.19 years, respectively (2011). The main causes of mortality are: cardiovascular disease, malignant neoplasm, diabetes mellitus and infectious and parasitic diseases. In 2011, the infant mortality rate was 14.6 deaths per 1,000 live births. There are 32,000 people infected with HIV, but the prevalence rate of 15- to 49-year-old adults infected with HIV was 1.7% (2009). The general government expenditure on health as a percentage of total government expenditures in 2007 was 5.2%. In 2003, there was one physician per 1,263 people and there were 17 (2008) hospital beds per 10,000 individuals.

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1995	-	-	-	Dengue fever
2000 April	-	12	-	Eosinophilic meningitis
2006	Delacree Park, Denham, Tivoli, Trench, and Greenwich	370	-	Malaria
2007 October	-	-	-	Leptospirosis
2007 October	-	4,000	18	Dengue fever
2007 June	St. Catherine, St. Thomas, and Clarendon	-	-	Malaria
2007 October	Kingston	2	-	Malaria
2008 September	St. Catherine	3	-	Malaria
2009 March	Caymanas Park	5	-	Malaria
2010 February	Kingston	1	-	Malaria

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Other Infections

- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
119	110	110

Puerto Rico

Population and Geographical Location

Puerto Rico is an island which had a population of 3,989,133 and an area of 9,104 km² in 2011. It is located in Central America and in the northern margin of the Caribbean Sea and in the west of the Atlantic Ocean.

Climate and Health Status

Puerto Rico has a tropical marine and mild climate. It has little seasonal temperature variation.

The population using improved drinking water sources (%) was not reported in 2008. The average life expectancy for males and females: 75.31 and 82.71 years, respectively (2011). The main causes of mortality are: cardiovascular disease, injuries, malignant neoplasm and infectious and parasitic diseases. In 2011, the infant mortality rate was 8.07 deaths per 1,000 live births. There are 7,397 (1997) people infected with HIV, but the prevalence rate of 15- to 49-year-old adults infected with HIV is not available. The general government expenditure on health as a percentage of total government expenditures is not available (unreported). In 2001, there was one physician per 567 people and there were 13 (2008) hospital beds per 10,000 individuals.

Other Infections

- Schistosomiasis
- Fascioliasis
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
911	911	911

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reactions from previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old, Hypersensitivity to vaccine components, Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers, Those with close contact with the natives, People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately-to- severely ill patients, History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine, Those with a negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reactions to gelatin or neomycin, Pregnancy, Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children, Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B, Pregnancy, Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reactions	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old, Injectible vaccine is approved for children over 2 years old, Severe local or systemic reactions to a prior dose, There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and with a negative history of chickenpox infection, Those who have received one dose of vaccine with negative blood test results for chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency, History of immediate hyper sensitivity reactions to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of the Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling	-	Immuno-compromised patients, Pregnancy, Allergic reaction to eggs, Diseases of the thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever		
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements	
Not confirmed	Not seen	Not seen	-	-	

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection

Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common disease	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common disease	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2003 August-October	Puerto Rico	500,000	-	Acute hemorrhagic conjunctivitis
2004 June	Nationwide	400	-	Viral meningitis
2007	Nationwide	11,000	8	Dengue fever
2009	Nationwide	3,000		Dengue fever
2010 March	Nationwide	12,000	30	Dengue fever

Trinidad and Tobago

Population and Geographical Location

In 2011, Trinidad and Tobago had a population of 1,227,505 and an area of 5,128 km².

It consists of an archipelago at the estuary of Rio Orinoco, in the coastal waters of Venezuela and South America, located at the south end of the Antilles islands and in the south of the Caribbean Sea.

Climate and Health Status

Trinidad and Tobago has a hot, humid climate.

The rainy season starts from June to December but because of continental winds its climate is relatively mild.

The population using improved drinking - water sources (%): urban 98%, rural 93%, total 94% (2008).

The average life expectancy for males and females: 68.51 and 74.3 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, infectious and parasitic diseases, malignant neoplasm and diabetes mellitus.

In 2011, the infant mortality rate was 27.69 deaths per 1,000 live births.

There are 15,000 people infected with HIV, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 1.5% (2009).

The general government expenditure on health as a percentage of total government expenditures in 2007 was 9.4%.

In 2007, there was one physician per 796 people and there were 27 (2008) hospital beds per 10,000 individuals.

Other Infections

- Oropouche fever
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
999	990	990

Current Outbreaks and Mortality Table

Date	Area	Cases	Mortality	Diseases
1988, 1995, and 1999	-	-	-	Yellow fever
2008 January	-	100	-	Dengue fever
2009 January	Mayaro and Nariva	-	-	Yellow fever
2010 July	-	600	3	Dengue fever
2011	Forested areas of the island	-	-	Yellow fever

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Central America

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Costa Rica

Population and Geographical Location

In 2011, Costa Rica had a population of 4,576,562 people and an area of 51,100 km². It is located in Central America. This country is bordered by Nicaragua to the north, Panama and the Caribbean Sea to the east and the Pacific Ocean to the south and the west.

Climate and Health Status

Costa Rica has a tropical and subtropical climate. The dry season starts from December to April and the rainy season starts from May to November. It is cooler in highlands. The population uses improved drinking-water sources (%): urban 100%, rural 91%, total 97%, (2008). The average life expectancy for males and females: 75.1 and 80.46 years, respectively (2011). The main causes of mortality are: cardiovascular disease, malignant neoplasm, injuries and infectious and parasitic diseases. In 2011, the infant mortality rate was 9.45 deaths per 1000 live births. The population of people infected with HIV is 9,800 but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.3% (2009). General government expenditure on health as a % of total government expenditure in 2007 was 25.8%.

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Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria- tetanus	Recommended	All travel who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age ≥ 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling	-	Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1993	Nationwide	-	-	Dengue fever
2003	Nationwide	19700	-	Dengue fever
2005 Summer	Central Pacific Atlantic	30000	-	Dengue fever
2006 November	Limon, Batan	-	-	Malaria
2007	Guanacaste, Puntarenas, Limon	26000	8	Plasmodium falciparum
2010 1 st 8 months	Nationwide	21000	-	Dengue fever

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

In 2000, there was one physician per 868 people and there were 13 (2008) hospital beds per 10,000 individuals. A public health plan was approved in 1970 despite the fact that health services are concentrated in urban areas.

Other Infections

- Chagas disease
- Cutaneous and mucocutaneous leishmaniasis
- Leptospirosis Coccidioidomycosis (arid areas)
- Lymphatic filariasis (small number of cases reported from Puerto Limon)
- Venezuelan equine encephalitis (transmitted by mosquitoes)
- Rocky Mountain spotted fever
- Tick-borne relapsing fever
- Fascioliasis
- Paragonimiasis (oriental lung fluke) (rare)
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
911	911	911

Guatemala

Population and Geographical Location

In 2011, Guatemala had a population of 13,824,463 and an area of 108,889 km². It is located in Central America. This country is bordered by Mexico to the north and west, by Belize, Honduras and the Gulf of Honduras to east, by El Salvador to the southeast and by the Pacific Ocean to the south and southwest.

Climate and Health Status

Guatemala has a tropical climate. It is hot and humid in lowlands and it is cooler in highlands. The population uses improved drinking-water sources (%): urban 98%, rural 90%, total 94%, (2008). The average life expectancy for males and females: 69.03 and 72.83 years, respectively (2011). The main causes of mortality are: infectious and parasitic diseases, cardiovascular disease, injuries and respiratory infections. In 2011, the infant mortality rate was 26.02 deaths per 1000 live births. The population of people infected with HIV is 62,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.8% (2009). General government expenditure on health as % of total government expenditure in 2007 was 14.1%. The number of physicians is not reported and there were 6 (2008) hospital beds per 10,000 individuals.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria- tetanus	Recommended	All travel who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling	-	Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Aboriginal regions above 1500 meters from sea level have no risk Lake Atitlan Antiyua	-	Entrance from an endemic region or children below 1 year old

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2008 December	Santa Barbara and Colonia El Maestro, El Jurgallon, and Lomas	-	-	Malaria
2009	Nationwide	4000	-	-
2009 April	Coatepeque	-	-	-
2009 August	Izabal	-	8	-
2010	-	11000	25	Dengue fever
2010 May	Guatemala			Dengue fever

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Histoplasmosis
- Chagas disease
- Bartonellosis
- Venezuelan equine encephalitis
- Eastern equine encephalitis
- Visceral and cutaneous leishmaniasis
- Tick-borne relapsing fever
- Leptospirosis
- Brucellosis
- Onchocerciasis
- Paragonimiasis
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
110/120	125/128	122/123

Mexico

Population and Geographical Location

In 2011, Mexico was a country with a population of 113,724,226 and an area of 1,964,375 km². This country is located in the south of North America, the north of Central America and is also the smallest country in North America. This large body of land is bordered by the US to the north, Mexico, the Campeche Gulfs and the Caribbean Sea to the east, Brazil and Guatemala to the south and the Pacific Ocean to the west.

Climate and Health Status

Mexico is mostly alpine. However, its dry and desert climate in the north differs from its mild and half humid climate in the mountains.

The population uses improved drinking-water sources (%): urban 96%, rural 87%, total 94%, (2008). The average life expectancy for males and females: 73.65 and 79.43 years, respectively (2011). The main causes of mortality are: cardiovascular disease, malignant neoplasm, diabetes mellitus and injuries.

In 2011, the infant mortality rate was 17.29 deaths per 1000 live births.

The population of people infected with HIV is 220,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.3% (2009).

General government expenditure on health as a % of total government expenditure in 2007 was 15.5%. In 2004, there was one physician per 370 people and there were 17 (2008) hospital beds per 10,000 individuals.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria- tetanus	Recommended	All travel who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling	-	Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Chipapas, Campeche, michoacan, guerrero, Oaxaca, nayarati, Sinaloa, Tabasco, Quintana, Jalisco, Sonora, Durango, Chihuahua	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
In most years	Veracruz and Chiapas	-	-	Dengue fever
2000 January	Hermosillo	-	-	Coccidioidomycosis

Date	Area	Cases	Mortality	Diseases
2001 March	Acapulco	-	-	Histoplasmosis
2002 November	Pacific and Hurricane Isidoro from the Gulf of Mexico	10000	-	Dengue fever
2004 May	States of Mexico, Hidalgo, Campeche, and Coahuila	64	-	Measles
2004 August	Sonora County	1	-	West Nile virus
2005	-	16000	-	Dengue fever
2006	-	27000	-	Dengue fever
2007 Summer	Nationwide	67000	-	Dengue fever
2008 September	Jalisco, Zapopan, Puerto Vallarta, Guadalajara, and Tlaquepaque	-	-	Dengue fever
2008 September	-	6	-	Dengue fever
2008 September	Queretaro	300	-	Hepatitis A
2008 November	Parque Hundido, Gomez Palacio, Durango	-	-	Dengue fever
2008 December	-	600	-	Dengue fever
2009 1 st 11 months	Nationwide	100000	-	Dengue fever
2009 January	Tamaulipas	-	-	Dengue fever
2009 April	Nationwide	-	-	H1N1 influenza
2009 May	Morelos state	58	-	H1N1 influenza
2009 June	Federal District, Estado de Mexico, San Luis Potosi and Hidalgo	8279	116	Dengue fever
2009 July	San Felipe Orizatlan	-	-	H1N1 influenza
2009 Summer	State of Jalisco	-	-	H1N1 influenza
2009 October	Mecatlan	-	-	Dengue fever
2009 November	Campeche	-	-	Dengue fever
2010 July	Guadalajara and Puerto Vallarta	-	-	Dengue fever
2010 July	Huasteca	-	-	Dengue fever
2010 December	Veracruz	30	2	Dengue fever
2010 September	Guerrero	9000	-	Dengue fever

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Most of the public health activities are under the control of the health and welfare ministry of Mexico. Some diseases like smallpox and cholera are eradicated.

However, there is a lack of medical staff in rural areas and an increase in the population is going to overwhelm current systems of water and waste.

The social security institute of Mexico is in charge of the welfare programs. These services are for poor people, cheap housing, supplies, incidents, insurance disease, childbirth and old age.

Based upon an agreement (in 1995) between the government and the business and marketing parts, the government agrees to increase the benefits of unemployment insurance as the "solidarity for economical improvement."

Other Infections

- Hepatitis E
- Shigellosis
- Amebiasis
- Brucellosis
- Chagas disease
- Cutaneous and mucocutaneous leishmaniasis
- Visceral leishmaniasis
- Tick-borne relapsing fever
- Trench fever (limited foci)
- Louse-borne typhus (limited foci)
- Murine typhus
- Tularemia (northern Mexico)
- Rocky Mountain spotted fever
- Onchocerciasis
- Venezuelan equine encephalitis
- Eastern equine encephalitis
- St. Louis encephalitis
- Anthrax
- Blastomycosis
- Fascioliasis
- Paragonimiasis

Emergency Numbers

Police	Medical	Fire
066	065	068

Nicaragua

Population and Geographical Location

In 2011, Nicaragua was a country with a population of 5,666,301 and an area of 130,370 km². It is located in Central America. This country is bordered by Honduras to the north, by the Caribbean Sea to the east, by Costa Rica to the south and by the Pacific Ocean to the west.

Climate and Health Status

Nicaragua has a hot, humid and rainy climate in the eastern domains, while the western domains have a more arid climate. The population uses improved drinking-water sources (%): urban 98%, rural 68%, total 85%, (2008).

The average life expectancy for males and females: 69.82 and 74.09 years, respectively (2011). The main causes of mortality are: cardiovascular disease, infectious and parasitic diseases, injuries and malignant neoplasm.

In 2011, the infant mortality rate was 22.64 deaths per 1000 live births.

The population of people infected with HIV is 6,900 but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.2% (2009).

General government expenditure on health as % of total government expenditure in 2007 was 16.3%.

In 2003, there was one physician per 2,931 people and there were 9 (2008) hospital beds per 10,000 individuals. Health laws improved after the rise of the Sandinistas revolutionary government in 1997.

Other Infections

- Venezuelan equine encephalitis
- Chagas disease
- Visceral leishmaniasis
- Tick-borne relapsing fever
- Brucellosis
- Paragonimiasis
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
118	128	115

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travel who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of the Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling	-	Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever		
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements	
Not confirmed	Not seen	Not seen	-	-	

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection

Important Points for Safely Traveling with Children (Continued)

Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1992	Leon	-	-	Dengue fever
1994 and 1995	Nationwide	-	-	Dengue fever
1998	Nationwide	-	-	Leptospirosis
2005 June	Cua	-	-	Cutaneous leishmaniasis
2007 March	-	-	-	Dengue fever
2007 October	Managua	-	-	Leptospirosis
2009 October	-	2000	8	Dengue fever

Date	Area	Cases	Mortality	Diseases
2010 months	Nationwide	5000	6	Dengue fever
2010 January	Managua	-	-	Dengue fever
2010	Leon	35	-	Leptospirosis

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Panama

Population and Geographical Location

In 2011, Panama had a population of 3,460,462 and an area of 75,420 km². It is located in Central America. This country is bordered by the Atlantic Ocean to the north, by Colombia to the east, by the Pacific Ocean to the south and by Costa Rica to the west.

Climate and Health Status

Panama has a maritime tropical climate. It is also hot, humid and cloudy. The prolonged rainy season starts from May to January and the short dry season starts from January to May.

The population uses improved drinking-water sources (%): urban 97%, rural 83%, total 93%, (2008). The average life expectancy for males and females: 75.02 and 80.68 years, respectively (2011). In 2011, the infant mortality rate was 11.64 deaths per 1000 live births.

The population of people infected with HIV is 20,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.9% (2009). The main causes of mortality are: cardiovascular disease, malignant neoplasm, injuries and infectious and parasitic diseases. General government expenditure on health as a % of total government expenditure in 2007 was 11.6%. In 2000, there was one physician per 770 people and there were 22 (2008) hospital beds per 10,000 individuals. The social security scheme of Panama has created facilities for health and retirement of its citizens. Health services are easily available for the entire urban population; and they are also available for more than two-thirds of the rural population. People living in remote rural areas have less access to the health services.

Other Infections

- Chagas disease (American trypanosomiasis) (rural areas)
- Cutaneous and mucocutaneous leishmaniasis
- Leptospirosis
- Brucellosis
- Paragonimiasis
- Amebiasis
- Rocky Mountain spotted fever
- Tick-borne relapsing fever
- Oropouche fever (rare; transmitted by mosquitoes)
- Mayaro virus disease (transmitted by mosquitoes in tropical forests)
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
911	911	911

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria- tetanus	Recommended	All travel who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components 3 Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Chloroquine in Bocas Del toro, Mefloquine/Proguanil /Doxycycline in Darien, San blas	Confirmed in Darien and San blas provinces excluding San blas islands	Rural areas in the provinces of Bocas del Toro, Darien, Veragaus, San Blas, and San Blas Islands	All travelers who are visiting the provinces of Darien, Kunayala (San Blas), and Panama, excluding the Canal Zone, Panama City, and the San Blas islands	Not necessary

Important points for safely traveling with children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality Table

Date	Area	Cases	Mortality	Diseases
1999 - 2000	Los Santos	11	3	Hantavirus pulmonary syndrome
2008 July	Los Santos	1		Hantavirus pulmonary syndrome

Current Outbreaks and Mortality Table (Continued)

Date	Area	Cases	Mortality	Diseases
2009 May	Los Santos		2	Hantavirus pulmonary syndrome
2010 1 st 4 months	San Miguelito, Panama City	516	-	Dengue fever
2010 1 st 3 months	Herrera, Los Santos and Cocle	10	-	Hantavirus pulmonary syndrome
2010 June	Darien and Panama	17	1	Eastern equine encephalitis
2010 June	Darien, Panama	28	1	Venezuelan equine encephalitis

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

South America

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Argentina

Population and Geographical Location

In 2011, Argentina had a population of 41,769,726 and an area of 2,780,400 km². It is located in the south of the South American continent. This country is bordered by Bolivia and Paraguay to the north, by Brazil and Uruguay to the northeast, by the Atlantic Ocean to the south and by Chile to the south and the west.

Climate and Health Status

Argentina has a relatively rainy climate. The central and eastern plains have low water levels and relatively low rainfall, whereas the mountainous areas have cold weather. The population using improved drinking water sources (%): urban 98%, rural 80%, total 97% (2008). The average life expectancy for males and females: 73.71 and 80.36 years, respectively (2011). The main causes of mortality are: cardiovascular disease, malignant neoplasm, respiratory infections and injuries. In 2011, the infant mortality rate was 10.81 deaths per 1,000 live births. There are 110,000 people infected with HIV, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.5% (2009).

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Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccines in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reactions in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old, Hypersensitivity to vaccine components, Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers, Those with close contact with the natives, People who, receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately-to-severely ill patients, History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine, Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reactions to gelatin or neomycin, Pregnancy, Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children, Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B; Pregnancy, Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reactions	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reactions	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six- years old, Injectable vaccine is approved for children over 2- years old, Severe local or systemic reaction to a prior dose, There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old with a negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy, Known severe immunodeficiency, History of immediate hypersensitivity reactions to gelatin or neomycin	Soreness or swelling at the injection site, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9-months old with a history of travel to eastern regions of the Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling	-	Immuno-compromised patients, Pregnancy, Allergic reaction to eggs, Diseases of the thymus (e.g., Thymectomy)	Soreness, redness or swelling at the injection site, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Jujuy Salta Misiones Corrientes	All travelers to the northern jungles and northeastern Iguacu falls	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common disease	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common disease	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2000	-	1,700	-	-
2005	Cordoba	-	-	St. Louis encephalitis
2006 April	Misiones	-	-	Dengue fever
2006 September	Neuquen	55	-	Hepatitis A
2007 April	Santa Fe province	-	-	Leptospirosis
2007 February	Misiones and Salta	-	-	Dengue
2007 January	Jujuy	-	-	Typhoid fever
2007 and 2008	-	-	1	Rabies
2008 March	Misiones	-	-	Yellow fever
2008 April	Guarana	3	-	Yellow fever
2008 April	San Pedro	1	-	Yellow fever
2008 April	El Dorado	1	-	Yellow fever
2008 April	Bernardo de Irigoyen	1	-	Yellow fever
2008				Yellow fever
2009	Chaco, Catamarca and Salta	25,000	9	Dengue fever
2009 January	Misiones	1	-	Yellow fever
2010 March	Buenos Aires	-	-	St. Louis encephalitis
2010 March	Entre Rios	-	-	St. Louis encephalitis
2010 early	Santa Fe and Entre Rios	48	1	Leptospirosis
2010 March	Misiones, Chaco, Corrientes, Santa Fe, and Buenos Aires	672	-	Dengue fever
2010	Santa Fe	32	6	Leptospirosis

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

The general government expenditure on health as a percentage of total government expenditures in 2007 was 13.9%. In 2004, there was one physician per 337 people, and there were 41 (2008) per 10,000 individuals.

Other Infections

- Chagas disease
- Hantavirus pulmonary syndrome
- Argentine hemorrhagic fever
- Eastern equine encephalitis
- St. Louis encephalitis
- West Nile virus infections
- Cutaneous leishmaniasis
- Visceral leishmaniasis
- Trichinellosis
- Louse-borne typhus
- Murine typhus
- Tick-borne relapsing fever
- Rocky Mountain spotted fever
- Anthrax
- Brucellosis
- Echinococcus
- Fascioliasis
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
101	107	100

Brazil

Population and Geographical Location

In 2011, Brazil was a country with a population of 203,429,773 and an area of 8,514,877 km². It is located at the eastern half of South America. It is the fifth widest country in the world and lies just south of the equator. Brazil is bordered by Venezuela, Guyana, Surinam and French Guiana to the north, the Atlantic Ocean and Uruguay to the east and south, Argentina, Paraguay, Bolivia, Peru and Colombia to the west.

Climate and Health Status

Brazil has a mostly tropical climate, but it is temperate in south. The Amazon is extremely hot, humid and rainy and is mild, humid and rainy in high areas.

The population using improved drinking water sources (%): urban 99%, rural 84%, total 97% (2008). The average life expectancy for males and females: 68.97 and 76.27 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, respiratory infections, infectious and parasitic diseases.

In 2011, the infant mortality rate was 21.17 deaths per 1,000 live births.

There are 890,000 people infected with HIV, but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.6% (2009).

The general government expenditure on health as a percentage of total government expenditures in 2007 was 5.4%.

In 2006, there was one physician per 628 people and there were 26 (2008) hospital beds per 10,000 individuals.

Health conditions are different in various regions of Brazil. In many large urban regions, there are adequate numbers of doctors. However, in many other regions, access to healthcare is limited.

Other Infections

- Plague
- Schistosomiasis
- Cutaneous and mucocutaneous leishmaniasis
- Brazilian purpuric fever
- Leptospirosis
- Sporotrichosis
- Brucellosis
- Echinococcus
- Fascioliasis
- Lymphatic filariasis
- Onchocerciasis
- Mayaro virus disease
- Hepatitis D
- Venezuelan equine encephalitis
- Eastern equine encephalitis
- Brazilian spotted fever
- Lyme disease
- Melioidosis
- Paracoccidioidomycosis
- Angiostrongylus meningitis
- Chagas disease
- HIV (human immunodeficiency virus)

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria- tetanus	Recommended	All travelers who have not received vaccines in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reactions in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old, Hypersensitivity to vaccine components, Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers, Those with close contact with the natives, People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately-to-severely ill patients, History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine, Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reactions to gelatin or neomycin, Pregnancy, Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children, Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B; Pregnancy, Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reactions	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection, Those who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy, Known severe immunodeficiency, History of immediate hyper sensitivity reactions to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients, Pregnancy, Allergic reaction to eggs, Diseases of the thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old. The injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose, There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Mefloquine Doxycycline Atovaquone/Proguanil	Seen	Acre, Amapa, Rondonia, Amazonas, Maranhao, Mato grosso except belem, Porto, Velho Boa vista, Macapa, Manaus, Maraba, Santarem	Travelers to: Rocantins, Maranhao, Mato grosso, Grosso do sul, Minas gerais, Para rondonina, Roraima, Tocantins Endemic regions: Bahia, Prana, Piaui, Ro grande, Sao Paulo	Travelers from Burkinafaso, Cameroon, Congo, Etiopia, Ghana, Ginea, Mali, Libery, Niger, Muritani, Bisau, Nigeria, Kenya, Senegal, Uganda, Tansania, Sumalia, Bolivia

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases such as diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1998 - 1999	The island of Marajo	-	-	Dengue fever
1998	Nationwide	500,000	-	Dengue fever
2000	Chapada Dos Veadeiros	-	-	Yellow fever
2001	Minas Gerais	32	16	Chagas disease
2002	Nationwide	780,000	145	Dengue fever
2003	Vila Sansao and Vila Paulo Fontelles	-	-	Toxoplasmosis
2003 January	Minas Gerais	58	-	Oropouche fever
2003	Acuti Pereira River	-	-	Yellow fever
2004 August	Vila Tapara	-	-	Yellow fever
2004	Campinas	-	-	Rabies
2004 March	City of Portel	15	15	Oropouche fever
2004 May	Viseu municipality	-	6	Rabies
2004 May	-	-	-	Rabies
2005 March	Santa Catarina	-	-	Rabies
2005 October	Maranhao	-	23	Hantavirus pulmonary syndrome
2005 April	Sao Paulo and Rio	-		Hantavirus pulmonary syndrome
2006 July	Mato Grosso	-	1	Yellow fever
2006	Ceara, Sao Paulo, Maranhao, Amazonas, Piaui, Goias, Alagoas, Paraiba, and Rio Grande do Norte	346,550	67	Diphyllobothriasis
2006 July	Para	-	-	Yellow fever
2007	Amazonia, Para, Roraima, and Goias	6	-	Dengue fever
2007	Nationwide	559,954	158	Dengue fever
2007	Sao Paulo	-	-	Chagas disease
2007 January	Bahia	47	-	Yellow fever
2008	Mato Grosso, Sobradinho	-	-	Dengue fever
2008 January		45	25	Malaria Plasmodium vivax
2008	Rio de Janeiro	250,000	181	Dengue fever
2008	Rio Grande do Norte, Ceara, Bahia, Sergipe, Pernambuco, Minas Gerais, and Para			Visceral leishmaniasis
2008		34	17	Yellow fever
2008	Rio Grande do Sul	20	9	Dengue fever
2009 December	Bahia			Dengue fever

Current Outbreaks and Mortality (Continued)

Date	Area	Cases	Mortality	Diseases
2008		34	17	Yellow fever
2008	Rio Grande do Sul	20	9	Dengue fever
2009 December	Bahia			Dengue fever
2009 August	Mazagao	650		Hantavirus pulmonary syndrome
2009	Sao Paulo State	28	11	Yellow fever
2009 February	Minas Gerais.	1	-	Meningococcal disease
2009	Acre, Mato Grosso do Sul, Rondonia, Goias, Mato Grosso, Minas Gerais, and Sao Paulo	-	-	Oropouche fever
2009 September	Ceara and Rio Grande do Sul	-	-	Yellow fever
2009 August	Parana	-	-	Yellow fever
2009 January	Sao Paulo	-	-	Dengue fever
2009 November	Belem, Para	-	-	Dengue fever
2009 February	Rio Grande do Sul	-	-	Dengue fever
2009 July	Parana	-		Dengue fever
2010 June and July	Alagoas, Espirito Santo, Roraima, Rio Grande do Sul, Sao Paulo, Minas Gerais, Pernambuco, and Rio de Janeiro	-	-	Chagas disease
2010 March and April	Sao Paulo, Minas Gerais, Parana, Mato Grosso, Mato Grosso do Sul, Rio Grande do Sul, Acre, Roraima, Alagoas, and Goias	-	-	Hantavirus pulmonary syndrome
2010 January	Rondonia	-	-	Hantavirus pulmonary syndrome
2010 January	Santa Isabel do Rio Negro	-	-	Dengue fever
2010	Parana, Minas Gerais, Sao Paulo, Mato Grosso, Santa Catarina and Rio Grande do Sul	-	-	Dengue fever

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Emergency Numbers

Police	Medical	Fire
190	192	193

Chile

Population and Geographical Location

In 2011, Chile had a population of 16,888,760 and an area of 756,102 km². It is located in the southwest coast of South America.

This country is bordered by Peru to the north, by Bolivia to the northeast, by Argentina to the east and the Pacific Ocean to the west.

Climate and Health Status

The northern area, called Atacama, is dry and has desert conditions, and the central agricultural parts are relatively mild and rainy. The southern parts are cold and covered by dense forests. The population using improved drinking water sources (%): urban 99%, rural 75%, total 96% (2008). The average life expectancy for males and females: 74.44 and 81.13 years, respectively (2011). The main causes of mortality are: cardiovascular disease, malignant neoplasm, injuries and digestive diseases. In 2011, the infant mortality rate was 7.34 deaths per 1,000 live births. There are 40,000 people infected with HIV, but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.4% (2009). The general government expenditure on health as a percentage of total government expenditures in 2007 was 17.9%. In 2003, there was one physician per 971 people and there were 23 (2008) hospital beds per 10,000 individuals. Workers are covered by insurance benefits for the elderly, unemployed and the disabled.

Other Infections

- Echinococcus
- Bartonellosis (Oroya fever)
- Louse-borne typhus (mountain areas)
- Fascioliasis (sheep-raising areas)
- Anthrax (occupational hazard among those working with farm animals)
- Brucellosis (the most common animal source is infected cattle)
- Cholera
- Trichinellosis
- Chagas disease
- HIV (human immunodeficiency virus)

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccines in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reactions in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old, Hypersensitivity to vaccine components, Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers, Those with close contact with the natives, People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0, 1, and 6 months)	-	Moderately-to-severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza- outbreak season from November to April, Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs, History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine, Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reactions to gelatin or neomycin, Pregnancy, Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children, Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reactions	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old, The injectable vaccine is approved for children over 2 years old, Severe local or systemic reactions to a prior dose, There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection, Those who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy, Known severe immunodeficiency, History of immediate hypersensitivity reactions to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling	-	Immuno-compromised patients, Pregnancy, Allergic reaction to eggs, Diseases of the thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Not seen	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2001	Southern and central Chile	-	-	Hantavirus pulmonary syndrome
2001	Santiago	-	-	Respiratory syncytial virus infections
Date	Area	Cases	Mortality	Diseases
2005 January	Puerto Montt	10000	-	Vibrio parahemolyticus infections
2008 December	Maule and Biobio	200	-	Vibrio parahemolyticus infections
2008 December	Atacama	-	-	Amnesic toxin
2009	Bio Bio Region	34	9	Hantavirus pulmonary syndrome
2010	-	49	-	Hantavirus pulmonary syndrome

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Emergency Numbers

Police	Medical	Fire
133	131	132

Colombia

Population and Geographical Location

In 2011, Colombia had a population of 44,725,543 and an area of 1,138,914 km². It is located in southwest South America.

It is the fifth widest country of South America and bordered by the Caribbean Sea to the northwest, Venezuela and Brazil to the east, Peru and Ecuador to the south and the Pacific Ocean and Panama to the west.

Climate and Health Status

The northern areas in Colombia were turned into coastal plains by the swamp delta of the Magdalena River and it has a different climate.

Its high mountains are covered with constant snow and the tropical forests of the Amazon in the east are hot, humid and rainy.

The population using improved drinking water sources (%): urban 99%, rural 73%, total 92% (2008).

The average life expectancy for males and females: 71.27 and 78.03 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, injuries, malignant neoplasm and infectious and parasitic diseases.

In 2011, the infant mortality rate was 16.39 deaths per 1,000 live births.

There are 160,000 people infected with HIV, but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.5% (2009).

General government expenditure on health as % of total government expenditure in 2007: 18.8%

In 2002, there was one physician per 752 people and there were 10 (2008) hospital beds per 10,000 individuals.

Although there is a lack of doctors and most of them work in urban areas, health students are filling the gaps. Malaria and yellow fever still exist in some areas of this country.

The health insurance system includes: childbirth, dentistry, accident insurance, compensation of losses and disabilities, retirement and life insurance for many workers. The financial supply system falls upon the workers, employers and government.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria- tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reactions in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old, Hypersensitivity to vaccine components, Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers, Those with close contact with the natives, People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately-to-severely ill patients, History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine, Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reactions to gelatin or neomycin, Pregnancy, Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children, Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B, Pregnancy Immuno deficiency	Myalgia, allergic reaction

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reactions	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old, Injectable vaccine is approved for children over 2 years old, Severe local or systemic reaction to a prior dose. There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection, Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy, Known severe immunodeficiency, History of immediate hypersensitivity reactions to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cypopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling	-	Immunocompromised patients, Pregnancy, Allergic reaction to eggs, Diseases of the thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Mefloquine Doxycycline Atovaquone/Proguanil	Seen	Vicinity Bogota	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2000	Santiago de Cali	8	-	Diphtheria
2002 July	-	68	-	Measles
2003	Antioquia, Santander, Bogota	38	-	Severe acute respiratory disease
2003	Northeastern part of Colombia	101	44	Yellow fever
2003 December	Guajira, Magdalena, Meta, and Cesar, Sierra Nevada de Santa Marta, Tayrona, Caribbean coast, Santa Marta, Valledupar, and Dibulla	28	11	Yellow fever
2004 July	Tumaco	2	-	Cholera
2004 May-June	Birrinchao	-	-	Rabies
2006 March	Necocli	8	-	Hantavirus pulmonary syndrome
2009 January	Meta	5	2	Yellow fever
2010 June	Santander	2	-	Rabies

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Other Infections

- Bartonellosis (Oroya fever)
- Anthrax
- Louse-borne typhus
- Murine typhus
- Tick-borne relapsing fever
- Cutaneous and mucocutaneous leishmaniasis
- Visceral leishmaniasis
- Brucellosis (low incidence)
- Venezuelan equine encephalitis
- Mayaro virus disease
- Eastern equine encephalitis
- Rocky Mountain spotted fever
- Fascioliasis (sheep-raising areas)
- Onchocerciasis
- Paragonimiasis
- Coccidioidomycosis
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
112	112	112

Paraguay

Population and Geographical Location

In 2011, Paraguay had a population of 6,459,058 and an area of 406,752 km². It is a landlocked country located in the center of the southern half of South America. Paraguay is bordered by Bolivia and Brazil to the east and southeast and Argentina to the south and west.

Climate and Health Status

Paraguay has a subtropical-to-temperate climate. There is substantial rainfall in the eastern portions, becoming semiarid in the far west.

The population using improved drinking water sources (%): urban 99%, rural 66%, total 86% (2008).

The average life expectancy for males and females: 73.59 and 78.93 years, respectively (2011). The main causes of mortality are: cardiovascular disease, malignant neoplasm, infectious and parasitic diseases and injuries.

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2000	Nationwide	29,282	-	Dengue fever
2004 May	Central Chaco region	11	-	Hantavirus
2006	Asuncion	1,700	-	Dengue fever
2007 January	Cordillera, Amambay, Central, Concepcion, and Paraguari	28,000	17	Dengue fever
2008 February	San Pedro, Asuncion, Caaguazu	24	8	Yellow fever
2008 September	Chaco region	25	4	Hantavirus
2009	Amambay, Bloqueron, Caaguazu and Central	1,200	-	Dengue fever
2009	Concepcion and Amambay	800	-	Dengue fever
2009 February	-	2	1	Hantavirus
2010	Central, Amambay, Concepcion and Alto Parana provinces	9,874	11-	Dengue fever
2010	Presidente Hayes	1	-	Hantavirus

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

In 2011, the infant mortality rate was 23.02 deaths per 1,000 live births.

There are 13,000 people infected with HIV, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.3% (2009).

General government expenditure on health as % of total government expenditure in 2007 was 11.9%.

In 2002, there was one physician per 1,003 people and there were 13 (2008) hospital beds per 10,000 individuals.

Paraguay's government is responsible for social security programs of the elderly, sick people and it is in charge of childbirth.

Other Infections

- Chagas disease
- Cutaneous and mucocutaneous leishmaniasis
- Visceral leishmaniasis
- Hantavirus pulmonary syndrome
- Venezuelan equine encephalitis
- Tick-borne relapsing fever
- Brucellosis (low incidence)
- Murine typhus (uncommon)
- Coccidioidomycosis (occurs rarely in arid areas)
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
911	911	911

Peru

Population and Geographical Location

In 2011, Peru had a population of 29,248,943 and an area of 1,285,216 km². It is located in the west of South America. This country is bordered by Ecuador and Colombia to the north, by Brazil, Bolivia and Chile to the east and the Pacific Ocean to the west and south.

Climate and Health Status

The climate of Peru is as following:

- 1) It is hot and humid in the coastal plain.
- 2) In the mountainous region the climate is cold and humid, and the rainfall is adequate.

- 3) In the eastern region, which is covered by rain forests, the climate is relatively warm and humid.

The population using improved drinking water sources (%): urban 90%, rural 61%, total 82% (2008).

The average life expectancy for males and females: 70.55 and 74.48 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, infectious and parasitic diseases and injuries.

In 2011, the infant mortality rate was 22.18 deaths per 1,000 live births.

There are 75,000 people infected with HIV, but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.4% (2009).

The general government expenditure on health as a percentage of total government expenditures in 2007 was 15.6%.

The number of physicians is not reported, and there were 15 (2008) hospital beds per 10,000 individuals.

Despite improved facilities and access to medical equipment, the waste disposal system is still inefficient, and cholera epidemics have killed more than 1,000 and infected more than 150,000 people in 1991.

Other Infections

- Leptospirosis
- Chagas' disease
- Brucellosis
- Histoplasmosis
- Cutaneous and mucocutaneous leishmaniasis
- Anthrax
- Louse-borne typhus
- Venezuelan equine encephalitis
- Eastern equine encephalitis
- Mayaro virus disease
- Echinococcus
- Cysticercosis
- Fascioliasis
- Cyclosporiasis
- Paragonimiasis
- Gnathostomiasis
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
115	141	116

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccines in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reactions in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old, Hypersensitivity to vaccine components, Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers, Those with close contact with the natives, People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0, 1, and 6 months)	-	Moderately-to-severely ill patients, History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine, Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reactions to gelatin or neomycin, Pregnancy, Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children, Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B, Pregnancy, Immunodeficiency	Myalgia, allergic reaction

Immunization Planning (Continued)

Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reactions	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age ≥ 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old, Injectable vaccine is approved for children over 2 years old, Severe local or systemic reactions to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and with a negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy, Known severe immunodeficiency, History of immediate hypersensitivity reactions to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling	-	Immunocompromised patients, Pregnancy, Allergic reaction to eggs, Diseases of the thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Not seen	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2001 June	Loreto, Puinahua, San Pablo and Iquitos	-	-	Yellow fever
2003 July	Pavo, Aucarca, El Zancudo, Mariscal Caceres	-	-	Yellow fever
2004	Peru	52	26	Yellow fever
2004	Nationwide	7,000	-	Bartonellosis (Oroya fever)
2006	Condorcanqui	-	11	Human rabies
2006 March	Santa Rosa, Palmapampa,	4	-	Yellow fever
2006	Northern coast	5,531	-	Dengue fever
2006 September	Collo Locality, Arahua District, Canta Province	-	-	Bartonellosis (Oroya fever),
2007 January	Madre de Dios and Puno	-	23	Rabies
2007 February	La Convencion	3	3	Yellow fever
2007	La Libertad	6,907	2	Dengue fever
2008 January	Loreto, Iquitos, San Juan Bautista, and Punchana districts	-	-	Dengue fever
2008 First 21 weeks	Amazonas and San Martin	17	3	Yellow fever
2008 October	Loreto			Dengue fever
2009 August-September	Santa Clara	15		Plague
2009 January	San Martin	1	-	Yellow fever
2009	Tumbes in northwest Peru	5000	-	Dengue fever
2009 February	Ucayali, on the border with Brazil	-	-	Dengue fever
2010 July	Chocope, Ascope, La Libertad	17	3	Plague
2010 August				Human rabies
2010 June	Bagazan, Pachiza	160	-	Oropouche fever
2010 April	Piura	-	-	Dengue fever
2010	Cajamarca, La Libertad, Piura, and Lambayeque	-	-	Plague
2010 April	Chicama	-	-	Plague

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Uruguay

Population and Geographical Location

In 2011, Uruguay was a country with a population of 3,308,535 and an area of 176,215 km². It is located in the central part of southeast South America.

This country is bordered by Brazil to the north, by Brazil and the Atlantic Ocean to the east, by River La Plata to the south and by Argentina to the west.

Climate and Health Status

Uruguay has a warm and temperate climate.

The population using improved drinking water sources (%): urban 100%, rural 100%, total 100% (2008).

The average life expectancy for males and females: 73.07 and 79.46 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, injuries and neuropsychiatric conditions.

In 2011, the infant mortality rate was 9.69 deaths per 1,000 live births.

There are 9,900 people infected with HIV, but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.5% (2009).

General government expenditure on health as % of total government expenditure in 2007: 17.3%

In 2002, there was one physician per 283 people and there were 29 (2008) hospital beds per 10,000 individuals.

The Ministry of Public Health and its various committees have established clinics and health centers to control tuberculosis and reduce infant mortality.

Uruguay is famous for its advanced social welfare scheme which includes: incidents, side effects, and discomfort of job, age, labor and the welfare of children.

A budget is allocated for family affairs, and various laws have been passed to protect women and orphan workers.

Other Infections

- Echinococcus
- Fascioliasis (sheep-raising areas)
- Anthrax (occupational hazard among those working with farm animals)
- Brucellosis (low incidence)
- HIV (human immunodeficiency virus)

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccines in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reactions in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old, Hypersensitivity to vaccine components, Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers, Those with close contact with the natives, People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately-to-severely ill patients, History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine, Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reactions to gelatin or neomycin, Pregnancy, Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children, Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B, Pregnancy, Immunodeficiency	Myalgia, allergic reaction

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reactions	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old, Injectable vaccine is approved for children over 2 years old, Severe local or systemic reactions to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and with a negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy, Known severe immunodeficiency, History of immediate hypersensitivity reactions to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling	-	Immunocompromised patients, Pregnancy, Allergic reaction to eggs, Diseases of the thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever		
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements	
Not confirmed	Not seen	Not seen	-	-	

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality Table

Date	Area	Cases	Mortality	Diseases
2001 April	Nationwide	-	-	Foot-and-mouth disease
2004 August	Rocha	3	-	Hantavirus pulmonary syndrome
2010 April	San Jose	1		Hantavirus pulmonary syndrome

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Emergency Numbers

Police	Medical	Fire
911	911	911

Venezuela

Population and Geographical Location

In 2011, Venezuela had a population of 27,635,743 and an area of 912,050 km². It is located in northern South America and in the southern coast of the Caribbean Sea. This country is bordered by the Caribbean Sea to the north, by the Atlantic Ocean to the northeast, by Guyana to the east and by Brazil and Colombia to the west.

Climate and Health Status

Venezuela has a temperate climate in the mountainous highlands, and other regions are warm, humid and relatively rainy. The population using improved drinking water sources (%): unreported in 2008. The average life expectancy for males and females: 70.84 and 77.17 years, respectively (2011). The main causes of mortality are: cardiovascular disease, injuries, malignant neoplasm and infectious and parasitic diseases. In 2011, the infant mortality rate was 20.62 deaths per 1,000 live births. There are 110,000 people infected with HIV (2009), and the prevalence rate of 15- to 49-year-old adults infected with HIV is not available (unreported) %. The general government expenditure on health as a percentage of total government expenditures in 2007 was 7.1%. In 2001, there was one physician per 567 people, and there were 13 (2008) hospital beds per 10,000 individuals. The Venezuelan government has limited programs on health and accident insurance, and it is responsible for retirement as well.

Other Infections

- Cutaneous, mucocutaneous, and visceral leishmaniasis
- Brucellosis
- Tick-borne relapsing fever
- Schistosomiasis
- Onchocerciasis
- Kyasanur forest disease (reported in Guanarito)
- Fascioliasis (sheep-raising areas)
- Eastern equine encephalitis
- Paragonimiasis (rare)
- Coccidioidomycosis (occurs rarely in arid areas)
- West Nile virus (identified in birds)

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccines in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reactions in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old, Hypersensitivity to vaccine components, Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers, Those with close contact with the natives, People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately-to-severely ill patients, History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine, Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reactions to gelatin or neomycin, Pregnancy, Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children, Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B, Pregnancy, Immunodeficiency	Myalgia, allergic reaction

Immunization Planning (Continued)

Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reactions	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old, Injectible vaccine is approved for children over 2 years old, Severe local or systemic reactions to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and with a negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy, Known severe immunodeficiency, History of immediate hypersensitivity reactions to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling	-	Immunocompromised patients, Pregnancy, Allergic reaction to eggs, Diseases of the thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone/Proguanil Doxycycline Mefloquine	Confirmed	Rural areas of the following states: Amazonia, Apure, Bolivar, and delta Amacuro, Tachira, Barina states	For all travelers ≥ 9 months of age traveling to Venezuela, except the northern coastal area. The cities of Caracas and Valencia are located in endemic areas.	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing < 5 kg (25lb) Doxycycline should not be prescribed Precautionary measures like bed nets and DEET formulations for children older than 2 years
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Malaria	Using Mefloquine in first semester and proguanil in pregnancy is not recommended Preventive instruments like bed nets and DEET formulations
	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporins Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1998 October	Yanomami Indians	-	-	Yellow fever
2001 September	Falcon, Zulia	6,000	-	Measles
2003 June	Venezuelan-Colombian border	34	14	Yellow fever
2004	Sucre, Merida	2	-	Yellow fever
2004 October	Monagas	3	-	Yellow fever
2005 April-May	Merida	3	-	Yellow fever
2005	Portuguesa	7	-	Yellow fever
2006 March	Miranda, Zulia, Merida and Carabobo	38	-	Measles
2007 November	Maracay	-	-	Dengue fever
2008 January	Margarita Island	200	-	Dengue fever
2009	Aragua, Guarico	-	-	Yellow fever
2009	Aragua, Apure, Lara, Monagas, Carabobo, and Barinas	35,000	-	Dengue fever
2009 April	Chichiriviche de la Costa, in the western part of the state of Vargas	-	-	Chagas disease
2010 May	Bolivar state	20,000	-	Malaria
2010 May	-	15	-	Chagas disease
2010 May	Bolivar state	20,000	-	Malaria

Date	Area	Cases	Mortality	Diseases
2010 June	Barinas			Dengue fever
2010 June	Portuguesa	77		Mayaro fever
2010	Miranda, Merida	More than 68,000		Dengue fever

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

- Venezuelan equine encephalitis
- Venezuelan hemorrhagic fever
- Hepatitis D
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
171	171	171

North America

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Canada

Population and Geographical Location

In 2011, Canada had a population of 34,030,589 and an area of 9,984,670 km². It is the second largest country in the world. Canada is located in the northern part of North America. This country is bordered by the Arctic Ocean to the north, by the Atlantic Ocean to the east, by the US to the south, by the Pacific Ocean to the west and by Alaska to the northwest. This country is divided into five districts as follows:

- 1) Marine areas
- 2) Highlands or the Dorenschen Plateau
- 3) Southern regions
- 4) The Pacific coastal region (mountainous and covered with vast forests).
- 5) Northern lands which are almost empty and very cold.

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Climate and Health Status

Canada has a temperate and dry climate in the south and southeast regions, and it has a cold and dry climate in the central and southwestern section. The climate is mild and humid at the coasts of the Pacific Ocean, and it is cold and dry in other regions.

The population using improved drinking water sources (%): urban 100%, rural 99%, total 100% (2008).

The average life expectancy for males and females: 78.81 and 84.1 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, neuropsychiatric conditions and respiratory infections.

In 2011, the infant mortality rate was 4.92 deaths per 1,000 live births.

There are 68,000 people infected with HIV, but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.3% (2009).

The general government expenditure on health as a percentage of total government expenditures in 2007: 18.1%

In 2006, there was one physician per 542 people and there were 34 (2008) hospital beds per 10,000 individuals.

In Canada, all sections of the government are responsible for social welfare. The federal government has developed comprehensive standards for monitoring the revenue, which include Canadian salaries and wages, the Canada assistance plan, allowance to the elderly, youth and family allowances and unemployment insurance, all requiring coordination of the people and those at the national level. The federal government aids specific groups such as soldiers and immigrants to assume costs which are related to public welfare. Although the most important task of the provinces is monitoring the general welfare, local authorities also help to improve the public welfare with funding from the provinces. The provincial government is responsible for trustee educational and health affairs in Canada. In July 2001, Canada became the first country that considered medical marijuana permissible for chronic diseases.

Other Infections

- Tick-borne relapsing fever
- Lyme disease
- Blastomycosis
- Q fever
- Trichinellosis
- Hantavirus pulmonary syndrome
- Histoplasmosis
- Rabies
- HIV (human immunodeficiency virus)

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria- tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reactions in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old, Hypersensitivity to vaccine components, Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers, Thoes with close contact with the natives, People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately-to- severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April, Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs, History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine, Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reactions to gelatin or neomycin, Pregnancy, Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children, Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B, Pregnancy, Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reactions	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old, Severe local or systemic reactions to a prior dose, There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and with a negative history of chickenpox infection Those who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy, Known severe immunodeficiency, History of immediate hypersensitivity reactions to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travelling to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling	-	Immunocompromised patients, Pregnancy, Allergic reaction to eggs, Diseases of the thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1999	British Columbia	200	8	Cryptococcus gattii
1999	Vancouver Island	-	-	Cryptococcus gattii
2000 May	Walkerton, Ontario	192	5	E. Coli 0157:H7
2003 August-November	Saskatchewan and Alberta, Ontario, Manitoba, and Quebec	1335	10	West Nile virus infections
2003 March	-	253	38	Severe acute respiratory syndrome (SARS)
2003 May	-	1	-	Bovine spongiform encephalopathy ("mad cow disease")
2004 March	British Columbia	2	-	H7 avian influenza (bird flu)
2004 October	Kelowna, British Columbia	-	-	Hepatitis A
2004	Ontario, Manitoba, and Saskatchewan	25	-	West Nile virus infections
2005 May	Southwest Ontario	214	-	Rubella (German measles)

Date	Area	Cases	Mortality	Diseases
2006	Manitoba, Ontario, Alberta, Saskatchewan, and Quebec	127	-	West Nile virus infections
2006	-	5	-	Bovine spongiform encephalopathy ("mad cow disease")
2007 February	Nova Scotia, Alberta, British Columbia, Quebec, Prince Edward Island, Newfoundland, Manitoba, Saskatchewan and New Brunswick	1284		Mumps
2007 November	Chinook	-	-	Mumps
2007	Saskatchewan, Manitoba, Alberta, Ontario, British Columbia, Quebec, Nov-a Scotia	2338	-	West Nile virus infections
2007		3	-	Bovine spongiform encephalopathy ("mad cow disease")
2008 April	Southern Ontario	10	-	Measles
2008 March	Calgary			Mumps
2008 August	British Columbia, Vancouver, Washington state	-	-	Mumps
2008	Saskatchewan, Manitoba, Ontario, Alberta and British Columbia	36	-	West Nile virus infections
2008	-	4	-	Bovine spongiform encephalopathy ("mad cow disease")
2009 April	Canada	7,775	21	H1N1 influenza ("swine flu")
2009	-	1	-	Bovine spongiform encephalopathy ("mad cow disease")
2010 March	British Columbia	44	-	Measles
2010	-	1	-	Bovine spongiform encephalopathy ("mad cow disease")

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Emergency Numbers

Police	Medical	Fire
911	911	911

US

Population and Geographical Location

In 2011, the US had a population of 313,232,044 and an area of 9,826,675 km². It is located in the southern half of the North American continent and is the fourth widest country in the world.

America is bordered by Canada to the north, the Atlantic Ocean to the east, the Gulf of Mexico and Mexico to the south, and the Pacific Ocean to the west.

Climate and Health Status

The US has a mostly temperate climate, but the climate is tropical in Hawaii and Florida, arctic in Alaska, and semi-arid in the Great Plains which is located in the west of the Mississippi River.

It is arid in the Great Basin of the southwest. Low winter temperatures in the northwest are ameliorated occasionally in January and February by warm Chinook winds from the eastern slopes of the Rocky Mountains.

The population using improved drinking water sources (%): urban 100%, rural 94%, total 99% (2008).

The average life expectancy for males and females: 75.92 and 80.93 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, respiratory infections and neuropsychiatric conditions.

In 2011, the infant mortality rate was 6.06 deaths per 1,000 live births.

There are 1,200,000 people infected with HIV, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.6% (2009).

The general government expenditure on health as a percentage of total government expenditures in 2007 was 19.5%.

In 2004, there was one physician per 391 people and there were 31 (2008) hospital beds per 10,000 individuals.

According to federal laws, the state and central government of America have the duty to give health services to people. The social security plan that was approved in 1935 requires financial support from people who have income and offers retirement pay for those that become disabled.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria- tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reactions in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old, Hypersensitivity to vaccine components, Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers, Thoes with close contact with the natives, People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately-to- severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April, Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs, History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine, Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reactions to gelatin or neomycin, Pregnancy, Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children, Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B, Pregnancy, Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reactions	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old, Severe local or systemic reactions to a prior dose, There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and with a negative history of chickenpox infection Those who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy, Known severe immunodeficiency, History of immediate hypersensitivity reactions to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travelling to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling	-	Immunocompromised patients, Pregnancy, Allergic reaction to eggs, Diseases of the thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever		
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements	
Not confirmed	Not seen	Not seen	-	-	

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2004	Washington State, California, Idaho, Oregon	60	15	Infections caused by <i>Cryptococcus gattii</i>
2004	Hawaii	-	-	Leptospirosis
2006 August		600	-	Salmonella tennessee

Date	Area	Cases	Mortality	Diseases
2006 April	The states of Illinois, Iowa, Kansas, Missouri, Nebraska, Pennsylvania, South Dakota, and Wisconsin	1,487	-	Mumps
2006 September	Salinas Valley, California	205	3	E. Coli O157:H7
2006 December	Minnesota and Iowa	-	-	E. Coli O157:H7
2006 November	Iowa	-	-	Q fever
2006 August	Mountains of north-central Colorado	4	-	Tick paralysis
2006	New Mexico, Colorado, La Plata County, California, and Texas	14	-	Plague
2006 August	Lake Tahoe	-	-	Tick-borne relapsing fever
2007 June	-	52	-	Salmonella Wandsworth infections
2007 February	Georgia	-	-	Salmonella Tennessee infections
2007 November	State of Maine	-	-	Mumps
2007 April and September	New Mexico	5	-	Plague
2008 June	Nationwide	1,442	-	Salmonella
2008 May	Illinois	-	-	Measles
2008 April	Washington	-	-	Measles
2008 February	Arizona	-	-	Measles
2008 January-February	San Diego, California	-	-	Measles
2008 Early	New York City	-	-	Measles
2008	Arizona	1	-	-
2008 August	South-central Washington	2	-	-
2008 September	North Dakota and Utah	2	-	-
2008 January		1	-	-
2009 June	New York and New Jersey	-	-	Mumps
2009 April	-	-	-	H1N1 influenza
2009 January	-	654	-	H1N1 influenza
2009 December	Nevada county	2		Salmonella typhimurium
2009 June	Arizona	1	-	Mumps
2010 January		More than 1,500		Mumps
2010 July	Central Washington state	1		Mumps
2010 February	Weld County, Colorado	-	1	Hantavirus

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

These cases are supplied by the taxes and any surplus is used to decrease inflation. Moreover, state and central governments also help pay for unemployment insurance. The comprehensive health plan includes: Medicare law, health insurance for the elderly, Medicaid and help for low-income families.

The United States has various state of the art medical facilities, but they are not available to everyone.

According to estimates, more than 30 million people in America lack personal health insurance and don't have Medicare and or Medicaid. Approximately 60 million people lack complete insurance for many terrible diseases.

Federal, state and local funds are used for the income of blind, disabled, elderly and poor people, and for impoverished families and their children as well. Government activities include lunch plans for children and the provision of food.

Other Infections

- Lyme disease
- Ehrlichiosis and anaplasmosis
- Coccidioidomycosis
- Histoplasmosis
- Rocky Mountain spotted fever
- Tularemia
- Arbovirus diseases
- Angiostrongylus meningitis

Emergency Numbers

Police	Medical	Fire
911	911	911

Section III: Asia

Central Asia

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Kazakhstan

Population and Geographical Location

In 2011, Kazakhstan had a population of 15,522,373 and an area of 2,724,900 km². It is located in Central Asia and the northeast coast of the Caspian Sea. It is bordered by Russia to the north and the northeast, China to the southeast, Kyrgyzstan and Uzbekistan to the south and Turkmenistan and the Caspian Sea to the west.

Climate and Health Status

Its climate is continental, and the average temperature in January reaches 18 degrees below zero in the north and drops to 3 degrees below zero in the south. The average summer temperature in July is 19 degrees in the north and up to 28 degrees in the south.

The population using improved drinking-water sources (%) is as follows: urban 99%, rural 90%, total 95% (2008).

The average life expectancy for males and females is 63.24 and 74.08 years, respectively (2011).

The main causes of mortality are cardiovascular disease, injuries, malignant neoplasm and respiratory infections.

In 2011, the infant mortality was 24.15 deaths per 1,000 live births.

The population of people infected with HIV is 13,000, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.1% (2009).

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Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immuno-compromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Not seen	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than two years old should not receive hepatitis A or typhoid vaccines
Nutrition	Using safe food and water Breastfeeding, special food for babies or cow milk Adequate hydration Sunlight protection

Important Points for Safely Traveling with Children (Continued)

Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third trimester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first trimester

Current Outbreaks and Mortality Table

Date	Area	Cases	Mortality	Diseases
1989	Nationwide	-		Crimean-Congo hemorrhagic fever
1999 August	Aralsk	1	-	Plague
2001 August	Aralsk	1	-	Plague
2003 July	Mangistau	3	-	Plague
2003 August	Shomish	-	-	Plague
2007 April	Kyzyl-Orda	-	-	Crimean-Congo hemorrhagic fever
2007 January	Semipalatinsk (Semey)	60	-	Hepatitis A
2008 June	Kizilordinskaya	1	-	Crimean-Congo hemorrhagic fever

Date	Area	Cases	Mortality	Diseases
2009 July	Turkestan	3	1	Crimean-Congo hemorrhagic fever
2010 April	Southern Kazakh Oblast	7	2	Crimean-Congo hemorrhagic fever
2009	Kizilordinskaya	4	-	Crimean-Congo hemorrhagic fever

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

General government expenditure on health as % of total government expenditure in 2007 was 11.2%. In 2007, there was one physician per 269 people, and there were 77 (2007) hospital beds per 10,000 individuals. The citizens of Kazakhstan have been affected by radiation caused by nuclear tests. A Soviet nuclear testing center named “Semey” contained more than 300 underground tests. Some tests were conducted at the ground level and in other regions of Kazakhstan, and near the Caspian Sea, about 40 tests were conducted underground; after the independence, no other testing has been done in this country. The long-term side effects of these experiments on people living in these regions remain unknown. Reports show that people who are living in these places suffer more from respiratory problems, and the life expectancy is lower as well. In this country, medical care is free. Since independence, the prevalence of infectious and parasitic diseases has doubled.

Other Infections

- *Cutaneous leishmaniasis*
- *Brucellosis*
- *Anthrax*
- *Malaria*
- *Louse-borne typhus*
- *Tick-borne relapsing fever*
- *Tick-borne encephalitis*
- *Hemorrhagic fever with renal syndrome*
- *Cat liver fluke*
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
03	03	03

Kyrgyzstan

Population and Geographical Location

In 2011, Kyrgyzstan had a population of 5,587,443 and an area of 199,951 km². It is located in Central Asia, and it is landlocked. It is bordered by Kazakhstan to the north, China to the east and southeast, Tajikistan to the south and southwest and Uzbekistan to the west.

Climate and Health Status

Its climate is continental, and the temperature variance between day and night is large. Its eastern regions are dry, and their domains and the southwest mountains of Fergana are humid and rainy. Lowlands are dry, and they have a desert climate.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria- tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Immunization Planning (Continued)

Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site injection was given, fever, rash, seizure, pneumonia, cytopenia

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Not seen	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than two years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breastfeeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third trimester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first trimester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2005		41	-	Anthrax
2006	Bishkek and Chuysk	-	-	Malaria

Current Outbreaks and Mortality (Continued)

Date	Area	Cases	Mortality	Diseases
2006 September	Bishkek, Batken, Jalalabad, Issik-Kul, Osh and Narin	209	-	Malaria
2006	-	15	-	Anthrax
2007	Bosogo, Olmo, Kalys-Ordo	52	-	Malaria
2007	-	23	-	Anthrax
2008 December	Jalal-Abad, Talasskoe, Norinskoe [Naryn], and Issik Kulsoe	400	-	Brucellosis
2008 September	Jalal-Abad Oblast and the Batken Oblast	-	-	Anthrax
2008 June and July	Aravan, Osh, the Suzak, Nooken, Jalal-Abad Oblast	-	-	Anthrax
2008	Chuysk and Talass	-	-	Anthrax
2008		47		Anthrax
2009 July and August	Jalal-Abad	-	-	Anthrax

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

The population using improved drinking-water sources (%) is as follows: urban 99%, rural 85%, total 90% (2008). The average life expectancy for males and females is 66.04 and 74.24 years, respectively (2011). The main causes of mortality are cardiovascular disease, injuries, malignant neoplasm and respiratory infections.

In 2011, the infant mortality was 29.27 deaths per 1,000 live births.

The population of infected people with HIV is 9,800, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.3% (2009).

General government expenditure on health as % of total government expenditure in 2007: 9.8%. In 2007, there was one physician per 444 people, and there were 51 (2007) hospital beds per 10,000 individuals.

Other Infections

- Tick-borne encephalitis
- Cutaneous leishmaniasis

Emergency Numbers

Police	Medical	Fire
103	103	103

Tajikistan

Population and Geographical Location

In 2011, Tajikistan had a population of 7,627,200 and an area of 143,100 km². It is located in Central Asia, surrounded by land on all sides. It is bordered by Kyrgyzstan to the north, China in the east, Afghanistan in the south and Uzbekistan in the west and northwest.

Climate and Health Status

It has cold winters and hot summers. Western areas have maximum rainfall in this country. Pamir Mountains are semi-arid to polar. The population using improved drinking-water sources (%) is as follows: urban 94%, rural 61%, total 70% (2008). The average life expectancy for males and females is 62.97 and 69.25 years, respectively (2011). The main causes of mortality are cardiovascular disease, infectious and parasitic diseases, malignant neoplasm and injuries. In 2011, the infant mortality rate was 38.54 deaths per 1,000 live births. The population of people infected with HIV is 9,100, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.2% (2009). General government expenditure on health as % of total government expenditure in 2007: 3.6% In 2006, there was one physician per 564 people, and there were 61 (2006) hospital beds per 10,000 individuals.

After entering the free trade market, allowances and social insurance were approved to guarantee the welfare of the citizens.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria- tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age ≥ 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site injection was given, fever, rash, seizure, pneumonia, cytopenia

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Mefloquine Doxycycline Atovaquone/Proguanil	Seen	South and Central regions Badakhshan Gorno Leinabad	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than two years old should not receive hepatitis A or typhoid vaccines		
Nutrition	Using safe food and water Breastfeeding, special food for babies or cow milk Adequate hydration Sunlight protection		
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections		
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary	

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third trimester pregnancy		
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration		
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first trimester	

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1996 and 1997	Nationwide	-	-	Typhoid fever
2003 September	Dushanbe	-	-	Typhoid fever
2004 August	Rudaki	-	-	Typhoid fever
2006 April	Dushanbe	-	-	Leptospirosis
2009 December	Sogdinskiy	-	-	Hepatitis A
2009 August	Western Tursunzade	-	24	Crimean-Congo hemorrhagic fever
2010 April	Southwestern part of Tajikistan	458	26	Poliomyelitis

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Other Infections

- Visceral and cutaneous leishmaniasis
- Anthrax
- brucellosis
- Tick-borne relapsing fever

Emergency Numbers

Police	Medical	Fire
-	03	-

Turkmenistan

Population and Geographical Location

In 2011, Turkmenistan had a population of 4,997,503 and an area of 488,100 km². It is located in Southwest Asia. It is bordered by Kazakhstan and Uzbekistan in the north, Uzbekistan in the northeast, Afghanistan in the southeast, Iran in the south and the Caspian Sea in the west.

Climate and Health Status

It has mainly a dry climate, but a remarkable difference in seasonal temperatures is the main feature of its climate.

The population using improved drinking-water sources (%) is as follows: urban 97% (2008), rural and total is not available (unreported).

The average life expectancy for males and females is 65.57 and 71.63 years, respectively (2011). The main causes of mortality are cardiovascular disease, injuries, infectious and parasitic diseases and malignant neoplasm.

In 2011, the infant mortality was 42.34 deaths per 1,000 live births.

The population of people infected with HIV is <200, but the prevalence rate of 15- to 49-year-old adults infected with HIV is <0.1% (2007).

General government expenditure on health as % of total government expenditure in 2007: 10.3%. In 2007, there was one physician per 408 people, and there were 41 hospital beds (2007) per 10,000 individuals.

The healthcare system is based on the system established during the time of the Soviet Union, but it lacks quality and it is severely deficient regarding financial issues.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria- tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precautions)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site injection was given, fever, rash, seizure, pneumonia, cytopenia

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Not seen	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than two years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breastfeeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third trimester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first trimester

Other Infections

- *Cutaneous leishmaniasis*
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
03	03	03

Uzbekistan

Population and Geographical Location

In 2011, Uzbekistan had a population of 28,128,600 and an area of 447,400 km². It is located in Central Asia, bordered by Kazakhstan in the west and north, Kyrgyzstan and Tajikistan in the east and Afghanistan and Turkmenistan in the south.

Climate and Health Status

It has a dry and continental climate. Its winters are mild and short, and the summers are long, warm and dry. It has semi-arid grassland in eastern areas.

The population using improved drinking-water sources (%) is as follows: urban 98%, rural 81%, total 87% (2008).

The average life expectancy for males and females is 69.48 and 75.71 years, respectively (2011).

The main causes of mortality are cardiovascular disease, malignant neoplasm, injuries and digestive diseases.

In 2011, the infant mortality rate was 21.92 deaths per 1,000 live births.

The population of people infected with HIV is 28,000, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.1% (2009).

General government expenditure on health as % of total government expenditure in 2007 was 7.9%.

In 2007, there was one physician per 389 people, and there were 48 (2007) hospital beds per 10,000 individuals.

Some reforms have been made in order to enter the global free market economy; this may have undermined the social welfare of its citizens.

Therefore, the government allocated policies in the form of credit for social insurance and public careers.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria- tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)		Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third trimesters	2 to 4 weeks before traveling		History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel		The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site injection was given, fever, rash, seizure, pneumonia, cytopenia

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Uzunsky Sariassiskiy Surkhanda Rinskaya	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than two years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breastfeeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third trimester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first trimester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2005	Nationwide	-	-	Brucellosis
2010	Southwestern part of Tajikistan	-	-	Poliomyelitis

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Other Infections

- Echinococcus
- Anthrax
- Cutaneous leishmaniasis
- Tick-borne relapsing fever
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
03	03	03

Eastern Asia

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China

Population and Geographical Location

In 2011, China had a population of 1,336,718,015 and an area of 9,596,961 km². It is bordered by Mongolia to the north; Russia to the northeast; North Korea, The Yellow Sea and the East China Sea to the East; the South China Sea, South Vietnam, Laos, Myanmar, India, Bhutan and Nepal to the south; India and Pakistan to the west; and Afghanistan, Tajikistan, Kyrgyzstan and Kazakhstan to the northwest.

Climate and Health Status

China is located in Central Asia and has dry, cold winters and hot summers.

The eastern half of the country has a humid and marine climate. Northern China has mild summers and cold and rainy winters. The climate of south China is hot, humid and relatively rainy.

The population using improved drinking water sources (%): urban 98%, rural 82%, total 89% (2008).

The average life expectancy for males and females: 72.68 and 76.94 years, respectively (2011).

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Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received the vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reactions from previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Those with a hypersensitivity to vaccine components, Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers, Those with close contact with the natives, People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately-to- severely ill patients, History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Japanese encephalitis	Recommended	Long stays (1month) in rural areas, Extensive outdoor or nighttime exposure in rural areas	At least 10 days before traveling	3 doses at 0, 7th and 30th days	Persons with a history of urticaria are at a greater risk for adverse reactions to the vaccine, Pregnancy	Fever, myalgia, malaise, anaphylaxis/allergic reaction: pruritus, urticaria, angioedema
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine, Those with a negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reactions to gelatin or neomycin, Pregnancy, Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children, Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B, Pregnancy, Immunodeficiency	Myalgia, allergic reaction

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reactions	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old, The injectable vaccine is approved for children over 2 years old, Severe local or systemic reaction to a prior dose, There is no data about the safety of the typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and with a negative history of chickenpox infection, Those who have received one dose of the vaccine with negative blood test results for chickenpox immunity	Before traveling	-	Pregnancy, Known severe immunodeficiency, History of immediate hypersensitivity reactions to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travelling to eastern regions of the Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling	-	Immunocompromised patients, Pregnancy, Allergic reaction to eggs, Diseases of the thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Areas with Malaria	Drug resistance	Malaria Species	Prophylaxis
Rural parts of Anhui, Guizhou, Henan, Hubei, Hainan, and Yunnan provinces. Some major river cruises may go through malaria endemic areas	Chloroquine Mefloquine	<i>P. vivax</i> <i>P. falciparum</i>	Along the China-Burma border in the western part of Yunnan province: Atovaquone/Proguanil or Doxycycline
Anhui and Hubei provinces			Hainan and other parts of the Yunnan province: Atovaquone/Proguanil, Doxycycline or Mefloquine Anhui, Guizhou, Henan, and Hubei provinces: Atovaquone/Proguanil, Chloroquine, Doxycycline, Mefloquine, or Primaquine

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1995	Heihe province	Rising	-	Measles
2001	-	-	-	Cholera
2002 November	Guangdong	5,327	349	SARS
2003 December	Guangdong	1	-	SARS
2004 January	Guangxi, Hunan, Hubei, Gansu, Shaanxi, Anhui, Shanghai, Guangdong, Zhejiang, Yunnan, Henan, Jiangxi, and xinjianguygar	-	-	Avian influenza
2004 April	-	9	-	SARS
2004 January	-	3	-	SARS
2004 April	-	14	-	Measles
2005 September	Fujian	-	-	Cholera
2005 November	Anhui, Hunan, Fujian, Sichuan, Guangxi, Guangdong, Hubei, Jiangsu, Beijing, Shanghai, Shandong, Shanxi, Jiangxi, Liaoning, Guizhou, Xinjiang Uygur, Xinjiang Autonomous	39	-	H5N1 avian influenza (“bird flu”)
2005 July to August	Sichuan	204	38	Streptococcus suis
2005 January	Anhui	-	-	Meningococcal disease
2005 August	Henan, Hebei, Jiangsu, and Xichuan	-	-	Meningococcal disease
2006 August	Hunan, Ningxia Hui	-	-	Avian influenza
2006 October	Inner Mongolia	-	-	Avian influenza
2006 September-	Guangdong	-	-	-
2006 September	Anhui	18,000	-	Malaria
2006 August	Henan, Shaanxi, Shanxi	-	-	Japanese encephalitis
2006 August	Beijing	132	-	Angiostrongylus meningitis
2007 May	Linyi city in Shandong province	-	3	Hand, foot, and mouth disease
2007	Gansu	2	-	
2007 March	Tibet	-	-	Avian influenza
2007 September	Guangdong	-	-	Avian influenza
2008 April	Guangdong, Zhejiang, Hebei, Shandong, Hunan, Hubei, Hainan, Henan, Jiangsu, Jiangxi, Shaanxi, Sichuan, Yunnan, and Zhejiang, Beijing, Shanghai, and Chongqing	170,000	36	Hand, foot, and mouth disease

Date	Area	Cases	Mortality	Diseases
2008 October	Fujian Province	-	-	Hand, foot, and mouth disease
2008 February	Xinjiang Uygur Autonomous Region	-	10	Measles
2008 January to March	City of Guangzhou in southern China	3,650	-	Measles
2008 September	Linshi district in southeastern Tibet	2	-	-
2008 September	Nationwide	54,000	4	Melamine- contaminated products
2008 October	Hainan	-	-	Cholera
2008 December	Guangdong	1	-	H9N2 avian influenza
2008 January	Xinjiang	-	-	Avian influenza
2008 February	Guizhou	-	-	Avian influenza
2008 March and June	Guangdong	-	-	Avian influenza
2008 December	Jiangsu	-	-	Avian influenza
2008 October	Yunnan	-	-	Dengue fever
2009 early	Shandong	-	-	Hand, foot, and mouth disease
2009 July	Henan, Jiangsu, Guangxi, Anhui, Guangdong, Hebei, Hunan, Zhejiang, and Hubei	85,301	44	Hand, foot, and mouth disease
2009 August	Qinghai	12	3	Pneumonic plague
2009 January	Yunnan	47	-	Cholera
2009 June	Shaanxi Province	-	11	Rabies
2009 February	Tibet	-	-	Avian influenza
2010	Nationwide	1,000,000	537	Hand, foot, and mouth disease
2010 April to May	-	280	-	Measles

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

The main causes of mortality are: cardiovascular disease, malignant neoplasm, respiratory infections and injuries.

In 2011, the infant mortality rate was 16.06 deaths per 1,000 live births.

There are 740,000 people infected with HIV, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.1% (2009).

The general government expenditure on health as a percentage of total government expenditures in 2007 was 9.9%.

In 2003, there was one physician per 714 people and there were 30 (2004) hospital beds per 10,000 individuals. Social services programs were the most important factors contributing to the rise of communism in China. This welfare plan included squaring the status of residences away; creating employment opportunities; and providing medical care, retirement pensions and burial expenses. One of the fundamental changes which has occurred in this country is the public attitude toward traditional Chinese medicine such as local herbal medicines, home remedies and acupuncture. This type of treatment in China is more common than the classical style. In rural areas, plants are used in about four-fifths of treatments. Many trained physicians travel to remote areas to promote health. Millions of peasants in these remote areas see physicians for the first time. Very extensive programs combating tuberculosis, malaria and other diseases have been successfully implemented.

The government controls the number of infant births through family planning programs. Since the Cultural Revolution in 1960, the government has invigorated its family planning programs; a single-child policy has been approved by the legislature.

In addition, government benefits for disability, childbirth, incidents and aging are prevalent.

Other Infections

- *Visceral leishmaniasis*
- *Cutaneous leishmaniasis*
- *Scrub typhus*

Emergency Numbers

Police	Medical	Fire
110	999	119

- *Hemorrhagic fever with renal syndrome*
- *Hepatitis E*
- *Schistosomiasis*
- *Leptospirosis*
- *Trachoma (eye infection)*
- *Brucellosis*
- *Melioidosis*
- *Murine typhus*
- *Louse-borne typhus*

- *North Asian tick fever (northern China)*
- *Tick-borne relapsing fever (western China)*
- *Tick-borne encephalitis (rural and forested areas)*
- *Crimean-Congo hemorrhagic fever (western China)*
- *Anthrax*
- *Chikungunya fever*
- *Tularemia*
- *Q fever*
- *Lyme disease*
- *Lung fluke (paragonimiasis)*
- *Oriental liver fluke (clonorchiasis)*
- *Giant intestinal fluke (fasciolopsiasis)*
- *Fish tapeworm (diphyllobothriasis)*
- *Pork tapeworm (taeniasis)*
- *HIV (human immunodeficiency virus)*

Japan

Population and Geographical Location

In 2011, Japan had a population of 126,475,664 and an area of 377,915 km². It is an archipelago, formed by 3,400 islands, located in East Asia and in the western waters of the Pacific Ocean.

Climate and Health Status

Its climates in the south areas relatively warm, humid and rainy; the central areas are mild; and the northern areas are cold. The main causes of mortality are: cardiovascular disease, malignant neoplasm, injuries and respiratory infections. The general government expenditure on health as a percentage of total government expenditures in 2007: 17.9%. Average life expectancy for males and females: 78.96 and 85.72 years, respectively (2011); which is the highest in Asia. In 2004, there was one physician per 469 people. Number of hospital beds per 10,000 individuals: 139 (2004). There are 8,100 people with HIV, but the prevalence rate of 15- to 49-year-old adults with HIV is less than 0.1% (2009). The population using improved drinking water sources (%): urban 100%, rural 100%, total 100% (2008). Since World War II, social welfare services have been developed dramatically to include the laws of livelihood security, pensions for poor people, insurance for national health, and social welfare, and plans of welfare for the elderly, disabled, and children. Most people retire at the age of 55 years; their retirement pension is 40% of their salary. The public health conditions are great. In 2011, the infant mortality rate was 2.78 deaths per 1,000 live births.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received the vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reactions from previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Those with a hypersensitivity to vaccine components, Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers, Those with close contact with the natives, People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately-to- severely ill patients, History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Japanese encephalitis	Recommended	Long stays (1month) in rural areas, Extensive outdoor or nighttime exposure in rural areas	At least 10 days before traveling	3 doses at 0, 7th and 30th days	Persons with a history of urticaria are at a greater risk for adverse reactions to the vaccine, Pregnancy	Fever, myalgia, malaise, anaphylaxis/allergic reaction: pruritus, urticaria, angioedema
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine, Those with a negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reactions to gelatin or neomycin, Pregnancy, Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children, Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B, Pregnancy, Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reactions	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Varicella	Recommended	Persons over one year old and with a negative history of chickenpox infection, Those who have received one dose of the vaccine with negative blood test results for chickenpox immunity	Before traveling	-	Pregnancy, Known severe immunodeficiency, History of immediate hyper sensitivity reactions to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travelling to eastern regions of the Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling	-	Immunocompromised patients, Pregnancy, Allergic reaction to eggs, Diseases of the thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Not seen	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines		
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection		
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections		
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary	

Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1983, 1989-1991, 1997-1998	Nationwide	-	-	<i>Echovirus</i>
1996	Sakai City	6,000	-	<i>Hemorrhagic E. Coli</i>
2000 July	Osaka	13,000	-	<i>Staphylococcus aureus</i>
2004 January	Farm in Yamaguchi	1	-	H5N1 avian influenza ("bird flu")
2006	Japan	Tens of thousands of cases	-	<i>Norovirus</i> infections
2006 July	Japan	-	-	<i>Pharyngoconjunctival fever</i> (
2007 April	Kanto Tokyo, Kanagawa, Saitama, and Chiba	18,000	-	Measles
2007	Miyazaki	-	-	H5N1 avian influenza ("bird flu")
2008 April to May	Hokkaido Island and Akita	-	-	H5N1 avian influenza ("bird flu")
2008 first 6 months	Tokyo and Hokkaido	9,600		Measles

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Emergency Numbers

Police	Medical	Fire
110	119	119

Other Infections

- Leptospirosis
- Hepatitis E
- *Lung fluke*
- *Oriental liver fluke (clonorchiasis)* (acquired by eating raw fish)
- *Fish tapeworm*
- *Gnathostomiasis*
- *Giant intestinal fluke (fasciolopsiasis)*
- *Hemorrhagic fever with renal syndrome*
- *Scrub typhus*
- *Japanese spotted fever*
- Tularemia
- *HIV (human immunodeficiency virus)*

North Korea - Democratic People's Republic of Korea

Population and Geographical Location

In 2011, North Korea had a population of 24,457,492 and an area of 120,538 km². It is located in East Asia; the Far East region is known as the northern part of the Korean Peninsula. This country is bordered by China to the north, the Sea of Japan to the east, South Korea to the south, and the Yellow Sea and the Korean Bay to the west.

Climate and Health Status

Its climate is relatively hot and humid in the south, and the northern areas are relatively cool, moist and rainy. The population using improved drinking water sources (%): urban 100%, rural 100%, total 100% (2008). The average life expectancy for males and females: 65.03 and 72.93 years, respectively (2011). The main causes of mortality are: cardiovascular disease, infectious and parasitic diseases, respiratory infections and malignant neoplasm. In 2011, the infant mortality rate was 27.11 deaths per 1,000 live births. Information associated with the population of people infected with HIV and the prevalence rate of 15- to 49-year-old adults infected with HIV is not available (unreported).

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reactions in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine, Those with a negative history of previous infections with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reactions to gelatin or neomycin, Pregnancy, Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children, Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B, Pregnancy, Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reactions	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old, Injectable vaccine is approved for children over 2 years old, Severe local or systemic reactions to a prior dose, There is no data about the safety of the typhoid vaccine during pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Varicella	Recommended	Persons over one year old and with a negative history of chickenpox infection, Those who have received one dose of the vaccine with negative blood test results to chickenpox immunity	Before traveling		Pregnancy, Known severe immunodeficiency, History of immediate hyper sensitivity reactions to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of the Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients, Pregnancy, Allergic reaction to eggs, Diseases of the thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Chloroquine	Not seen	South regions	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2006	Anggang, Kangwon, South Hamkyung, North Hamkyung, Yangkang Province	-	-	Scarlet fever
2007	North Korea	3,600	4	Measles

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

The general government expenditure on health as a percentage of total government expenditures in 2007 is not available (unreported). The number of physicians is not reported. The number of hospital beds per 10,000 individuals is not available (unreported). All North Korean citizens have retirement and disability insurance. Healthcare services are free and available to all people.

Other Infections

- *Hemorrhagic fever with renal syndrome (transmitted by rodents)*
- *Lung fluke (paragonimiasis)*
- *Oriental liver fluke (clonorchiasis)*

Emergency Numbers

Currently there is no emergency number available.

South Korea

Population and Geographical Location

In 2011, South Korea had a population of 48,754,657 and an area of 99,720 km². It is located in East Asia in the South Korean Peninsula. It is bordered by North Korea in the north, the Sea of Japan in the east, the Korea Strait in the south and the Yellow Sea in the west.

Climate and Health Status

Its climate is hot, humid and rainy. Its rainfall is heavier in the summer than in winter.

The population using improved drinking water sources (%): urban 100%, rural 88%, total 98% (2008).

The average life expectancy for males and females: 75.84 and 82.49 years, respectively (2011). The main causes of mortality are: malignant neoplasm, cardiovascular disease, injuries and respiratory infections. In 2011, the infant mortality rate was 4.16 deaths per 1,000 live births. There were 9,500 people infected with HIV, but the prevalence rate of 15- to 49-year-old adults infected with HIV is <0.1 % (2009).

The general government expenditure on health as a percentage of total government expenditures in 2007: 12.1%. In 2004, there was one physician per 593 people and there were 86 (2004) hospital beds per 10,000 individuals. The government does not support any social insurance schemes; limited plans exist with few members for retirement insurance. In addition, there is no unemployment insurance.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria- tetanus	Recommended	All travelers who have not received the vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reactions in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old, Hypersensitivity to vaccine components, Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers, Those with close contact with the natives, People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately-to- severely ill patients, History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Japanese encephalitis	Recommended	Long stays (1month) in rural areas, Those with extensive outdoor or nighttime exposure in rural areas	At least 10 days before traveling	3 doses at 0, 7th and 30th days	Persons with a history of urticaria are at greater risk to adverse reactions from the vaccine, Pregnancy	Fever, myalgia, malaise, anaphylaxis/allergic reaction: pruritus, urticaria, angioedema
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reactions to gelatin or neomycin, Pregnancy, Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
		Negative history of previous infections with measles or negative blood test results for immunity to measles				
Poliomyelitis	Recommended	Unvaccinated children, Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B, Pregnancy, Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reactions	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old, Injectable vaccine is approved for children over 2 years old, Severe local or systemic reactions to a prior dose, There is no data about the safety of the typhoid vaccine during pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Varicella	Recommended	Persons over one year old with a negative history of chickenpox infection Those who have received one dose of the vaccine with negative blood test results for chickenpox immunity	Before traveling		Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travelling to eastern regions of the Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients, Pregnancy, Allergic reaction to eggs, Diseases of the thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Chloroquine	Not seen	Kyonggi Kangwon	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection

Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2003 December	Poultry farms	-	-	H5N1 avian influenza ("bird flu")
2006 November	North Jeolla, Jeollabuk-do, and South Chungchong	-	-	H5N1 avian influenza ("bird flu")
2008 April	North Jeolla, South Jeolla, Gyeonggi, Chungcheong, and Gyeongsang	-	-	H5N1 avian influenza ("bird flu")

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Emergency Numbers

Police	Medical	Fire
112	119	119

Other Infections

- *Vibrio vulnificus*
- *Hemorrhagic fever with renal syndrome*
- *Tick-borne encephalitis (rural and forested areas in spring and summer)*
- *Leptospirosis (rodents are the chief animal reservoir)*
- *Brucellosis (the most common animal source is infected cattle)*
- *Scrub typhus (rural areas; transmitted by chigger bites)*
- *Murine typhus (rare)*
- *Lung fluke (paragonimiasis)*
- *Oriental liver fluke (clonorchiasis)*
- *Fish tapeworm (diphyllobothriasis)*
- *Hand, foot and mouth disease*
- *HIV (human immunodeficiency virus)*

Taiwan

Population and Geographical Location

In 2011, Taiwan had a population of 23,071,779 and an area of 35,980 km². It is located in East Asia and the western Pacific Ocean.

Climate and Health Status

Its climate is tropical. There is a rainy season during southwest monsoon (June to August). Cloudiness is persistent and extensive throughout the year.

The population using improved drinking water sources (%) is not available (unreported).

The average life expectancy for males and females: 75.5 and 81.36 years, respectively (2011).

The main causes of mortality: are not available (unreported).

In 2011, the infant mortality rate was 5.18 deaths per 1,000 live births.

The population of people infected with HIV and the prevalence rate of 15- to 49-year-old adults infected with HIV is not available (unreported) %.

The general government expenditure on health as a percentage of total government expenditures is not available (unreported).

The number of physicians is not reported.

Number of hospital beds per 10,000 individuals is not available (unreported).

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received the vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reactions in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old, Hypersensitivity to vaccine components, Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers, Those with close contact with the natives, People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately-to- severely ill patients, History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Japanese encephalitis	Recommended	Long stays (1month) in rural areas, Extensive outdoor or nighttime exposure in rural areas	At least 10 days before traveling	3 doses at 0, 7th and 30th days	Persons with a history of urticaria are at greater risk of adverse reactions to the vaccine, Pregnancy	Fever, myalgia, malaise, anaphylaxis/allergic reaction: pruritus, urticaria, angioedema
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine, Negative history of previous infections with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reactions to gelatin or neomycin, Pregnancy, Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children, Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B, Pregnancy, Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reactions	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel		The oral vaccine is approved for travelers at least six years old, Injectable vaccine is approved for children over 2 years old, Severe local or systemic reactions to a prior dose, There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and with a negative history of chickenpox infection, Those who have received one dose of the vaccine with negative blood test results for chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency, History of immediate hyper sensitivity reactions to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travelling to eastern regions of the Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients, Pregnancy, Allergic reaction to eggs, Diseases of the thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever		
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements	
Not confirmed	Not seen	Not seen	-	-	

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection

Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality Table

Date	Area	Cases	Mortality	Diseases
1998 April to July	-	6	-	Hand, foot and mouth disease
1998 April to July	Nationwide	71	-	Hand, foot and mouth disease
2002 July	Kaohsiung	5,000	-	Hand, foot, and mouth disease
2003 March	Taipei	674	84	Dengue fever
2006 July	Kaohsiung-Pingdong	2,000	-	SARS
2007 October	Tainan	500	-	SARS
2007 October	Taiwan	-	-	Dengue fever
2008 August	Shezidao of Shilin District	-	-	Conjunctivitis ("pink-eye")
2008 May		352	11	Hand, foot and mouth disease
2008 October	Southern Taiwan	-	-	Dengue fever
2009 November	Kaohsiung and Pingtung	648	2	Dengue fever

Current Outbreaks and Mortality Table (Continued)

Date	Area	Cases	Mortality	Diseases
2010	Nationwide	1,200	-	Dengue fever
2010	-	-	-	Hand, foot, and mouth disease
2010	Nationwide	227	-	Dengue fever

An influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Emergency Numbers

Police	Medical	Fire
110	119	119

Other Infections

- *Scrub typhus*
- *Eosinophilic meningitis*
- *Melioidosis*
- *Hemorrhagic fever with renal syndrome*
- *HIV (human immunodeficiency virus)*

Southern Asia

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Afghanistan

Population and Geographical Location

In 2011, Afghanistan had a population of 29,835,392 and an area of 652,230 km². It is located in Southwest Asia. It contains plains and high mountains, and it is a part of the Iranian Plateau. It is bordered by Turkmenistan and Tajikistan to the north, China and Pakistan to the east, Pakistan to the south and Iran to the west.

Climate and Health Status

Afghanistan has an arid to semiarid climate. It has cold winters and hot summers.

The population using improved drinking-water sources (%): urban 78%, rural 39%, total 48% (2008).

The average life expectancy for males and females is 44.79 and 45.25 years, respectively (2011).

The main causes of mortality are infectious and parasitic diseases, cardiovascular disease, injuries and malignant neoplasm.

In 2011, the infant mortality rate was 149.2 deaths per 1,000 live births.

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Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last ten years	4 to 6 weeks before traveling	Every ten years	1. History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	1. Children younger than one year old 2. Hypersensitivity to vaccine components 3. Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (three doses at 0,1, and 6 months)	-	1. Moderately to severely ill patients 2. History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least two doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	1. History of immediate hypersensitivity reaction to gelatin or neomycin 2. Pregnancy 3. Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	1. Allergy to streptomycin, neomycin polymixin B 2. Pregnancy 3. Immunodeficiency	Myalgia, allergic reaction

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	1. History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	1. The oral vaccine is approved for travelers at least six years old 2. Injectable vaccine is approved for children over two years old 3. Severe local or systemic reaction to a prior dose 4. There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results for chickenpox immunity	Before traveling	-	1. Pregnancy 2. Known severe immunodeficiency 3. History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		1. Immunocompromised patients 2. Pregnancy 3. Allergic reaction to egg 4. Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1998 March	Takar	19	12	Crimean-Congo hemorrhagic fever
2000 August	Nationwide	-	-	Cholera
2000 June-July	Gulran, heart	-	-	Crimean-Congo hemorrhagic fever
2001 July	Nationwide	4,000	100	Cholera
2002 December	Province of Badghis	-	-	Malaria
2002 July	Kabul	6,691	3	Cholera
2003 August	-	50	3	Diphtheria
2003 January	Khwhahan, Badakhshan	115	17	Pertussis

Current Outbreaks and Mortality (Continued)

Date	Area	Cases	Mortality	Diseases
2003 June	Zhare Dasht, Kandahar	-	-	Diphtheria
2004 June	Nationwide	3,000	8	Cholera
2007 February	Ghor province	-	-	Typhoid fever
2007 February	Laghman	-	-	Hepatitis E
2007 February	Nangarhar and Kunar	-	-	H5N1 avian influenza ("bird flu")
2008	Nationwide	31	-	Poliomyelitis
2008 August	Herat	5	2	Crimean-Congo hemorrhagic fever
2008 October	Nooristan, Nangarha, Samangan, Faryab and Nimruz	-	-	Cholera
2009		38	-	Polio
2009	Kabul	65,000	-	Leishmaniasis
2009 September	Kabul, Samangan and Nangarhar	600	-	Cholera
2010	Kandahar, Helmand, Urozgan and Nangarhar	18	-	Poliomyelitis
2010	Khosan	-	-	Leishmaniasis

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

The population of people infected with HIV is not available, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.01% (2001).

General government expenditure on health as % of total government expenditure in 2007 was 3.7%.

In 2005, there was one physician per 4,878 people, and there were 4.2 hospital beds per 10,000 individuals.

Health standards in this country are very poor; civil wars and bombing are making this situation even worse. It is estimated that wars and conflicts have resulted in 4,000 deaths in 2001-2002; this number is expected to grow. Unexploded bombs and un-cleared landmines are the most dangerous threats facing the people of Afghanistan.

Malnutrition and diseases caused by water pollution are the consequences of civil wars.

Other Infections

- *Scrub typhus* (transmitted by chiggers)
- *Murine typhus* (transmitted by fleas)
- Tick-borne relapsing fever
- Leptospirosis
- Anthrax
- Brucellosis (low incidence)
- *Giardiasis*
- *Cryptosporidiosis*
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
119	102	119

India

Population and Geographical Location

In 2011, this country had a population of 1,189,172,906 and an area of 3,287,263 km². It is located in the south of Asia and is on the northern coast of the Indian Ocean. India is bordered by Nepal and Bhutan to the north, Myanmar and Bangladesh to the east, the Indian Ocean on the east, south and west borders and Pakistan on the northwest.

Climate and Health Status

India's climate is affected by the monsoon phenomenon. Precipitation is heavy from June to September. The climate of India is dry and warm in the rest of the year (eight months).

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last ten years	4 to 6 weeks before traveling	Every ten years	1. History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	1. Children younger than one year old 2. Hypersensitivity to vaccine components 3. Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (three doses at 0,1, and 6 months)	-	1. Moderately to severely ill patients 2. History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Japanese encephalitis	Recommended	Long stays (one month) in rural areas Extensive outdoor or nighttime exposure in rural areas	At least ten days before traveling	Three doses at 0, 7th and 30th days	1. Persons with history of urticaria are at greater risk of adverse reactions to vaccine 2. Pregnancy	Fever, myalgia, malaise, anaphylaxis/allergic reaction: pruritus, urticaria, angioedema
Meningococcal	Recommended	All travelers to the states of Meghalaya, Tripura and Mizoram in the northeast	Before traveling	-	-	-
MMR	Recommended	Travelers who have not received at least two doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	1. History of immediate hypersensitivity reaction to gelatin or neomycin 2. Pregnancy 3. Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results for chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone / Proguanil Doxycycline Mefloquine	Confirmed	Delhi, Bombai, Himachal, Pradesh, Jammn, Sikkim Cashmir	-	If coming from an endemic area

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than two years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breastfeeding, special food for babies or cow's milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third trimester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first trimester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1992 to 1994	Maharashtra	3	-	<i>Buffalopox</i>
1994	Nationwide	-	-	Plague
1994	Bihar	200,000	-	Leishmaniasis
1996	Delhi	-	-	Dengue
1997	Surat and Valsad	-	-	Leptospirosis
1998 March	Beed, Maharashtra	5	-	<i>Buffalopox</i>
1999 September	Andhra Pradesh	-	-	Japanese encephalitis
2001 January-February	Siliguri	-	-	Nipah virus
2001 July	Orissa State	34,000	33	Cholera
2002	Assam	40,000	-	Malaria
2002 February	Hat Koti, Shimla, Himachal Pradesh	16	4	Pneumonic plague
2003 June	Delhi	2185	4	Dengue
2003 September	Gujarat	-	-	Leptospirosis
2005 May	Delhi	441	60	Meningococcal disease
2005 June			25	Malaria
2005 August	Uttar Pradesh	6,000	1,500	Japanese encephalitis
2005 November	Madras	-	-	Cholera
2006 February	Nationwide	1,250,000	-	Chikungunya fever
2006 February	Nationwide	-	-	H5N1 avian influenza ("bird flu")
2006 April	Assam	-	500	Malaria
2006 June	Bengal	18,000	55	Malaria
2006 July	Mumbai	-	-	Leptospirosis
2006 May	Vadaserikara	-	-	Leptospirosis
2006 August	Nationwide	674	-	Poliomyelitis
2006 August	Kochi	300	-	Typhoid
2006 August	Gujarat	-	-	Leptospirosis
2006 August	Tibba	-	-	Cholera
2006 September	Delhi	9,940	183	Dengue
2006 October	Goan and Konokan region	-	-	Malaria
2006 October	Eastern Uttar Pradesh	-	300	Malaria
2006 October	Mumbai	-	-	Cholera
2006	Goa	12	-	Malaria

Current Outbreaks and Mortality (Continued)

Date	Area	Cases	Mortality	Diseases
2007	Nationwide	864	-	Poliomyelitis
2007 March	Nationwide	32	-	Chikungunya fever
2007 April	Bally	-	-	Cholera
2007 May	Nadia	-	5	Nipah virus
2007 June	Kangpokpi, Manipur	-	-	Typhoid fever
2007 July	Rajasthan	-	-	Malaria
2007 July	Uttar Pradesh	-	500	Japanese encephalitis
2007 July	Assam	-	115	Japanese encephalitis
2007 August	Kashmir	400	-	Hepatitis E
2007 September	Calcutta	-	-	Hand, foot, and mouth disease
2007 September	Orissa	-	200	Cholera
2007 September	Haryana	-	-	Cholera
2007 October	Mumbai	-	-	<i>Conjunctivitis</i> ("pink-eye")
2008 First 9 months	Delhi	732	-	Cholera
2008	Nationwide	546	-	Poliomyelitis
2008 January	Goa	1	-	Malaria
2008 January to April	Bengal	-	-	H5N1 avian influenza ("bird flu")
2008 April	Tripura	-	-	H5N1 avian influenza ("bird flu")
2008 July	Uttar Pradesh	2,400	447	Japanese encephalitis
2008 July	Assam	100	23	Japanese encephalitis
2008 September	Declining, except in Delhi	Declining	-	Dengue fever
2008 September	Mountainous Kishtwar	-	-	Measles
2008 September	Murshidabad	-	-	Cholera
2008 October	Bengal, Mohali, Bathinda, Punjab	-	-	Dengue
2008 November	Assam	-	-	H5N1 avian influenza ("bird flu")
2008	Karnataka	70,000	-	Chikungunya fever
2008	Nationwide	2,800	-	Dengue fever
2009	Nationwide	724	-	Poliomyelitis
2009	Bengal	-	-	Chikungunya fever
2009 January	Meghalaya	-	-	Meningococcal meningitis
2009 February	Tripura and Mizoram	2,000	230	Meningococcal meningitis
2009 February	Sabarkantha district, Gujarat state	-	92	Hepatitis B
2009 March	Kothra, Narmada	-	-	Chikungunya fever

Date	Area	Cases	Mortality	Diseases
2009 April	Kerala	-	-	Dengue fever
2009 May	Uttar Pradesh	-	-	Japanese encephalitis
2009 May	Goa	-	-	Chikungunya fever
2009 May	Assam, Bengal	-	-	H5N1 avian influenza ("bird flu")
2009 June	Kerala	-	-	Dengue fever
2009 June	Tumkur and Gujarat	-	-	Cholera
2009 July	Goa	-	-	Chikungunya fever
2009 July	Kolkata (Calcutta)	-	-	Dengue fever
2009 July to August	Punjab	-	-	Cholera
2009 August	Bihar	-	-	Malaria
2009 August	Island of Rameswaram in Tamil Nadu state	-	-	Chikungunya fever
2009 August	Gujarat	-	-	Dengue fever
2009 August	Gujarat	-	-	Dengue fever
2009 September	Keezhakarai, Tamil Nadu and Hyderabad	-	-	Chikungunya fever
2009 September	Mumbai and Gujarat	-	-	Cholera
2009 October	New Delhi and Madhya Pradesh	-	-	Dengue fever
2009 Summer	Assam	164	78	<i>Meningococcal disease</i>
2009 December	Meghalaya	80	5	<i>Scrub typhus</i>
2009 Summer	Uttar Pradesh and Assam	4,000	567	<i>Meningococcal disease</i>
2010 April to August	Uttar Pradesh, Bihar	3,754	541	<i>Meningococcal disease</i>
	Karnataka	700,000	-	Chikungunya fever
	Maharashtra	200,000	-	Chikungunya fever
2010 November	Pune	-	-	Dengue fever and chikungunya fever
2010 January-February	Shimla	160	-	Hepatitis E
2010 March	Kerala	-	-	Dengue fever
2010 March	Kerala	-	-	Dengue fever
2010 April	Karnataka	-	-	Malaria
2010 June and August	Kerala and Maharashtra	250	-	Dengue fever
2010 July	Kerala, Mumbai	9,000	-	Malaria
2010 July	Manipur	34	-	Japanese encephalitis
2010 July	Gujarat	-	-	Encephalitis of unknown cause
2010 August	Karnataka	-	-	Chikungunya fever
2010 September	Haryana	-	-	Malaria
2010 October	Rajasthan	-	-	Malaria

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

The population using improved drinking-water sources (%): urban 96%, rural 84%, total 88% (2008).

The average life expectancy for males and females is 65.77 and 67.95 years, respectively (2011).

The main causes of mortality are cardiovascular disease, infectious and parasitic diseases, injuries and malignant neoplasm.

In 2011, the infant mortality rate was 47.57 deaths per 1,000 live births.

The population of people infected with HIV is 2,400,000, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.3% (2009).

General government expenditure on health as % of total government expenditure in 2007 was 3.7%.

In 2005, there was one physician per 1,823 people, and there were 9 (2005) hospital beds per 10,000 individuals.

After its independence in 1947, from the Colonial British, the Indian government seriously focused on health problems prevalent in the country. This included such diseases as cholera, bloody diarrhea and elephantiasis, which are consequently no longer common within the Indian population. But despite these efforts, the health status among poor people is still critical. Many Indian people are still suffering from malnutrition.

The majority of the rural population does not have access to expert medical resources.

Other Infections

- African trypanosomiasis
- *Vibrio parahemolyticus*
- Cutaneous leishmaniasis
- Brucellosis
- *Kyasanur Forest disease*
- *Chandipura virus encephalitis*
- Anthrax
- Typhus
- Tick-borne relapsing fever
- Louse-borne relapsing fever
- *Indian tick typhus*
- *Tick-borne spotted fever*
- Lymphatic filariasis
- West Nile fever
- *Cysticercosis*
- *Echinococcosis*
- *Giant intestinal fluke (fasciolopsiasis)*
- *Lung fluke (paragonimiasis)*
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
100	102	101

Islamic Republic of Iran

Population and Geographical Location

In 2011, Iran had a population of 75,974,508 and an area of 1,648,195 Km². Iran is located in the Middle East, between Iraq and Pakistan, bordering the sea of Oman, the Persian Gulf, and the Caspian Sea.

The neighboring countries of Iran are Afghanistan, Armenia, Azerbaijan, Iraq, Pakistan, Turkey, and Turkmenistan. The Coastline of Iran is 2,440 km.

Climate and Health Status

Iran has a diverse climate. In the northwest, winters are cold with heavy snowfall and subfreezing temperatures during December and January.

Springs and falls are relatively mild, while summers are dry and hot.

In the south, winters are mild, and the summers are very hot. Average daily temperatures in July exceeds 38° C.

In the province of Khuzestan, the summer heat is accompanied by high humidity.

In general, Iran has an arid climate in which most of the relatively scant annual precipitation falls from October through April. In most of the country, annual average of precipitation is less than 25 centimeters.

The major exceptions are the higher mountain valleys of the Zagros and the coasts of Caspian Sea, where precipitation averages at least 50 centimeters annually. In the western part of the Caspian Sea, rainfall exceeds 100 centimeters annually, and it is distributed relatively evenly throughout the year.

This contrasts with central parts of Iran, which receive ten centimeters or less of precipitation annually.

The population using improved drinking-water sources (%): urban 98%, rural 90% and total 94% (2008).

The average life expectancy for males and females is 68.58 and 71.61 years, respectively (2011).

The main causes of mortality are cardiovascular disease, motor vehicle injuries, malignant neoplasm and respiratory infections.

In 2011, the infant mortality rate was 18 per 1,000 live births.

The population of people infected with HIV is 92,000, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.2% (2009).

General government expenditure on health as percentage of total government expenditure in 2007 was 11.5%.

In 2005, there was one physician per 1,259 people, and there were 14 beds (2006) per 10,000 individuals.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last ten years	4 to 6 weeks before traveling	Every ten years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (three doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third trimesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least two doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Polio	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results for chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Not seen	-	-

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than two years old should not receive hepatitis A or typhoid vaccines		
Nutrition	Using safe food and water Breastfeeding, special food for babies or cow's milk Adequate hydration Sunlight protection		
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections		
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary	

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third trimester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first trimester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2001 and 2002	-	-	-	Crimean-Congo
2006 February	Rasht	-	-	Avian influenza ("bird flu")
2007 October	Kurdistan western part	-	-	Cholera
2008 January	Near the Caspian Sea			Avian influenza ("bird flu")
2008 September	Qom and Karaj	-	-	Cholera
2008	Abattoir in Mashhad	120	19	Crimean-Congo
2009	Sistan and Baluchistan	-	-	Crimean-Congo

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Other Infections

- Anthrax
- Brucellosis
- Cutaneous leishmaniasis
- Leptospirosis
- Tick-borne relapsing fever
- Urinary Schistosomiasis
- Tularemia
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
110	115	125

Pakistan

Population and Geographical Location

In 2011, Pakistan had a population of 187,342,721 and an area of 796,095 km². It is located in South Asia, and it is bordered by Afghanistan (north), China and India in the east, the Indian Ocean (south) and Iran (west).

Climate and Health Status

Pakistan has a mostly desert climate. It is mostly hot and dry. The climate is temperate in northwest and arctic in north.

The population using improved drinking-water sources (%): urban 95%, rural 87%, total 90% (2008).

The average life expectancy for males and females is 64.18 and 67.9 years, respectively (2011).

The main causes of mortality are infectious and parasitic diseases, cardiovascular disease, injuries and malignant neoplasm.

In 2011, the infant mortality rate was 63.26 deaths per 1,000 live births.

The population of people infected with HIV is 98,000, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.1% (2009).

General government expenditure on health as % of total government expenditure in 2007 was 3.5%.

In 2008, there was one physician per 1442 people, and there were six hospital beds per 10,000 individuals.

The lack of financial resources has resulted in poor healthcare and inadequate facility infrastructure.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last ten years	4 to 6 weeks before traveling	Every ten years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (three doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Japanese encephalitis	Recommended	Long stays (one month) in rural areas Extensive outdoor or nighttime exposure in rural areas	At least ten days before traveling	Three doses at 0, 7th and 30th days	Persons with history of urticaria are at greater risk of adverse reactions to vaccine Pregnancy	Fever, myalgia, malaise, anaphylaxis/allergic reaction: pruritus, urticaria, angioedema
MMR	Recommended	Travelers who have not received at least two doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results for chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Mefloquine Doxycycline Atovaquone/Proguanil	Confirmed	All regions with 2000 meters altitude	-	If coming from an endemic area

Important Points for Safely Travelling with Children

Vaccination	Routine vaccination Children younger than two years old should not receive hepatitis A or typhoid vaccines		
Nutrition	Using safe food and water Breastfeeding, special food for babies or cow's milk Adequate hydration Sunlight protection		
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections		
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary	

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third trimester pregnancy		
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration		
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first trimester	

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1998 February	-	4	2	Crimean-Congo hemorrhagic fever
2002 January	Northwest Frontier Province			Leishmaniasis
2002 February	Kurram	5,000	-	-
2006 April	Abbottabad and Mansehra	-	-	Avian influenza
2006 October	Nationwide	1,000	29	Dengue
2007 August	Nationwide	1,500	11	Dengue
2007 October	Lahore	-	-	Dengue
2007 December	Peshawar	8	2	H5N1 avian influenza ("bird flu")
2008 February	Karachi (Sindh)	-	-	Avian influenza
2008 May	Sindh	-	-	Cholera
2008 June	Rawalpindi, Punjab	-	-	Cholera
2008 June	North West Frontier province	-	-	Avian influenza
2008 August	Nationwide	287	4	Dengue
2008 September	Bajaur	-	-	Cholera
2008 October	Balochistan	3	3	Crimean-Congo hemorrhagic fever
2008 November	Lahore	1,000	-	Dengue fever
2008	Sindh	116	-	Poliomyelitis
2009	-	89	-	Poliomyelitis
2009 July	Dera Ismail Khan	-	-	Cholera
2009 September	Haripur	-	-	Dengue fever
2009 September	Garah Aashiq of Tehsil Parova	-	-	Cholera
2010 September	Nationwide	5,000	22	Dengue fever
2010 October	Balochistan	223	-	Crimean-Congo hemorrhagic fever
2010 December	Azad Jammu and Kashmir	150	3	Hepatitis A

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Other Infections

- Hepatitis E (transmitted by contaminated food or water)
- Visceral leishmaniasis (chiefly in Baltistan in the north)
- Tick-borne hemorrhagic fever (rural area in Rawalpindi District)
- Louse-borne typhus
- *Scrub typhus*
- Brucellosis
- Q fever
- West Nile fever (transmitted by mosquitoes)
- *Giardiasis*
- *Cryptosporidiosis*
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
15	115	16

Sri Lanka

Population and Geographical Location

In 2011, Sri Lanka had a population of 21,283,913 and an area of 65,610 km². It is located in south Asia, in the northern waters of the Indian Ocean and in the southeast of India. Sri Lanka is separated from Asia by the Strait of Palanquin.

Climate and Health Status

The climate of Sri Lanka in the southwest region is under the influence of monsoon winds (the tropical monsoon, the northeast monsoon starting from December to March, and the southwest monsoon starting from June to October), resulting in warm, humid and rainy weather. This also makes the other parts of the island dry.

The population using improved drinking-water sources (%): urban 98%, rural 88%, total 90% (2008). The average life expectancy for males and females is 72.21 and 79.38 years, respectively (2011). The main causes of mortality are cardiovascular disease, malignant neoplasm, respiratory infections and injuries. In 2011, the infant mortality rate was 9.7 deaths per 1,000 live births. The population of people infected with HIV is 2,800, but the prevalence rate of 15- to 49-year-old adults infected with HIV is less than 0.1% (2009).

General government expenditure on health as % of total government expenditure in 2007: 8.5% In 2004, there was one physician per 2,053 people, and there were 31 (2004) hospital beds per 10,000 individuals.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last ten years	4 to 6 weeks before traveling	Every ten years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (three doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Japanese encephalitis	Recommended	Long stays (one month) in rural areas Extensive outdoor or nighttime exposure in rural areas	At least ten days before traveling	Three doses at 0, 7th and 30th days	Persons with history of urticaria are at greater risk of adverse reactions to vaccine 2. Pregnancy	Fever, myalgia, malaise, anaphylaxis/allergic reaction: pruritus, urticaria, angioedema
MMR	Recommended	Travelers who have not received at least two doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	1. History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results for chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone / Proguanil Doxycycline Mefloquine	Confirmed	All regions except Galle, Colombo, Nurvara, Kalutara, Eliya	-	If coming from an endemic area

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2004 July	Colombo, Kandy, Gampaha, Kalutara and Kurunegala	9,000	60	Dengue fever
2005 March	Badulla and Monaragala districts, Uva province	-	-	Suspected <i>myocarditis</i>
2006 September	Western Province	-	-	Dengue
2007 March	Colombo	-	-	Hand, foot, and mouth disease
2007 May	Gampola	-	-	Hepatitis A
2007 September		-	6	Leptospirosis
2008	Nationwide	4,500	150	Leptospirosis
2008 March	Kuruwita-Erathna	-	-	Chikungunya fever
2008 April	Ratnapura and Sabaragamuwa	-	-	Chikungunya fever
2008 December	Nationwide	280	55	Leptospirosis
2009 February	Colombo, Kandy, Matale, Gampaha, Kalutara, Matale, Kegalle, and Kurunegala	35,000	345	Dengue fever
2010 July	Nationwide	22,000	164	Dengue fever
2010	Colombo, Jaffna, and Gampaha	-	-	Dengue
2011 February	-	50	2	Leptospirosis

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Other Infections

- Leishmaniasis
- Hepatitis E
- Brucellosis (the most common animal source is infected cattle)
- *Scrub typhus* (rural areas; transmitted by chigger bites)
- *Lung fluke infections (paragonimiasis)*
- Lymphatic filariasis (southwest coastal belt)
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
118	110	111

Southeastern Asia

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Cambodia

Population and Geographical Location

In 2011, Cambodia had a population of 14,701,717 and an area of 181,035 km². It is located in Southeast Asia and the Indochina Peninsula. It is bordered by Thailand and Laos to the north, Vietnam to the east and south and the Gulf of Thailand and Thailand in the southwest and West.

Climate and Health Status

It has a rainy and tropical climate. The monsoon season starts from May to November. From December to April, the weather is dry with little seasonal temperature variation.

The population using improved drinking-water sources (%): urban 81%, rural 56%, total 61% (2008).

The average life expectancy for males and females is 60.31 and 65.13 years, respectively (2011).

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Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last ten years	4 to 6 weeks before traveling	Every ten years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (three doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Japanese encephalitis	Recommended	Long stays (one month) in rural areas Extensive outdoor or nighttime exposure in rural areas	At least ten days before traveling	three doses at 0, 7th and 30th days	Persons with history of urticaria are at greater risk of adverse reactions to vaccine Pregnancy	Fever, myalgia, malaise, anaphylaxis/allergic reaction: pruritus, urticaria, angioedema
MMR	Recommended	Travelers who have not received at least two doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	1. Allergy to streptomycin, neomycin polymixin B 2. Pregnancy 3. Immunodeficiency	Myalgia, allergic reaction

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results for chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over nine months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Atovaquone /Proguanil Doxycycline Mefloquine	Confirmed	Present throughout the country, including the temple complex at Angkor Wat, no risk seen in Phnom Penh and around Lake Tonle Sap	-	If coming from an endemic area

Important Points for Safely Traveling with Children

	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2005	Kampot	13	11	H5N1 avian influenza ("bird flu")
2006	Kampong Speu, Phnom Penh, Prey Veng	2	-	H5N1 avian influenza ("bird flu")

Date	Area	Cases	Mortality	Diseases
2007	Kampong Cham	40,000	407	Dengue fever
2007 April	Kampong Cham	-	-	H5N1 avian influenza ("bird flu")
2008	-	9,456	65	Dengue fever
2008 December	Kandal Province	1	-	H5N1 avian influenza ("bird flu")
2009	Kampong Cham, Kandal, Siem Reap, and Banteay Meanchey	11,652	37	Dengue fever
2009 December	Kampong Cham	1	-	H5N1 avian influenza ("bird flu")
2010 January	Cambodia	2		Cholera
2010	Nationwide	12,347	37	Dengue fever
2010 May	Prey Veng	1	-	H5N1 avian influenza ("bird flu")

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

The main causes of mortality are infectious and parasitic diseases, cardiovascular disease, perinatal conditions and malignant neoplasm.

In 2011, the infant mortality rate was 55.49 deaths per 1,000 live births.

The population of people infected with HIV is 63,000, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.5% (2009).

General government expenditure on health as % of total government expenditure in 2007: 11.2%

In 2000, there was one physician per 7,060 people, and there were 6 (2008) hospital beds per 10,000 individuals.

Long-term poverty and an unsuitable geographical location have led to low medical standards in this country.

Other Infections

- *Scrub typhus*
- *Murine typhus*
- *Hepatitis E*
- *Schistosomiasis*
- *Leptospirosis*
- *Melioidosis*
- *Brucellosis*
- *Q fever*
- *Chikungunya fever*
- *Giant intestinal fluke*
- *Oriental liver fluke*
- *Cat liver fluke*
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
117	119	118

Indonesia

Population and Geographical Location

In 2011, this country had a population of 245,613,043 and an area of 1,904,569 km². It is the world's largest archipelago, and it is located in southeast Asia, in the waters of the Indian Ocean.

Climate and Health Status

It has a hot, humid and tropical climate. The weather is more moderate in highlands.

The population using improved drinking-water sources (%): urban 89%, rural 71%, total 80% (2008).

The average life expectancy for males and females is 68.8 and 73.99 years, respectively (2011).

The main causes of mortality are cardiovascular disease, infectious and parasitic diseases, malignant neoplasm and injuries.

In 2011, the infant mortality rate was 27.95 deaths per 1,000 live births.

The population of people infected with HIV is 310,000, but the prevalence rate of 15- to 49-year-old adults with HIV is 0.2% (2009).

General government expenditure on health as % of total government expenditure in 2007 was 6.2%.

In 2003, there was one physician per 8,236 people, and there were 6(2002) hospital beds per 10,000 individuals.

Poor diet, high population density, and poor collecting and waste disposal systems are the most serious issues that threaten people's health. The government has imposed many standards to raise public health and reduce drug addiction. Recently, especially in the main islands, serious attention aimed at reducing population and improving family planning programs have been developed.

Other Infections

- *Murine typhus*
- *Bubonic plague*
- *HIV (human immunodeficiency virus)*
- *Hepatitis E*
- *Schistosomiasis*
- *Leptospirosis*
- *Anthrax*
- *Brucellosis*
- *Lymphatic filariasis*
- *Scrub typhus*
- *Melioidosis*
- *Filariasis*
- *Strongyloides*
- *Fasciolopsiasis*
- *Cyclosporiasis*

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last ten years	4 to 6 weeks before traveling	Every ten years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (three doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Japanese encephalitis	Recommended	Long stays (one month) in rural areas Extensive outdoor or nighttime exposure in rural areas	At least ten days before traveling	three doses at 0, 7th and 30th days	Persons with history of urticaria are at greater risk of adverse reactions to vaccine Pregnancy	Fever, myalgia, malaise, anaphylaxis/allergic reaction: pruritus, urticaria, angioedema
MMR	Recommended	Travelers who have not received at least two doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymyxin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results for chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Mefloquine Doxycycline Atovaquone/Proguanil	Confirmed	Irian jara Borodubar Acech	-	If coming from an endemic area

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary
Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1995	Nationwide	-	-	Poliomyelitis
1998	El Nino	-	-	Dengue fever
2000	Flores Island	-	-	Rabies
2002 December	West Java, West Timor and Central Sulawesi	-	-	Chikungunya fever

2002 December	West Java, West Timor and Central Sulawesi	-	-	<i>Chikungunya fever</i>
2004	Nationwide	60,000	600	Dengue fever
2004	East Java and Central Java	-	-	Chikungunya fever
Date	Area	Cases	Mortality	Diseases
2005	Sulawesi	-	-	Rabies
2005 April	West Lombok	-	-	Chikungunya fever
2005 January	Banda Aceh, Meulaboh, and Sigli	67	-	Tetanus
2005 July	Nationwide	168	139	H5N1 avian influenza ("bird flu")
2005 July	Tangerang	-	-	Chikungunya fever
2005 May	West Java and Banten Central Java, East Java, Jakarta, Lampung, North Sumatra, South Sumatra, Aceh, and Riau	303		Poliomyelitis
2005 October	Village near Bogor, West Java	65	6	Anthrax
2006	-	2	-	Poliomyelitis
2006 April	Irian Jaya	-	-	Cholera
2006 February	Papua			Measles
2006 January	Bantul	-	-	Dengue
2006 May	Ciomas, Bogor, West Java	-	-	Cholera
2006 May	Wamena	-	-	Cholera
2007 December	Jepara (Java), Jombang (central Java), East Java, East Kalimantan (Borneo), South Sulawesi, and North Sulawesi	-	-	Dengue fever
2007 December	Jepara Regency (Central Java), from Bandarlampung and Padang City (Sumatra), and from Brebes and Pekalongan	-	-	Chikungunya fever
2007 January	Bali	-	-	Dengue fever
2007 March	Bekasi	-	-	Chikungunya fever
2007 May	Bandarlampung	-	-	Chikungunya fever
2007 November	East Java	-	-	Chikungunya fever
2008	Flores Island	-	-	Rabies
2008	Nationwide	100,000	-	Dengue fever
2008 April	East Kalimantan, Borneo	-	-	Dengue fever
2008 April	West Papua	-	170	Cholera
2008 August	Tanjungbalai	-	-	Dengue fever
2008 December	Bali	-	-	Rabies
2008 December	Riau	-	-	Dengue fever
2008 February	Flores Island	-	-	Rabies
2008 February	Central Java	2,300	37	Dengue fever
2008 January-April	Sukoharjo District in Central Java	-	-	Chikungunya fever
2008 July	Bali	-	-	Chikungunya fever

Current Outbreaks and Mortality (Continued)

Date	Area	Cases	Mortality	Diseases
2008 June	He	-	400	Dengue fever
2008 May	Makmur	-	-	Chikungunya fever
2008 November	Banyumas Regency, Central Java	-	-	Dengue fever
2008 November-December	Central Java	-	-	Chikungunya fever
2008 October	Central Sulawesi	-	-	Dengue fever
2008 October	Pajagalan, Garut Regency, West Java, Kota Padang of West Sumatra	-	-	Chikungunya fever
2009 April	Jakarta	-	-	Dengue fever
2009 April and December	South Sumatra	-	-	Chikungunya fever
2009 December	West Kutai, East Kalimantan	-	-	Dengue fever
2009 February	Southeast portions of Bali and Eastern portions of Bali	-	-	Rabies
2009 February	Banten province, Mamuju District, West Sulawesi Province, Pacitan Regency, East Java	-	-	Dengue fever
2009 January	Bone Regency, South Sulawesi, and East Kalimantan	-	-	Dengue fever
2009 January	Madiun Regency in East Java and from Indragiri Hulu Regency, Riau (Sumatra)	-	-	Chikungunya fever
2009 March	West Java	-	-	Dengue fever
2009 March	Banyumas	-	-	
2009 November	North Sumatra	-	-	Dengue fever
2010 February	Lampung and Bangka-Belitung provinces and from South Kalimantan regency in Banjar (Borneo)	-	-	Chikungunya fever
2010 February-March	Bali	6		Dengue fever
2010 January	Jakarta			Dengue fever
2010 March	Malang regency, East Java	-		Dengue fever

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Emergency Numbers

Police	Medical	Fire
110	119	113

Malaysia

Population and Geographical Location

In 2011, Malaysia had a population of 28,728,607 and an area of 329, 847 km². It is located in Southeast Asia and the south coast of the Southern China Sea. It is bordered by Indonesia and Singapore in the south, Thailand and Brunei in the north, the South China Sea in the north and the Strait of Malacca to the west.

Climate and Health Status

It has a hot, humid, rainy and generally tropical climate. In southwest regions, the monsoon starts from April to October, and in the northeast regions, it starts from October to February. The population using improved drinking-water sources (%): urban 100%, rural 99%, total 100% (2008). The average life expectancy for males and females is 71.05 and 76.73 years, respectively (2011). The main causes of mortality are cardiovascular disease, malignant neoplasm, infectious and parasitic diseases and injuries. In 2011, the infant mortality rate was 15.02 deaths per 1,000 live births. The population of people infected with HIV is 100,000, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.5% (2009). General government expenditure on health as % of total government expenditure in 2007 was 6.9%. In 2002, there was one physician per 1,661 people, and there were 18 (2005) hospital beds per 10,000 individuals.

Other Infections

- *Scrub typhus (deforested areas; transmitted by chigger bites)*
- *Hepatitis E (transmitted by contaminated food or water)*
- *Leptospirosis (animal reservoir includes rats, cattle, buffalo, and pigs)*
- *Gnathostomiasis*
- *Melioidosis*
- *Legionnaires' disease*
- *Brucellosis (low incidence)*
- *Lymphatic filariasis (chiefly caused by Brugia malayi)*
- *Chikungunya fever*
- *Kunjin virus infections (reported from Sarawak)*
- *Lung fluke (paragonimiasis)*
- *Giant intestinal fluke (fasciolopsiasis)*
- *Sea snakes*
- *HIV (human immunodeficiency virus)*

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last ten years	4 to 6 weeks before traveling	Every ten years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (three doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Japanese encephalitis	Recommended	Long stays (one month) in rural areas Extensive outdoor or nighttime exposure in rural areas	At least ten days before traveling	three doses at 0, 7th and 30th days	Persons with history of urticaria are at greater risk of adverse reactions to vaccine Pregnancy	Fever, myalgia, malaise, anaphylaxis/allergic reaction: pruritus, urticaria, angioedema
MMR	Recommended	Travelers who have not received at least two doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results for chickenpox immunity	Before traveling	-	1. Pregnancy 2. Known severe immunodeficiency 3. History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Mefloquine Doxycycline Atovaquone/Proguanil	Confirmed	Only in aboriginal regions	-	If coming from an endemic area

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1997, 2000, 2003	Sarawak	-	-	Enterovirus 71
1998-1999	Perak and Negri Sembilan	265	105	Paramyxovirus
1997 Spring	Sarawak	-	34	Viral myocarditis
2004	Nationwide	263	20	Leptospirosis
2004 August	Northern Malaysia	-	-	H5N1 avian influenza ("bird flu")
2005 July	Penang	-	-	Malaria
2005 April	Kelantan	-	-	Typhoid
2006	Nationwide	34,000	-	Dengue fever
2006	Selangor	11,000	-	Dengue fever
2006 December	Perak	-	-	Chikungunya fever
2006 May	Sabah	-	-	
2006 March	Sarawak	13,000	13	Hand, foot, and mouth disease
2007 First 8 months	Selangor, Kelantan, Johor and Kuala Lumpur	30,000	-	Dengue fever
2007 April	Northern Sabah	-	-	Cholera
2008	Nationwide	45,000	98	Dengue
2008	Kedah	4,271	-	Chikungunya fever
2008 April	Johor	-	-	Chikungunya fever
2008 August	Bario	-	-	Malaria
2009		1,400	62	Leptospirosis
2009 January	Kuala Lumpur	38,000	79	Dengue
2009 December	Sarawak	-	-	Dengue
2009	Nationwide	5,000	-	Chikungunya fever
2009 September	Sibu	-	-	Chikungunya fever
2009 November	Sabah and Terengganu	-	-	Cholera
2010 June	Ulu Baram, Sarawak	-	-	Malaria caused by Plasmodium vivax
2009	Nationwide	41,000	87	Dengue fever
2010	Selangor, Sarawak, and Kelantan	45,000	134	Dengue fever

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Ambulance Emergency Numbers

Police	Medical	Fire
999	999	999

Philippines

Population and Geographical Location

In 2011, this archipelago had a population of 101,833,938 and an area of 300,000 km². It is located in Southeast Asia and the western waters of the Pacific Ocean; the Philippines is formed by seven thousand islands.

Climate and Health Status

It has a warm and humid climate with heavy rainfall and generally tropical marine. The northeast monsoon starts from November to April, and the southwest monsoon starts from May to October. The population using improved drinking-water sources (%): urban 93%, rural 87%, total 91% (2008). The average life expectancy for males and females is 68.72 and 74.74 years, respectively (2011). The main causes of mortality are cardiovascular disease, infectious and parasitic diseases, malignant neoplasm and injuries. In 2011, the infant mortality rate was 19.34 deaths per 1,000 live births. The population of people infected with HIV is 8,700, but the prevalence rate of 15- to 49-year-old adults infected with HIV is less than 0.1% (2009). General government expenditure on health as % of total government expenditure in 2007 was 6.7%. In 2002, there was one physician per 1,105 people, and there were 5 (2006) hospital beds per 10,000 individuals. With the exception of rural areas, most cities in the Philippines are equipped with advanced medical facilities. The Philippine government is responsible for life insurance and is the trustee of retirement plans for the worker class.

Other Infections

- Schistosomiasis
- Heterophyiasis
- Anthrax
- Hepatitis E
- Scrub typhus
- Murine typhus
- Chikungunya fever
- Lymphatic filariasis

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last ten years	4 to 6 weeks before traveling	Every ten years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (three doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Japanese encephalitis	Recommended	Long stays (one month) in rural areas Extensive outdoor or nighttime exposure in rural areas	At least ten days before traveling	three doses at 0, 7th and 30th days	Persons with history of urticaria are at greater risk of adverse reactions to vaccine Pregnancy	Fever, myalgia, malaise, anaphylaxis/allergic reaction: pruritus, urticaria, angioedema
Meningococcal	Recommended	Travelers to Benquet mountains	Before traveling	-	-	-
MMR	Recommended	Travelers who have not received at least two doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results for chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling	-	Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Mefloquine Doxycycline Atovaquone/Proguanil	Luzon Basilan Minadano Minadaro Sulupalawan Archipelago	Bohal, Bilaran, Aklan, Copiz, Camiguin, Cebucatanuanes, Leyte, Iliolo, Guimaras, Northern Samar Manila, Masbate, Sequijor	-	If coming from an endemic area

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality Table

Date	Area	Cases	Mortality	Diseases
2003 May	Manila	10	2	Severe acute respiratory syndrome (SARS)
2005 January	Baguio, Cordillera, Luzon	-	-	Meningococcal
2005 July	-	376	81	Meningococcal
2005 September	Catanduanes, Caramoan, Camarines Sur	-	-	Cholera
2006 November	Agusan del Sur	500	-	Typhoid
2007 January-February	Iloilo Province	-	-	Rabies
2007 January	Nationwide	-	-	Dengue fever
2007 March	Bukidnon	-	-	Dengue fever
2007 April	Zamboanga	40	1	Typhoid
2007 May	Bangui, Cabantian and Sasa	-	-	Dengue fever
2007 June	Inoba-an	-	-	Dengue fever
2007 July	Basilan	-	-	Measles
2007 July	Caraga	-	-	Dengue fever
2007 August	Laguna and Iloilo	-	-	Dengue fever
2007 September	Cebu	-	-	Dengue fever
2007 October	Aklan	-	-	Dengue fever
2007 November	Capiz	-	-	Dengue fever
2007 September	Bauang, La Union Province	-	3	Dengue fever
2008 January	Bacoor, Cavite, and Valenzuela	-	-	Dengue fever
2008 January	Bayombong, Nueva Vizcaya	-	-	Typhoid
2008 February	Calamba	2,000	-	Typhoid fever
2008 February	Negros Oriental and Zamboanga	-	-	Dengue fever
2008 March	Ilocos Norte	-	-	Dengue fever
2008 March	Iloilo	-	-	Typhoid fever
2008 June	Davao	-	-	Leptospirosis
2008 July	Negros Oriental	-	-	Dengue fever
2008 August	Moises Padilla, Negros Oriental	-	-	Measles
2008	Calasiao, Pangasinan	-	-	Dengue fever
2008 November	Real and Infanta, Quezon	-	-	Typhoid fever
2008 November	Tagoloan	-	-	Cholera
2008 September	Pangasinan	-	-	Cholera
2008 August	Palimbang, Sultan Kudarat	-	-	Cholera

Date	Area	Cases	Mortality	Diseases
2009 January	Ticao Island, Masbate, Bicol	-	-	Cholera
2009 June	Cebu	-	-	Dengue fever
2009 September	Cordillera	-	-	Dengue fever
2009 October	Kalinga	-	-	Dengue fever
2009 November	Western Visayas, Iloilo	-	-	Measles
2009 October	Luzon	2,158	167	Leptospirosis
2009	Luzon, Mindanao, and Visayas	250	-	Rabies
2010 The first six months	Nationwide	25,000	-	Dengue fever
2010 January	North Cotabato	43	-	Malaria
2010 March	Cordillera	-	-	Dengue fever
Date	Area	Cases	Mortality	Diseases
2010 May	Western Visayas	-	-	Dengue fever
2010 June	Cagayan	-	-	Dengue fever
2010 July	Northern Mindanao, Negros Occidental, Davao Sur, Cebu, Zamboanga, and Bicol	-	-	Dengue fever
2010 July	Camarines Norte, Jose Panganiban	182	-	Malaria
2010 August	Taytay	-	-	Malaria
2010 August	Rizal, Eastern Visayas, Ifugao, Capiz, and Roxas	-	190	Dengue fever
2010 August	Negros Occidental	-	1	Rabies
2010 August	Barangay Vitali in Zamboanga	-	-	Cholera
2010	Calabarzon, Ilocos, Central Luzon and Bicol	2,000	-	Measles

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

- Capillariasis
- Lung fluke
- Giant intestinal fluke
- Cat liver fluke
- Strongyloides
- Sea snakes
- Corals, jellyfish, sharks, and sea urchins
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
911	911	911

Singapore

Population and Geographical Location

In 2011, this small country had a population of 4,740,737 and an area of 697 km². It is located in Southeast Asia and on the southern end of the Malay Peninsula, which is a large island formed by 54 small islets. Singapore is situated on the tip of the Strait of Malacca, southeast of Malaysia, and it is separated by the long and narrow Strait of Johor from Malaysia. In the south, the Singapore Strait separates the country from the Indonesian archipelago.

Climate and Health Status

It has a tropical, hot and humid climate with heavy rainfall. There is no rainy or dry season. Thunderstorms occur on 40% of all days (67% of days in April).

The population using improved drinking-water sources (%): urban 100% (2008), rural and total not available (unreported).

The average life expectancy for males and females is 79.53 and 84.96 years, respectively (2011).

The main causes of mortality are cardiovascular disease, malignant neoplasm, injuries and respiratory infections.

In 2011, the infant mortality rate was 2.32 deaths per 1,000 live births.

The population of people infected with HIV is 3,400, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.1% (2009).

General government expenditure on health as % of total government expenditure in 2007 was 7.2%.

In 2003, there was one physician per 737 people, and there were 32 (2005) hospital beds per 10,000 individuals.

Singapore provides various welfare facilities for its citizens. In this country, provincial welfare resources are provided through mandatory payments by employers.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last ten years	4 to 6 weeks before traveling	Every ten years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (three doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Japanese encephalitis	Recommended	Long stays (one month) in rural areas Extensive outdoor or nighttime exposure in rural areas	At least ten days before traveling	three doses at 0, 7th and 30th days	Persons with history of urticaria are at greater risk of adverse reactions to vaccine Pregnancy	Fever, myalgia, malaise, anaphylaxis/allergic reaction: pruritus, urticaria, angioedema
Meningococcal	Recommended	Travelers to Benquet mountains	Before traveling	-	-	-
MMR	Recommended	Travelers who have not received at least two doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results for chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Not seen	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1999 March	Nationwide	11	1	Nipah virus
2000	-	3,790	5	Hand, foot, and mouth disease
2003 March	Nationwide	206	31	SARS
2003 September	Nationwide	1	-	SARS
2003 December	Nationwide	1	-	SARS
2004	Nationwide	-	-	Melioidosis
2005 July	Nationwide	13,000	19	Dengue
2006 April	Nationwide	-	-	Hand, foot, and mouth disease
2006	Nationwide	-	-	Hand, foot, and mouth disease
2007	Nationwide	-	-	Hand, foot, and mouth disease
2007	Nationwide	8,607	-	Dengue fever
2008 January	Nationwide	-	-	Chikungunya fever
2008 July	Nationwide	388	-	Chikungunya fever
2008 April	Nationwide	6,424	-	Dengue fever
2009 April	Nationwide	-	-	Hand, foot, and mouth disease
2009 April	Nationwide	5,471	-	Hand, foot, and mouth disease
2010 May	Nationwide	-	-	H1N1 influenza

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Other Infections

- Leptospirosis
- *Marine hazards* (corals, jellyfish, sharks)
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
999	995	995

Thailand

Population and Geographical Location

In 2011, Thailand had a population of 66,720,153 and an area of 513,120 km². It is located in Southeast Asia. Thailand is bordered by Laos to the northeast, Cambodia and the Gulf of Thailand to the east, Malaysia to the south and the Andaman Sea (Indian Ocean) and Myanmar in the west.

Climate and Health Status

Thailand has a tropical, rainy and warm climate. The cloudy southwest monsoon starts from mid-May to September. The dry, cool northeast monsoon starts from November to mid-March. The southern isthmus is always hot and humid.

The population using improved drinking-water sources (%): urban 99%, rural 98%, total 98% (2008).

The average life expectancy for males and females is 71.24 and 76.08 years, respectively (2011).

The main causes of mortality are infectious and parasitic diseases, cardiovascular disease, malignant neoplasm and injuries.

In 2011, the infant mortality rate was 16.39 deaths per 1,000 live births.

The population of people infected with HIV is 530,000, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 1.3% (2009).

General government expenditure on health as % of total government expenditure in 2007: 13.1%

In 2002, there was one physician per 3,533 people, and there were 22 (2002) hospital beds per 10,000 individuals.

The Social Welfare Organization is responsible for the welfare of children and supporting disabled people.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last ten years	4 to 6 weeks before traveling	Every ten years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (three doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Japanese encephalitis	Recommended	Long stays (one month) in rural areas Extensive outdoor or nighttime exposure in rural areas	At least ten days before traveling	three doses at 0, 7th and 30th days	Persons with history of urticaria are at greater risk of adverse reactions to vaccine Pregnancy	Fever, myalgia, malaise, anaphylaxis/allergic reaction: pruritus, urticaria, angioedema
Meningococcal	Recommended	Travelers to Benquet mountains	Before traveling	-	-	-
MMR	Recommended	Travelers who have not received at least two doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results for chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Mefloquine Doxycycline Atovaquone/Proguanil	Confirmed	No risk in Bangkok, Phuket, Pattaya, Kasamui, Chiang mai Little risks in its borders with Cambodia	-	If coming from an endemic area

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1999	Khumuang, Buriram	-	-	Leptospirosis
2002 April	Nationwide	-	-	Dengue fever
2002 August	Koh Phangan	-	2	<i>Toxic jellyfish</i>
2004	Nationwide	25	17	H5N1 avian influenza ("bird flu"),
2005 January	Southwest coast	3	-	<i>Melioidosis</i>
2005 October to December	Nationwide	5	-	H5N1 avian influenza ("bird flu"),
2006	Koh Phangan	-	-	Malaria
2006 August	Kamphaeng Phet, Nakhon Sawan, Phichit and Uthai Thani	1,000	-	Dengue fever
2006 December	Patong Beach, Phuket	4	-	Legionnaires' disease
2006 First half	-	-	-	H5N1 avian influenza ("bird flu"),
2006 July	Surin, Ampur Mae Sareang	-	-	Dengue fever
2006 July to September	-	3	-	H5N1 avian influenza ("bird flu"),
2006 June	Phayao	50	-	<i>Botulism</i>
2006 March	Baan Luang District, Nan Province	163	-	<i>Botulism</i>
2006 September	Nan	-	-	Leptospirosis
2006 September	Nationwide	-	-	Hand, foot, and mouth disease
2007	Nationwide	40,000	47	Dengue fever
2007 August	Nationwide	110	2	Dengue fever
2007 June	Tak	-	-	<i>Cholera</i>
2007 May	Trat	-	-	Dengue fever
2008	Nationwide	91,000	99	Dengue fever
2008 August	Rayong Province	1,400	2	Dengue fever
2008 January	Phichit	-	-	H5N1 avian influenza ("bird flu"),
2008 January	Nakhon Sawan	-	-	H5N1 avian influenza ("bird flu"),
2008 October	Narathiwat	-	-	Chikungunya
2008 October	Sukhothai	-	-	H5N1 avian influenza ("bird flu"),
2008. November	Uthai Thani	-	-	H5N1 avian influenza ("bird flu"),
2009	Phuket	2,000	31	Chikungunya fever
2009 Early	Southern Thailand	-	-	Chikungunya fever
2009 June	Mae Hong Son	155	-	Dengue fever
2009 September	Songkhla	42,000	-	Chikungunya fever

Current Outbreaks and Mortality (Continued)

2010 August	Northeastern part	1,307	6	<i>Melioidosis</i>
Date	Area	Cases	Mortality	<i>Diseases</i>
2010 August	Ubon Ratchathani	-	-	Dengue fever
2010	Nationwide	86,000	100	Dengue fever
2010 January	Pattani	-	-	Cholera
2010 July	Nakhon Ratchasima	-	-	Dengue fever
2010 July	Phuket	-	-	Hand, foot and mouth disease
2010 May	Pattani	-	-	Dengue fever
2010 November	Phuket	700	-	Dengue fever
2010 September	Nationwide	10,000	-	Hand, foot, and mouth disease

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Other Infections

- Streptococcus suis infections
- Gnathostomiasis
- Vibrio parahemolyticus
- Scrub typhus
- Spotted fever rickettsioses
- Schistosomiasis
- Hepatitis E
- Eosinophilic meningitis
- Chikungunya fever

Emergency Numbers

Police	Medical	Fire
191	1669	199

Vietnam

Population and Geographical Location

In 2011, Vietnam had a population of 90,549,390 and an area of 331,210 km². It is located in Southeast Asia, the South China Sea and on the Gulf of Tonkin. It is bordered by China in the North, the Gulf of Tonkin and the South China Sea in the east, the South China Sea in the north and Cambodia and Laos in the west.

Climate and Health Status

Vietnam has a tropical climate in southern areas. The hot and rainy monsoon in north starts from mid-May to mid-September, and the warm and dry season in Vietnam starts from mid-October to mid-March. The population using improved drinking-water sources (%): urban 99%, rural 92%, total 94% (2008). The average life expectancy for males and females is 69.72 and 74.92 years, respectively (2011). The main causes of mortality are cardiovascular disease, infectious and parasitic diseases, malignant neoplasm and respiratory infections.

In 2011, the infant mortality rate was 20.9 deaths per 1,000 live births. The population of people infected with HIV is 280,000, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.4% (2009). General government expenditure on health as % of total government expenditure in 2007 was 8.7%. In 2002, there was one physician per 1,992 people, and there were 28 (2004) hospital beds per 10,000 individuals. Vietnam and the U.S. government have passed an agreement in order to analyze the effect of a chemical material named "agent orange," which was widely used in the Vietnam War.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last ten years	4 to 6 weeks before traveling	Every ten years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than one year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (three doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Japanese encephalitis	Recommended	Long stays (one month) in rural areas Extensive outdoor or nighttime exposure in rural areas	At least ten days before traveling	three doses at 0, 7th and 30th days	Persons with history of urticaria are at greater risk of adverse reactions to vaccine Pregnancy	Fever, myalgia, malaise, anaphylaxis/allergic reaction: pruritus, urticaria, angioedema
Meningococcal	Recommended	Travelers to Benquet mountains	Before traveling	-	-	-
MMR	Recommended	Travelers who have not received at least two doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over two years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results for chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g., Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Mefloquine Doxycycline Atovaquone/Proguanil	Not seen	Rural areas	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1998	Southern Viet Nam	20,0000	-	Dengue fever
2003 March	Nationwide	63	5	(SARS)
2005	Nationwide	49,400	51	Dengue fever
2006 September	Nationwide	-	-	Hand, foot, and mouth disease
2006	Nationwide	77,800	68	Dengue fever
2007 September	Ho Chi Minh	-	-	Hand, foot, and mouth disease
2007 October	Nationwide	-	-	Cholera
2007	Viet Nam	119	59	H5N1 avian influenza ("bird flu")
2007 June	Viet Nam	2	-	H5N1 avian influenza ("bird flu")
2007 May	-	-	-	H5N1 avian influenza ("bird flu")
2007 December	Son La	1	-	H5N1 avian influenza ("bird flu")
2007 July	Nationwide	42	2	Streptococcus suis
2008	Hanoi	-	-	Angiostrongylus meningitis
2008 May	Nationwide	-	-	Hand, foot, and mouth disease
2008 October	Quynh Luu	-	-	Cholera
2008 March	Hanoi	-	-	Cholera
2008 August	-	700	-	Cholera
2008 January	Tuyen Quang Province	1	-	H5N1 avian influenza ("bird flu")
2008 February	Hai Duong, Ninh Binh, and Phu Tho Provinces	1	-	H5N1 avian influenza ("bird flu")
2008 March	Ha Nam	1	-	H5N1 avian influenza ("bird flu")
2008	Nationwide	78,500	79	Dengue fever
2009	Nationwide	105,370	87	Dengue fever
2009	-	-	14	Rabies
2009 July	Northern Lai Chau	-	4	Rabies
2009 early	Hanoi	-	-	Measles
2009 January	Thanh Hoa	1	-	H5N1 avian influenza ("bird flu")
2009 February	Quang Ninh	1	-	H5N1 avian influenza ("bird flu")
2009 November	Dien Bien	1	-	H5N1 avian influenza ("bird flu")

Current Outbreaks and Mortality (Continued)

2009 November	Nationwide	77,000	60	Dengue fever
2010 May	Northern provinces	-	-	Cholera
2010 January	Khanh Hoa	1	-	H5N1 avian influenza ("bird flu")
2010 February	Tuyen Quang and Tien Giang	1	-	H5N1 avian influenza ("bird flu")
2010 March	Binh Duong	1	-	H5N1 avian influenza ("bird flu")
Date	Area	Cases	Mortality	Diseases
2010 April	Bac Kan	2	-	H5N1 avian influenza ("bird flu")
2010	-	-	34	Rabies
2010	Nationwide	80,000	59	Dengue fever

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Other Infections

- *Scrub typhus*
- *Murine typhus*
- *Leptospirosis*
- *Hepatitis E*
- *Chikungunya fever*
- *Melioidosis*
- *Liver fluke (fascioliasis)*
- *Lung fluke (paragonimiasis)*
- *Giant intestinal fluke (fasciolopsiasis)*
- *Oriental liver fluke (clonorchiasis)*
- *Schistosomiasis*
- *Strongyloides*
- *Venomous snakes (cobras, vipers)*
- *Plague*
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
113	115	114

Western Asia

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Armenia

Population and Geographical Location

Armenia is a mountainous country with a population of 2,967,975, in 2011, and an area of 29,743 km². It is located between Europe and Asia. Armenia is bordered by Georgia in the north, Azerbaijan in the east, Iran, Azerbaijan and Turkey to the south, and by Turkey in the west.

Climate and Health Status

Its climate is dry and continental. Armenia has warm summers and long winters.

The population using improved drinking-water sources (%): urban 98%, rural 93%, total 96% (2008).

The average life expectancy for males and females: 69.59 and 77.31 years, respectively (2011). The main causes of mortality are: cardiovascular disease, malignant neoplasm, diabetes mellitus and injuries.

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Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age ≥ 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Masis Ararat mountains	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Safely Traveling with Children (Continued)

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
September 1998	Yerevan	-	-	Cholera
March 2007	Tsovagyuk,	-	-	Tularemia

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

In 2011, the infant mortality rate was 18.85 deaths per 1000 live births.

The population of people infected with HIV is 1,900 but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.1% (2009). General government expenditure on health as a % of total government expenditure in 2007 was 10.4%. In 2007, there was one physician per 267 people and there were 41 (2007) hospital beds per 10,000 individuals.

Other Infections

- Anthrax
- Brucellosis
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
-	103	-

Azerbaijan

Population and Geographical Location

In 2011, Azerbaijan had a population of 8,372,373 and an area of 86,600 km². It is located in the Caucasus area (southeastern Europe), on the South Caucasus mountain range and the west coast of the Caspian Sea. Azerbaijan is bordered by Russia to the north, the Caspian Sea to the east, Iran to the south, and Armenia and Georgia to the west.

Climate and Health Status

In the central plains and eastern lowlands, it is dry and subtropical with warm, humid summers that are sometimes accompanied by alternating droughts. While Azerbaijan has relatively mild winters, the mountainous areas are cold with heavy snowfalls. General climate is dry and pleasant.

The population using improved drinking-water sources (%): urban 88%, rural 71%, total 80% (2008).

The average life expectancy for males and females: 63.2 and 72.01 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, respiratory infections and infectious and parasitic diseases.

In 2011, the infant mortality rate was 51.08 per 1000 live births.

The population of people infected with HIV is 3,600 but the prevalence rate of 15- to 49-year-old adults with HIV is 0.1% (2009).

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site the injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Aboriginal regions Agcaladi Beylaqan Bada Bilasubar Calilafad Kurdamir Saatli Sabirabal Kura and arax rivers	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2006 February	Khyzy and Bilasuvar	-	-	H5N1 avian influenza ("bird flu")
2006 March	Azerba Salyan Rayon in the southeastern part	8	5	H5N1 avian influenza ("bird flu")
2010 June	Nagorno-Karabakh Republic	-	-	Leptospirosis

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

General government expenditure on health as a % of total government expenditure in 2007 was 3.8%.

In 2007, there was one physician per 256 people and there were 79 (2007) hospital beds per 10,000 individuals.

In this country, the healthcare system has remained unchanged from the Soviet's communist rule. Due to low technology and lack of resources and manpower, the quality of healthcare is low.

In 2000, it was announced that in Azerbaijan, the occurrences of malaria cases decreased by about 80%, which is a world record in the fight against disease.

Other Infections

- Anthrax
- Leishmaniasis
- Brucellosis

Emergency Numbers

Police	Medical	Fire
02	03	01

Bahrain

Population and Geographical Location

Bahrain is situated in Southwest Asia. It had a population of 1,214,705 and an area of 758 km² in 2011.

Climate and Health Status

Bahrain has an arid climate with mild and pleasant winters and hot and humid summers.

The population using improved drinking-water sources (%): urban 100% (2008), rural and total (unreported).

The average life expectancy for males and females: 76.03 and 80.33 years, respectively (2011). The main causes of mortality are: cardiovascular disease, malignant neoplasm, injuries and diabetes mellitus. In 2011, the infant mortality rate was 10.43 deaths per 1000 live births. The population of people infected with HIV was <600 people (2007) and the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.2% (2001).

General government expenditure on health (2007) was 9.8% of total government expenditure. In 2007, there was one physician per 497 people and there were 20 hospital beds per 10,000 individuals. Bahrain provides quality health care to all its citizens including those who have been exiled. In 2003, 3% of its Gross Domestic Product was spent on health care.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site injection was given, fever, rash, seizure, pneumonia, cytopenia

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Not seen	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections

Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary
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Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

An Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
999	999	999

Cyprus

Population and Geographical Location

In 2011, this island had a population of 1,102,489 and an area of 9,251 km². Cyprus is located in Southwest Asia in the eastern waters of the Mediterranean Sea, 75 km off the coast of Turkey.

Climate and Health Status

Cyprus has mild Mediterranean weather with hot, dry summers and cool winters.

The population using improved drinking-water sources (%): urban 100%, rural 100% and total 100% (2008). The average life expectancy for males and females: 75.04 and 80.74 years, respectively (2011). The main causes of mortality are: cardiovascular disease, malignant neoplasm, respiratory infections and motor vehicle injuries. In 2011, the infant mortality rate was 9.38 deaths per 1000 live births. The population of people infected with HIV was <1000 (2007), but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.1% (2003). General government expenditure on health was 7.0 % of total government expenditure in 2007. In 2006, there was one physician per 565 people. In 2008, there were 37.1 hospital beds per 10,000 individuals.

Other Infections

- Viral meningitis caused by *Coxsackie virus*
- Brucellosis
- Tick-borne relapsing fever occurs rarely.
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
199	199	199

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria- tetanus	Recommended	All travel who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Not seen	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality Table

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Iraq

Population and Geographical Location

In 2011, this country had a population of 30,399,572 and an area of 438,317 km². It is located in West Asia. Iraq is bordered by Turkey (north), Iran (east), Kuwait (southeast), Saudi Arabia (south), Jordan (west) and the Persian Gulf (southeast).

Climate and Health Status

Its climate is like that of a desert. It has mild and cool winters with dry, hot and cloudless summers. The northern mountainous regions along Iranian and Turkish borders experience cold winters with occasionally heavy snowfalls that melt in early spring, sometimes causing extensive flooding in central and southern Iraq. The main causes of mortality are: infectious and parasitic diseases, cardiovascular disease, injuries and malignant neoplasm. General government expenditure on health as a % of total government expenditure in 2007 was 3.1%. The average life expectancy for males and females was 69.15 and 72.02 years, respectively (2011). In 2007, there was one physician per 1,855 people and there were 13 hospital beds per 10000 individuals. The population of people infected with HIV is <500 (2003) but the prevalence rate of 15- to 49-year-old adults infected with HIV is less than 0.1 % (2001). The population using improved drinking-water sources (%): urban 91%, rural 55%, total 79% (2008). Poor waste disposal systems and a history of war have resulted in substandard healthcare and the spread of epidemic diseases. There is also a shortage of medical resources. In the recent decade, poor immunization of children has increased the infant mortality rate as well. In the beginning of 2004, the Health Ministry began working under a new structure. In 2011, the infant mortality rate was 41.68 deaths per 1000 live births.

Other Infections

- Schistosomiasis
- *HIV (human immunodeficiency virus)*
- Hepatitis E
- Brucellosis
- Visceral leishmaniasis
- Crimean-Congo hemorrhagic fever
- Anthrax
- *Louse-borne typhus* (rare)
- Tick-borne relapsing fever (rare)
- *Fascioliasis*

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	4. History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	1. Children younger than 1 year old 2. Hypersensitivity to vaccine components 3. Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	7. Moderately to severely ill patients 8. History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	10. History of immediate hypersensitivity reaction to gelatin or neomycin 11. Pregnancy 12. Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	10. Allergy to streptomycin, neomycin polymixin B 11. Pregnancy 12. Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	4. History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	13. The oral vaccine is approved for travelers at least six years old 14. Injectable vaccine is approved for children over 2 years old 15. Severe local or systemic reaction to a prior dose 16. There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	10. Pregnancy 11. Known severe immunodeficiency 12. History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Arbil Basra Duhok Nineveh Soleymanieh Tamim	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection

Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2003	U.S. military personnel	200	-	Q fever
2003 April	Basra	1000		Cholera
2004 September	Sadr City in Baghdad and from Mahmudiya	-	-	Hepatitis E
2004 December	-	18	2	<i>Eosinophilic pneumonia</i>
2006 January	Northern province of Sulaimaniyah	2	2	H5N1 avian influenza ("bird flu")
2006 March	Southern city of Basra	1		H5N1 avian influenza ("bird flu")
2007 August	Sulaymaniyah, Kirkuk, and Erbil in	4696	24	Cholera (severe) dehydration
2008 February	Qadisiyah	212 (cutaneous) 63 (visceral)		Leishmaniasis
2008 March	Anbar			Measles
2008 August	Central and northern Iraq	925	11	Cholera

Current Outbreaks and Mortality (Continued)

Date	Area	Cases	Mortality	Diseases
2008 December	Babil, Diwanyia, Baghdad, Basra, Kerbala, Najaf, and Muthana	-	-	Cholera
2008 December	Anbar, Maysan, Erbil, Wasit and Diala	-	-	Cholera
2009 May	-	-	-	Leishmaniasis
2009 May	Southern province of Missan (Maysan)	200	-	Leishmaniasis
2011	U.S. military personnel	30	-	Q fever

Emergency Numbers

Currently no emergency number is available.

Jordan

Population and Geographical Location

In 2011, Jordan had a population of 6,508,271 and an area of 89,342 km². Jordan is located in West Asia and it is bordered by Syria to the north, Iraq (east), Saudi Arabia (south) and Palestine (west).

Climate and Health Status

The country has a desert climate that is mostly arid. It enjoys a rainy season in the west (November to April). The western areas of Jordan are semi-mountainous.

The population uses improved drinking-water sources (%): urban 98%, rural 91%, total 96% (2008)

The average life expectancy for males and females was 78.73 and 81.45 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, injuries, malignant neoplasm and infectious and parasitic diseases.

In 2011, the infant mortality rate was 16.42 per 1000 live births.

The population of people infected with HIV is 600 (2007) but the prevalence rate of 15- to 49-year-old adults infected with HIV is less than 0.1% (2001).

General government expenditure on health as a % of total government expenditure in 2007 was 11.4%

In 2007, there was one physician per 426 people and there were 18 hospital beds per 10,000 individuals.

Other Infections

- Hepatitis E
- Brucellosis
- Cutaneous leishmaniasis
- Tick-borne relapsing fever (rare)
- HIV (human immunodeficiency virus)

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Not seen	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Emergency Numbers

Police	Medical	Fire
192	191	193

Kuwait

Population and Geographical Location

In 2011, Kuwait had a population of 2,595,628 (including 1,291,354 non-nationals) and an area of 17,818 km². It is located in west Asia and on the southwest coast of the Persian Gulf. It is bordered by Iraq (north & west), Persian Gulf (east) and Saudi Arabia (south).

Climate and Health Status

Its climate is very hot and dry in the summer and it is mild and dry in the winter.

The population using improved drinking-water sources (%): urban 99%, rural 99%, total 99% (2008).

The average life expectancy for males and females: 75.95 and 78.3 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, injuries, malignant neoplasm and congenital anomalies.

In 2011, the infant mortality rate was 8.07 deaths per 1000 live births.

The population of people infected with HIV is <1000 but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.1% (2001).

General government expenditure on health as a % of total government expenditure in 2007 was 5.4%

In 2005, there was one physician per 576 people. In 2008, there were 18 hospital beds per 10,000.

Other Infections

- Hepatitis E (transmitted by contaminated food or water)
- Brucellosis
- Tick-borne relapsing fever (rare)
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
112	112	112

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Not seen	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2001 April	-	-	-	Hand, foot and mouth disease
2005 November	Farms in Kuwait	-	-	H5N1 avian influenza ("bird flu")
2007 February	Jahra			Measles
2007 February & March	Wafra	-	-	H5N1 avian influenza ("bird flu")

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Lebanon

Population and Geographical Location

In 2011, Lebanon had a population of 4,143,101 and an area of 10,452 km². It is one of the smallest countries in the Middle East. Lebanon is located in West Asia and on the eastern coast of the Mediterranean Sea; it is bordered by Syria in the north and east, Palestine in the south and the Mediterranean in the west.

Climate and Health Status

It has a Mediterranean climate. It has mild to cool, wet winters with hot, dry summers. Lebanon's mountains experience heavy winter snowfalls.

The population using improved drinking-water sources (%): urban 100%, rural 100%, total 100% (2008).

The average life expectancy for males and females: 73.48 and 76.62 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, injuries, malignant neoplasm and digestive diseases

In 2011, the infant mortality rate was 15.85 deaths per 1000 live births.

The population of people infected with HIV is 3,600 but the prevalence rate of 15- to 49-year-old adults with HIV is 0.1% (2009).

General government expenditure on health as a % of total government expenditure in 2007 was 11.7 %.

In 2006, there was one physician per 351 people. In 2009, there were 34.5 hospital beds per 10,000 individuals.

Other Infections

- Brucellosis (caused by consumption of milk or meat from infected sheep or goats)
- Hepatitis E (transmitted by contaminated food or water)
- Cutaneous leishmaniasis (transmitted by sandflies)
- Tick-borne relapsing fever (rare)
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
999	140	125

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling	-	Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Not seen	-	-

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2006 November	Beiruand	-	-	Typhoid fever

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Palestine

Population and Geographical Location

In 2009, Occupied Palestine had a population of 3,935,000 and an area of 6,020 km² (2010).

It is located in Southwest Asia and in the southeastern section of the Mediterranean Sea, linking the continents of Africa and Asia together.

Palestine is bordered by Lebanon (north), Syria (northeast), Jordan (east) and Egypt (west).

The Red Sea and the Gulf of Aqaba are in the south. The Health Ministry of Palestine is responsible for all health care services and medical affairs.

Climate and Health Status and Health Status

Its climate is pleasant for most of the year. Winter lasts for three months in the occupied Palestine. During the rest of the year, the climate of Palestine remains moderate. The hottest months are the months of July and August. The summer in Palestine enjoys a gentle wind that blows from the Mediterranean Sea and although the summers are hot, the evenings are cool and the people may even require a sweater. The Palestinian atmosphere is fresh and the air is unadulterated at the region.

The temperature in the summer reaches up to 35°C and in the winter the temperature drops to zero. Rainfall in Palestine is very restricted and major rainfall in Palestine begins from November to February. In the months of April, May and in the middle part of June, the people of Palestine are relentlessly affected by the annual hot, sandy, dry and dusty Khamseen winds, which come from the Arabian Desert. During the day the land of Palestine has seven hours of sunshine, in the winter and in the summer there is thirteen hours of sunshine.

The visitors and the tourists to Palestine are advised to wear light clothes in the summer and sweaters in the evening and at night. During the winter the visitors should be well equipped with warm clothes.

The population using improved drinking-water sources (%): Is not available (unreported).

The average life expectancy for males and females: 70.5 and 73.2 years, respectively (2009).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, diabetes mellitus and injuries.

The population of people infected with HIV and the prevalence rate of 15- to 49-year-old adults infected with HIV is not available (unreported) %.

General government expenditure on health as a % of total government expenditure in 2008: 10.5%

In 2009, there was one physician per 226,149 people and there were 12.9 hospital beds per 10,000 individuals.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travel who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2000 October	Central and northern parts	452	29	West Nile virus infection
2001		44	3	West Nile virus infection
2002 June	Golan Heights			Bovine spongiform encephalopathy
2002	-	26	2	Mad cow disease
2003	-	40	4	West Nile virus infection
2004	-	10	1	West Nile virus infection
2007	Afula, Nazareth	4	-	H5N1 avian influenza
2008 January	Jerusalem	491	-	West Nile virus infection
2009 November	Jerusalem	4000	-	Measles
2010 January	Binyamina	-	-	Mumps
2010 January	Haifa	-	-	H5N1 avian influenza

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Cutaneous leishmaniasis
- Tick-borne relapsing fever
- Brucellosis
- Leptospirosis
- Visceral leishmaniasis
- Murine typhus
- Israeli tick typhus
- Human monocytic ehrlichiosis
- Q fever
- Rabies
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
100	101	101

Qatar

Population and Geographical Location

In 2011, Qatar had a population of 848,016 and an area of 11,586 km². It is located east of the Arabian Peninsula, on the southern coast of the Persian Gulf and southwest of Asia. Qatar is bordered by the Persian Gulf in the west, north and east; and Saudi Arabia in the south.

Climate and Health Status

It has a desert climate. It is hot, dry, humid and sultry in summer.

The population using improved drinking-water sources (%): urban 100%, rural 100%, total 100% (2008).

The average life expectancy for males and females: 73.96 and 77.53 years, respectively (2011). The main causes of mortality are: cardiovascular disease, injuries, malignant neoplasm and diabetes mellitus.

In 2011, the infant mortality rate was 12.05 deaths per 1000 live births.

The population of people infected with HIV is fewer than 200 and the prevalence rate of 15- to 49-year-old adults infected with HIV is less than 0.1% (2009).

General government expenditure on health as a % of total government expenditure in 2007: 9.7% In 2006, there was one physician per 364 people. In 2008, there were 14 hospital beds per 10,000 individuals.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components 3. Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Not seen	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections

Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary
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Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
999	999	999

Saudi Arabia

Population and Geographical Location

In 2011, Saudi Arabia had a population of 26,131,703 and an area of 2,149,690 km². It is located in Southwest Asia. This country is bordered by Jordan (north), Iraq (north), Kuwait (northeast), the Persian Gulf (east), Qatar (east), the United Arab Emirates (east), Oman (southeast), Yemen (south) and the Red Sea (west).

Climate and Health Status

Its climate is hot and harsh. It has dry deserts coupled with great extremes of temperature and little rainfall.

The population using improved drinking-water sources (%): urban 97% (2008), rural and total (unreported).

The average life expectancy for males and females: 72.15 and 76.16 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, injuries, malignant neoplasm and infectious and parasitic diseases.

In 2011, the infant mortality rate was 16.16 deaths per 1000 live births.

The population of people infected with HIV is not available (unreported) and the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.01% (2001).

General government expenditure on health as a % of total government expenditure in 2007 was 8.4%

In 2007, there was one physician per 615 people. In 2008, there were 22 hospital beds per 10,000 individuals.

Saudi Arabia has several modern, western-style hospitals. General medical care is still at its beginning phases in Saudi Arabia.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components 3. Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling	-	Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommenda-tions	Requirements
Atovaquone/ Proguanil Doxycycline Mefloquine	Confirmed	Almadineh Albahah Jizan Makkah Asir Tabuk Najran	-	Those who have come from endemic areas

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1990 - 1991	Nationwide	7	-	Visceral leishmaniasis
2000	Mecca	400	-	Meningococcal disease
2000 September	Jizan and Asir	884	124	Rift Valley fever
2006 March	Jeddah			Dengue fever
2006 March	Ghulai, Al-Balad, Al-Muntazahat, Al-Thaalba and Al-Hindawiya	1308	5	Dengue fever
2007		243	-	Dengue fever
2007 March	Riyadh	-	-	H5N1 avian influenza ("bird flu")
2008		811	-	Dengue fever
2009 April	Jeddah, Mecca, and Taif	-	-	Dengue fever
2009 June	Jeddah	691	-	Dengue fever
2009 December	Jeddah	10	-	Dengue fever
2010	Jeddah and Jizan	906	-	Dengue fever
2011 February	-	61	-	Dengue fever

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Brucellosis (outbreak reported from Jizan in July 2004)
- Schistosomiasis
- Onchocerciasis (southwestern part of the country)
- Crimean-Congo hemorrhagic fever
- *Alkhurma virus infections*
- *Plague* (small outbreak in 1994 caused by eating raw camel liver)
- Foot-and-mouth disease
- *HIV (human immunodeficiency virus)* (travelers not at risk)

Emergency Numbers

Police	Medical	Fire
999	997	998

Syria

Population and Geographical Location

In 2011, Syria had a population of 22,517,750 and an area of 185,180 km². It is located in West Asia and the eastern coast of the Mediterranean Sea. Syria is bordered by Turkey (north), Iraq (east), Jordan (south), Palestine (east) and Lebanon (east).

Climate and Health Status

It has a desert climate coupled with hot, dry and sunny summers (June to August) and mild, rainy winters (December to February) along the coast. It also has cold weather with snow or sleet periodically falling in Damascus.

The population using improved drinking-water sources (%): urban 94%, rural 84%, total 89% (2008).

The average life expectancy for males and females: 72.31 and 77.21 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, injuries, infectious and parasitic diseases and malignant neoplasm.

In 2011, the infant mortality rate was 15.62 deaths per 1000 live births.

The population of people infected with HIV is fewer than 500 (2003) but the prevalence rate of 15- to 49-year-old adults infected with HIV is less than 0.1% (2001).

General government expenditure on health as a % of total government expenditure in 2007 was 6.0 %.

In 2006, there was one physician per 2,146 people. In 2008, there were 15.1 hospital beds per 10,000 individuals.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	North borders of Elhassaka	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Hepatitis E
- Cutaneous leishmaniasis
- Visceral leishmaniasis
- Schistosomiasis
- Tick-borne relapsing fever
- Brucellosis
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
112	110	113

Turkey

Population and Geographical Location

In 2011, Turkey had a population of 78,785,548 and an area of 783,562 km². It is located in West Asia and Southeastern Europe. Bulgaria, Georgia and the Black Sea are to the North of Turkey. It is bordered by Armenia (east), Azerbaijan (east), Iran (east), Iraq (south), Syria (south), Greece (west) and the Mediterranean (west/southwest) and Aegean Seas (west/southwest).

Climate and Health Status

It has a temperate climate coupled with hot, dry summers and mild, wet winters.

The population using improved drinking-water sources (%): urban 100%, rural 96%, total 99% (2008).

The average life expectancy for males and females: 70.61 and 74.49 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, injuries and infectious and parasitic diseases.

In 2011, the infant mortality rate was 23.94 deaths per 1000 live births.

The population of people infected with HIV is 4600 but the prevalence rate of 15- to 49-year-old adults infected with HIV is less than 0.1% (2009).

General government expenditure on health as a % of total government expenditure in 2007: 10.3%

In 2008, there was one physician per 704 people. In 2007, there were 28.4 hospital beds per 10,000 individuals.

Health care services are free for people who cannot afford it.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Icel, Adana, Osmaniye, Hatay, Kilis, Gaziantep, Sanliurfa, Adyaman, Elazig, Mus, Bingol, Mardin, Sirt, Bitlis, Batman, Hakkari, Van, Sirnak	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection

Important Points for Safely Traveling with Children (Continued)

Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1999 Summer	Alanya	-	-	<i>Salmonella</i> infections
2005 May	Edirne	-	-	<i>Tularemia</i>
2005 July-August	Southwest province of Mugla and the southern province of Antalya	10	-	<i>E. Coli O157</i> infections
2006 January	-	12	4	H5N1 avian influenza
2006 January	Dogubayazit	8	4	H5N1 avian influenza
2006 January-July	Kelkit Valley	242	20	Crimean-Congo hemorrhagic fever
2007 March	Village of Bascatak	-	-	Typhoid fever
2007 March	Mus	-	-	Typhoid fever

Date	Area	Cases	Mortality	Diseases
2007 June	Black Sea and Central Anatolia	-		Crimean-Congo hemorrhagic fever
2008	-	-	-	Crimean-Congo hemorrhagic fever
2008 January	Northern Black Sea	-	-	H5N1 avian influenza
2008 January	Zonguldak and Samsun	-	-	H5N1 avian influenza
2008 February	Yenicam, Sakarya	-	-	H5N1 avian influenza
2008 March	Edirne	-		H5N1 avian influenza
2008 March	Edirne	-	-	H5N1 avian influenza
2008 April	Tokat, Corum, Sivas, Amasya, Yozgat, Cankiri, Gumushane, Samsun, Bursa, Bolu, and Canakkale	-	-	Crimean-Congo hemorrhagic fever
2008 June	Middle and Eastern Anatolia	1315	63	Crimean-Congo hemorrhagic fever
2008 September	Sarigerme Holiday Village	-	-	<i>Salmonella</i> infections
2009	Black Sea	12	-	<i>Hemorrhagic fever with renal syndrome</i>
2009 January-August	-	274	61	Crimean-Congo hemorrhagic fever

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- West Nile virus infections
- Legionnaires' disease
- Cutaneous leishmaniasis (increasing incidence)
- Visceral leishmaniasis (southeast Anatolia only)
- Tick-borne relapsing fever
- Louse-borne relapsing fever
- Brucellosis
- Anthrax
- *Hemorrhagic fever with renal syndrome*
- *Fascioliasis*
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
112	112	112

United Arab Emirates

Population and Geographical Location

In 2011, the UAE had a population of 5,148,664 and an area of 83,600 km². It is located in the southern section of the Persian Gulf. This country extends from Southwest Asia and the Qatar Peninsula in the West, to the Straits of Hormuz and the Musandam Peninsula in the East. The UAE is bordered by the Persian Gulf (north), the Gulf of Oman and Oman (south) and Saudi Arabia (west).

Climate and Health Status

It has a desert climate and the weather is cooler in eastern mountains. It is very warm and dry, and it has little rainfall. The population using improved drinking-water sources (%): urban 100%, rural 100%, total 100% (2008). The average life expectancy for males and females: 73.94 and 79.22 years, respectively (2011). The main causes of mortality are: cardiovascular disease, injuries, malignant neoplasm and infectious and parasitic diseases.

In 2011, the infant mortality rate was 11.94 deaths per 1000 live births. The population of people infected with HIV is not available and the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.2% (2001). General government expenditure on health as a % of total government expenditure in 2007: 8.9%. In 2005, there was one physician per 686 people. In 2007, there were 19.3 hospital beds per 10,000 individuals.

There is a developed system of medical care for all citizens.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Not seen	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections

Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary
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Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Brucellosis
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
999	999	999

Yemen

Population and Geographical Location

In 2011, Yemen had a population of 24,133,492 and an area of 527,968 km². It is located in Southwest Asia, on the southern edge of the Arabian Peninsula and it is bordered by Saudi Arabia (north), Oman (east), the Gulf of Aden (south) and the Red Sea (west).

Climate and Health Status

It has a desert climate coupled. It is hot and humid along the west coast. The climate is temperate in western mountains.

The east of Yemen is affected by seasonal monsoons and extraordinarily hot, dry and harsh deserts.

The population using improved drinking-water sources (%): urban 72%, rural 57%, total 62% (2008).

The average life expectancy for males and females: 61.7 and 65.87 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, infectious and parasitic diseases, injuries and malignant neoplasm.

In 2011, the infant mortality rate was 55.11 deaths per 1000 live births.

The population of people infected with HIV is 12,000 but the prevalence rate of 15- to 49-year-old adults with HIV is 0.1% (2001).

General government expenditure on health as a % of total government expenditure in 2007 was 4.5%.

In 2004, there was one physician per 3,486 people. In 2009, there were 7 hospital beds per 10,000 individuals.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components 3. Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Not seen	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Safely Traveling with Children

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third-semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Travelers' diarrhea	Using Azithromycin or 3 rd -generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in the first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2001 February	Northwestern part of the country	1087	121	Rift Valley fever
2005 January	Hodeidah and Mokha	-	-	Dengue fever
2005 April	Hodeidah	478	-	Poliomyelitis

Current Outbreaks and Mortality (Continued)

Date	Area	Cases	Mortality	Diseases
2006 February	Al-Jawf	-	-	Cholera
2008 February	Bani Qais			Cholera
2008 June	Hadramout, Shabwa, Hodeidah, Lahj, Abyan	2000	-	Dengue fever
2008 December	Taiz	500	-	Dengue fever
2009 October	Taiz	-	-	Dengue fever
2010 May	Sa'ada	113	-	Measles
2010 May	Sa'ada	27	-	Measles
2010 July	Hadramout, Hajjah, Shabwa, Aden, Abyan, and Lahj	-	-	Dengue fever

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Hepatitis E (transmitted by contaminated food or water)
- Cutaneous leishmaniasis (transmitted by sandflies)
- Visceral leishmaniasis (western Yemen)
- Schistosomiasis
- Onchocerciasis (limited areas)
- Lymphatic filariasis
- Brucellosis (low incidence)
- *Fascioliasis* (sheep liver fluke disease)
- *Myiasis* (skin infestation with fly larvae)
- *Dracunculiasis* (guinea worm)
- *HIV* (*human immunodeficiency virus*)

Emergency Numbers

Police	Medical	Fire
194	191	191

Section IV: Europe

Eastern Europe

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Belarus

Population and Geographical Location

Belarus is a landlocked country with a population of 9,577,552 and an area of 207,600 km² in 2011. It is located in Eastern Europe. It is bordered by Russia to the northeast and east, by Ukraine to the south, by Poland to the west and by Lithuania and Latvia to the northwest.

Climate and Health Status

Belarus has cold winters and cool and moist summers. The climate changes between continental and maritime. The population using improved drinking-water sources (%): urban 100%, rural 99%, total 100% (2008). The average life expectancy for males and females: 65.57 and 77.18 years, respectively (2011). The main causes of mortality are: cardiovascular disease, malignant neoplasm, injuries and respiratory infections. In 2011, the infant mortality rate was 6.25 deaths per 1000 live births. The population of people infected with HIV is 17,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.3% (2009).

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Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components 3. Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0, 1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age ≥ 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Tick-borne encephalitis	Recommended	Persons who are going to have long stays in rural and forested areas in spring and summer	Before traveling	2 other doses through one year	-	Fever, myalgia, malaise, tenderness, allergic reactions
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1990	Nationwide	-	-	Diphtheria
2006	Nationwide	2	-	Rabies
2006 July	Minsk, Grodno	87	-	Measles

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

General government expenditure on health as % of total government expenditure in 2007 was 9.9%. In 2007, there was one physician per 204 people and there were 4 (2008) per 10,000 individuals.

Other Infections

- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
102	103	101

Czech Republic

Population and Geographical Location

The Czech Republic is a landlocked country with a population of 10,190,213 and an area of 78,867 Km² in 2011. It is located in central Europe. It is bordered by Germany in the west and northwest, by Poland to the northeast and by Slovakia and Austria in the south.

Climate and Health Status

The Czech Republic has a temperate climate. It has cool summers and cold, cloudy and humid winters.

The population using improved drinking-water sources (%): urban 100%, rural 100%, total 100% (2008).

The average life expectancy for males and females: 73.93 and 80.66 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, injuries and digestive diseases.

In 2011, the infant mortality rate was 3.73 deaths per 1000 live births.

The population of people infected with HIV is 2,000 and the prevalence rate of 15- to 49-year-old adults infected with HIV is less than 0.1% (2009).

General government expenditure on health as a % of total government expenditure in 2007 was 13.5%.

In 2007, there was one physician per 277 people and there were 81 (2008) hospital beds per 10,000 individuals

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components 3. Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Tick-borne encephalitis	Recommended	Persons who are going to have long stays in rural and forested areas in spring and summer	Before traveling	2 other doses through one year	-	Fever, myalgia, malaise, tenderness, allergic reactions
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1998 June	South Moravia	-	-	Salmonella
2006	Nationwide	75	12	Listeriosis
2006	South Bohemia, Vysocina, Moravia	1029	-	Tick-borne encephalitis
2007 July	Eastern part of the Czech Republic	-	-	H5N1 avian influenza ("bird flu")
2007	Nationwide	542	-	Tick-borne encephalitis
2008 June	Prague, Central Bohemia, and the Olomouc	1616	-	Hepatitis A
2009	Nationwide	1	-	Bovine spongiform encephalopathy ("mad cow disease")

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- *Hemorrhagic fever*
- *Lyme disease*
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
112	112	112

Hungary

Population and Geographical Location

Hungary is a landlocked country with a population of 9,976,062 and an area of 93,028 km². It is located in the center of Eastern Europe. Hungary is bordered by Slovakia to the north, by Ukraine to the northeast, by Romania to the east and southeast, by Yugoslavia and Croatia to the south and by Slovenia and Austria to the west.

Climate and Health Status

Hungary has a temperate climate. It has cold, cloudy and humid winters and warm summers.

The population using improved drinking-water sources (%): urban 100%, rural 100%, total 100% (2008).

The average life expectancy for males and females: 71.04 and 78.76 years, respectively (2011). The main causes of mortality are: cardiovascular disease, malignant neoplasm, injuries and digestive diseases. In 2011, the infant mortality rate was 5.31 deaths per 1000 live births. The population of people infected with HIV is 3,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV is <0.1% (2009).

General government expenditure on health as a % of total government expenditure in 2007 was 10.5%. In 2007, there was one physician per 357 people and there were 71 (2008) hospital beds per 10,000 individuals.

Since 1972, the population of this country has been covered by social insurance. Since 1993, the social security organization had the duty of supervising the insurance services and was responsible for social security. Social insurance is funded mainly by employers. Most medical services are free and drugs are inexpensive. The Ministry of Health, through branches of hospitals in different regions, controls the various delivery methods of health care services. In addition, the branches in different areas have the responsibility of guiding pregnant women and mothers, pensions of unemployed people, burial expenses and affairs of the elderly, disabled and even children.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components 3. Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Tick-borne encephalitis	Recommended	Persons who are going to have long stays in rural and forested areas in spring and summer	Before traveling	2 other doses through one year	-	Fever, myalgia, malaise, tenderness, allergic reactions
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	1. Pregnancy 2. Known severe immunodeficiency 3. History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1999 December	Bacs-Kiskun and Szabadszallas	-	-	Meningococcal disease
2000 January	Nationwide	30	4	Meningococcal disease
2006 June	Bacs-Kiskun province	-	-	H5N1 avian influenza ("bird flu")
2007	Heves	-	-	Mumps
2007 January	Lapista	-	-	H5N1 avian influenza ("bird flu")

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- West Nile virus infection
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
107	104	105

Poland

Population and Geographical Location

In 2011, Poland had a population of 38,441,588 and an area of 312,685 km². It is located in Central Europe and in the southern coast of the Baltic Sea. This country is bordered by the Baltic Sea and Russia to the north, Lithuania to the northeast, by Belarus and Ukraine to the east, Slovakia to the south, the Czech Republic to the southwest, and Germany to the west.

Climate and Health Status

Poland has a temperate climate. It has cold, cloudy and moderately severe winters with frequent precipitation and it has mild summers with frequent showers and thundershowers.

The population using improved drinking-water sources (%): urban 100%, rural 100%, total 100% (2008).

The average life expectancy for males and females: 72.1 and 80.25 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, injuries and digestive diseases.

In 2011, the infant mortality rate was 6.54 deaths per 1000 live births.

The population of people infected with HIV is 27,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.1% (2009). General government expenditure on health as a % of total government expenditure in 2007 was 10.8%. In 2006, there was one physician per 496 people and there were 52 (2008) hospital beds per 10,000 individuals.

Other Infections

- Lyme disease
- Diphtheria
- Brucellosis
- HIV (human immunodeficiency virus)

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components 3. Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Tick-borne encephalitis	Recommended	Persons who are going to have long stays in rural and forested areas in spring and summer	Before traveling	2 other doses through one year	-	Fever, myalgia, malaise, tenderness, allergic reactions
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2006 January and May	Neighboring Ukraine	60	-	Measles
2006 June	Nationwide	-	-	Measles
2007 July	West-Pomerania	214	-	<i>Trichinellosis</i>
2009 Summer	Pulawy	-	-	Measles

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Emergency Numbers

Police	Medical	Fire
997	999	998

Romania

Population and Geographical Location

In 2011, Romania had a population of 21,904,551 people and an area of 238,391 km². It is located in Eastern Europe. Romania is bordered by Ukraine to the north, by Moldova and the Black Sea to the east, by Bulgaria to the south and by Yugoslavia and Hungary to the west.

Climate and Health Status

Romania has a temperate climate. It has cold, cloudy winters with frequent snow and fog and it has sunny summers with frequent showers and thunderstorms.

The population using improved drinking-water sources (%): is not available (unreported).

The average life expectancy for males and females: 70.5 and 77.66 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, malignant neoplasm and digestive diseases.

In 2011, the infant mortality rate was 11.02 deaths per 1000 live births.

The population of people infected with HIV is 16,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.1% (2009).

General government expenditure on health as a % of total government expenditure in 2007 was 10.3%.

In 2006, there was one physician per 530 people and there were 65 (2008) hospital beds per 10,000 individuals.

Department of Health Trustee is in charge of the health care system. Additionally, there is a separate health system for defense institutions and personnel of transportation. A private sector system exists as well.

Other Infections

- Measles
- Tick-borne encephalitis
- Anthrax
- Trichinellosis
- HIV (human immunodeficiency virus)

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel		Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	10. Pregnancy 11. Known severe immunodeficiency 12. History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines	
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection	
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections	
Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg(25lb) Doxycycline should not be prescribed Precautionary measures like bed net and DEET formulation for children older than 2 years
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Malaria	Using Mefloquine in first semester and proguanil in pregnancy is not recommended Preventive instruments like bed net and DEET formulation
	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1996	Dolj, Galati, Constanta, Bucharest	-	-	West Nile fever
1999 July-September	Nationwide	-	-	Enterovirus
2005 October	Tulcea	-	-	H5N1 avian influenza ("bird flu")
2006 April	Nationwide	-	-	H5N1 avian influenza ("bird flu")
2007 November	Danube		--	H5N1 avian influenza ("bird flu")
2010 March	Tulcea	-	-	H5N1 avian influenza ("bird flu")

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Emergency Numbers

Police	Medical	Fire
112	112	112

Russian Federation

Population and Geographical Location

Russia is a country with a population of 138,739,892 and an area of 17,098,242 km². It is the largest country in the world. Russia is located in Europe and is bordered by the Arctic Ocean to the north, the Pacific Ocean to the east, by North Korea, China, Mongolia, Kazakhstan, the Caspian Sea, Azerbaijan and Georgia to the south, and the Black Sea, Ukraine, Belarus, Latvia, Estonia, Finland and Norway to the west.

Climate and Health Status

Russia has a mostly arid and continental climate. It has cold winters and mild summers. The main characteristics of Russia's climate are long, cold winters and extreme and severe cold in the northern regions. In the central and southern regions, the main characteristics of the vast Russian territory are a relatively moderate climate and a low to moderate rainfall.

The population using improved drinking-water sources (%): urban 98%, rural 89%, total 96% (2008).

The average life expectancy for males and females: 59.8 and 73.17 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, injuries, malignant neoplasm and digestive diseases.

In 2011, the infant mortality was 10.08 deaths per 1000 live births.

The population of people infected with HIV is 980,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV is 1.0% (2009).

General government expenditure on health as a % of total government expenditure in 2007 was 10.2%.

In 2006, there was one physician per 227 people and there were 97 (2008) hospital beds per 10,000 individuals.

After the country's independence, health programs suffered from shortage budget constraints; approximately 20% of the hospitals are without hot water systems and 18% of them have no sewage disposal systems. From 1994 to 1995, the prevalence of infectious diseases was very high; tuberculosis for example, has increased by 20%. In 1997, the report of the World Health Organization announced Russia as the most dangerous area for tuberculosis in the world.

Premature deaths due to alcohol use along with low birth rates have resulted in a decline in the population growth rate.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components 3. Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Japanese encephalitis	Recommended	Long stays (1month) in rural areas. Extensive outdoor or nighttime exposure in rural areas	At least 10 days before traveling	3 doses at 0, 7th and 30th days	Persons with history of urticaria are at greater risk of adverse reactions to vaccine Pregnancy	Fever, myalgia, malaise, anaphylaxis/allergic reaction: pruritus, urticaria, angioedema
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Tick-borne encephalitis	Recommended	Persons who are going to have long stays in rural and forested areas in spring and summer	Before traveling	2 other doses through one year	-	Fever, myalgia, malaise, tenderness, allergic reactions

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia

Emergency Numbers

Police	Medical	Fire
112	112	112

Slovak Republic

Population and Geographical Location

In 2011, Slovakia had a population of 5,477,038 and an area of 49,035 km². It is located in the northern part of Central Europe. Slovakia is bordered by the Czech Republic and Poland to the north, by Ukraine to the east, by Hungary to the south and Austria to the west.

Climate and Health Status

Slovakia has a temperate climate. It has cool summers and cold, cloudy and humid winters.

The population using improved drinking-water sources (%): urban 100%, rural 100%, total 100% (2008).

The average life expectancy for males and females: 71.92 and 79.93 years, respectively (2011).

The main causes of mortality are: cardiovascular diseases, malignant neoplasm, injuries and digestive diseases.

In 2011, the infant mortality rate was 6.59 deaths per 1000 live births.

The population of people infected with HIV is <500 and the prevalence rate of 15- to 49-year-old adults infected with HIV is less than 0.1% (2009).

General government expenditure on health as a % of total government expenditure in 2007 was 29.9%.

In 2004, there was one physician per 324 people and there were 68 (2008) hospital beds per 10,000 individuals.

Health insurance services provide health coverage; but this coverage is weak in remote and rural areas.

Other Infections

- Lyme disease
- Q fever

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components 3. Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Tick-borne encephalitis	Recommended	Persons who are going to have long stays in rural and forested areas in spring and summer	Before traveling	2 other doses through one year	-	Fever, myalgia, malaise, tenderness, allergic reactions
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2008	Nationwide	300		Hepatitis A

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Emergency Numbers

Police	Medical	Fire
158	155	150

Ukraine

Population and Geographical Location

In 2011, Ukraine had a population of 45,134,707 and an area of 603,550 km². It is the second largest country (after Russia) in Europe. It is located in the center of southeast Europe and is bordered by Belarus in the north, by Russia in the north and east, the Black Sea, the Caspian Sea, Azov Sea, Moldova and Romania in the south and Hungary, Slovakia and Poland in the west.

Climate and Health Status

Ukraine has a temperate and continental climate. Mediterranean climate exists only on the southern Crimean coast. Precipitation is disproportionately distributed in Ukraine. The highest amount is in west and north. It is lesser in east and southeast. Winters vary from being cool along the Black Sea. Summers are warm across the greater part of the country and it is hot in the south.

The population using improved drinking-water sources (%): urban 98%, rural 97%, total 98% (2008).

The average life expectancy for males and females: 62.79 and 74.75 years, respectively (2011).

The main causes of mortality are: malignant neoplasm, injuries and respiratory infections.

In 2011, the infant mortality rate was 8.54 deaths per 1000 live births.

The population of people infected with HIV is 350,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV is 1.1% (2009).

General government expenditure on health as a % of total government expenditure in 2007 was 9.2%.

In 2006, there was one physician per 316 people. In 2008, there were 87 (2008) hospital beds per 10,000 individuals.

Other Infections

- Leptospirosis
- Anthrax
- Crimean-Congo hemorrhagic fever
- *HIV (human immunodeficiency virus)*

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Tick-borne encephalitis	Recommended	Persons who are going to have long stays in rural and forested areas in spring and summer	Before traveling	2 other doses through one year	-	Fever, myalgia, malaise, tenderness, allergic reactions
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1990	Nationwide	-	-	Diphtheria
2004 July	Odessa	-	-	Typhoid fever
2005	Ardenne	-	-	Hantavirus infections
2005 December	Crimea, Kherson, Odessa			H5N1 avian influenza ("bird flu")
2006 February	Kiev	17000		Measles
2006 December	Zakarpatyie	200		Mumps
2008 July	Donetsk	-	-	Diphtheria
2008 July	Donetsk	-	-	Lyme disease
2009 June	Donetsk	-	-	Lyme disease
2009 October	Ternopil, Lviv, Ivano-Frankivsk, and Chernivtsi		282	H1N1 influenza
2010 August	Zaporizhzhya			Cholera

Emergency Numbers

Police	Medical	Fire
112	112	112

Northern Europe

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Denmark

Population and Geographical Location

In 2011, Denmark had a population of 5,529,888 and an area of 43,094 km². It is located in the center of Northern Europe and along the North Sea. It has the lowest elevation and is the flattest country in the continental European territories.

Denmark is bordered by the Strait of Skagerrak to the north, by the Baltic Sea and the Kattegat strait to the east, Germany to the south and by the North Sea to the west.

Climate and Health Status

Denmark has a temperate humid and overcast climate. It has mild, windy winters and cool summers.

The population using improved drinking-water sources (%) is as follows: urban 100%, rural 100%, total 100% (2008).

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Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1998	Nationwide	22	-	Salmonella
2002	North Jutland	-	-	Measles
2006	Copenhagen	18	-	Measles
2006	The Baltic Sea	Two children	-	Infections caused by Vibrio
2011	Nationwide	-	-	Bovine spongiform encephalopathy ("mad cow disease")

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

The average life expectancy for males and females is 76.25 and 81.14 years, respectively (2011).

The main causes of mortality are cardiovascular disease, malignant neoplasm, respiratory infections and injuries.

In 2011, the infant mortality rate was 4.24 deaths per 1,000 live births.

The population of people infected with HIV is 5,300, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.2 % (2009).

General government expenditure on health as % of total government expenditure in 2007, was 16.2%.

In 2006, there was one physician per 320 people, and there were 35 (2008) hospital beds per 10,000 individuals.

In 1930, Denmark was amongst the first countries to provide the social welfare system.

Denmark has continued to be a leader in this field.

This new system of social welfare covers more than 95% of people.

Its medical services cover admission to hospitals, costs for essential drugs and dentistry services.

Other Infections

- Tick-borne encephalitis
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
112	112	112

Finland

Population and Geographical Location

In 2011, Finland had a population of 5,259,250 and an area of 338,145 km². It is located in Northern Europe, bordering the Baltic Sea, Gulf of Bothnia, and Gulf of Finland, between Sweden and Russia.

Climate and Health Status

Finland has a cold, temperate climate. It is potentially subarctic but comparatively mild because of the moderating influence of the North Atlantic Current, Baltic Sea, and more than 60,000 lakes. The population using improved drinking-water sources (%) is as follows: urban 100%, rural 100%, total 100% (2008).

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria- tetanus	Recom-mended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Influenza	Recom-mended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recom-mended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Tick-borne encephalitis	Recom-mended	Persons who are going to have long stays in rural and forested areas in spring and summer	Before traveling	2 other doses through one year	-	Fever, myalgia, malaise, tenderness, allergic reactions

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2000 July-October	North Western region	900	-	Tularemia
2002	Nationwide	600	-	Pogosta disease
2004 March	Nationwide	-	-	Yersinia pseudotuberculosis
2004 March and April	Pohjanmaa (Ostrobothnia)	-	-	Yersinia pseudotuberculosis
2004 June and July	Helsinki	-	-	Yersinia pseudotuberculosis
2009	Nationwide	105	-	Pogosta disease
2011	Nationwide	1	-	Bovine spongiform encephalopathy

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

The average life expectancy for males and females is 75.79 and 82.89 years, respectively (2011). The main causes of mortality are cardiovascular disease, malignant neoplasm, neuropsychiatric conditions and injuries. In 2011, the infant mortality rate was 3.43 deaths per 1,000 live births. The population of people infected with HIV is 2,600, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.1% (2009).

General government expenditure on health as % of total government expenditure in 2007 was 12.9%. In 2007, there was one physician per 300 people, and there were 68 hospital beds per 10,000 individuals. Finland has an extensive social welfare system that includes: unemployment insurance, sickness, disability, aging and assistance to children and families. The 1990 economic crisis caused utilities to cut off. In 1972, health centers were established in all urban areas and doctors' fees were also eliminated.

Other Infections

- Lyme disease
- Puumala hantavirus infection
- Diphtheria
- Listeria
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
112	112	112

Norway

Population and Geographical Location

In 2011, Norway had a population of 4,691,849 and an area of 323,802 km². It is located in the West Scandinavian Peninsula, in Northern Europe and in the Norwegian Sea (Atlantic Ocean).

Norway is bordered by the Arctic Ocean to the north, by Russia and Finland to the northeast, Sweden to the East and to the south, by the Skagerrak Strait to the south and the Norwegian Sea to the west.

Climate and Health Status

Norway has temperate climate along the coast, which is modified by North Atlantic Current; colder interior; rainy year-round on west coast.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2000	Nationwide	-	-	Salmonella
2001 July-September	Stavanger	28	7	Legionnaires' disease
2004 September	Bergen	300	-	Giardia infections
2005 May	-	56	10	Legionnaires' disease
2006	Midtre Gauldal	11	-	Tularemia
2007 March	northern Norway	9	-	Tularemia
2008 June-July	Sarpsborg and Fredrikstad	5	2	Legionnaires' disease

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

The population using improved drinking-water sources (%) is as follows: urban 100%, rural 100%, total 100% (2008).

The average life expectancy for males and females is 77.53 and 83.02 years, respectively (2011).

The main causes of mortality are cardiovascular disease, malignant neoplasm, neuropsychiatric conditions and injuries.

In 2011, the infant mortality rate was 3.52 deaths per 1,000 live births.

The population of people infected with HIV is 4,000, but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.1% (2009).

General government expenditure on health as % of total government expenditure in 2007 was 18.3%. In 2007, there was one physician per 258 people, and there were 39 (2008) hospital beds per 10,000 individuals. Health insurance is compulsory in Norway, and the government and all people, including employers and ordinary people, are responsible for providing the costs of this system. All medical services are free.

Other Infections

- Tick-borne encephalitis
- Lyme disease
- *Nephropathia epidemica*
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
112	113	110

Sweden

Population and Geographical Location

In 2011, Sweden had a population of 9,088,728 and an area of 450,295 km². It is located in Northern Europe and the southern half of the Scandinavian Peninsula. Sweden is bordered by Norway to the west and northwest, Finland to the northeast, by the Gulf of Bothnia to the east, the Baltic Sea to the south and southeast and the Skagerrak Strait to the southwest.

Climate and Health Status

Sweden has a temperate and humid climate in the southern parts and cold and snowy in other regions. Its northern region is covered with snow in most seasons.

The population using improved drinking-water sources (%) is as follows: urban 100%, rural 100%, total 100% (2008).

The average life expectancy for males and females is 78.78 and 83.51 years, respectively (2011).

The main causes of mortality are cardiovascular disease, malignant neoplasm, neuropsychiatric conditions and injuries.

In 2011, the infant mortality rate was 2.74 deaths per 1,000 live births.

The population of people infected with HIV is 8,400, but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.1% (2009).

General government expenditure on health as % of total government expenditure in 2007 was 14.1%.

In 2006, there was one physician per 279 people, and there were 36 (2008) hospital beds per 10,000 individuals.

Sweden has the most comprehensive social welfare system in the world. All the people are under the cover of aging pensions, health insurance, and disability insurance. Unemployment insurance is also implemented and supported by the government. Some of the subsidies that are offered as family supports are: assistance for children, financial assistance to newly married people, childbirth allowances, free holidays for mothers and children with low income and housing allowances.

High level of welfare services has resulted in high taxes, and as a result, the government has reconsidered the level of welfare service delivery in the mentioned system (in 1990). Federal insurance law passed in 1911, and has approved insuring diseases and accidents. Accident insurance is compulsory for most employees.

Life insurance and retirement insurance, which also includes disability, is required and is funded through taxation. Unemployment insurance in this country has become mandatory since 1976.

Other Infections

- Lyme disease
- Hemorrhagic fever with renal syndrome
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
112	112	112

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria-tetanus	Recommended	All travel who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Tick-borne encephalitis	Recommended	Persons who are going to have long stays in rural and forested areas in spring and summer	Before traveling	2 other doses through one year	-	Fever, myalgia, malaise, tenderness, allergic reactions
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection, fever, rash, seizure, pneumonia, cytopenia

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2000	Stockholm, Sodermanland, Vastmanland, Varmland, and Orebro	400	-	Tularemia
2003	Nationwide	700	-	Tularemia
2004 August-September	Lidkaping		-	Legionnaires' disease
2006 January	Nationwide	18	-	Measles
2006 Summer	Varmlands	90	-	Tularemia
2006 August	Blekinge	3	-	Cholera
2007 March-April	Canton of Geneva	11	-	Measles

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

United Kingdom

Population and Geographical Location

In 2011, the United Kingdom was an island with a population of 62,698,362 and an area of 243,610 km². It is located in Western Europe and in the western waters of the North Atlantic. This country is bordered by the Irish Sea to the west and the North Sea, East Sea and the Manch Sea to the south.

Climate and Health Status

The UK has a temperate climate.

The population using improved drinking-water sources (%) is as follows: urban 100%, rural 100%, total 100% (2008).

The average life expectancy for males and females is 77.95 and 82.25 years, respectively (2011).

The main causes of mortality are cardiovascular disease, malignant neoplasm, respiratory infections and digestive diseases.

In 2011, the infant mortality rate was 4.62 deaths per 1,000 live births.

The population of people infected with HIV is 85,000, but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.2% (2009).

General government expenditure on health as % of total government expenditure in 2007, was 15.6%.

In 2002, there was one physician per 494 people, and there were 42 (2008) hospital beds per 10,000 individuals.

In 1990, the British conservative government presented reforms and different revises and highly controversial cases on the management of NHS for the social services.

Other Infections

- Lyme disease
- Leptospirosis
- Rabies
- *Hemorrhagic fever*
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
999	999	999

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria- tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	1. History of neurologic or severe hypersensitivity reaction in previous doses	Fever, redness, swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	1. History of immediate hypersensitivity reaction to eggs 2. History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	1. History of immediate hypersensitivity reaction to gelatin or neomycin 2. Pregnancy 3. Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	1. Pregnancy 2. Known severe immunodeficiency 3. History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
April 1999	Nationwide	144	-	Mumps
2000 April-June	Scotland, England, and Ireland		-	Clostridium novyi
2001	South London	90	-	Measles
2001 November	West London	4	-	Legionnaires' disease

Date	Area	Cases	Mortality	Diseases
2001 May-June	Central London	3	-	Legionnaires' disease
2002 March	Nationwide	-	-	Measles
2002	Nationwide	30	-	Q fever
2002 July-August	Newport, south Wales	-	-	Q fever
2002 August	Barrow	133	5	Legionnaires' disease
2002 August	West Midlands	7	-	Legionnaires' disease
2002 August	London	-	-	Botulism
2003 October	Hereford	28	2	Legionnaires' disease
2004-2005	England, Scotland, and Wales	-	-	Mumps
2006 1 st 5 months	Surrey and Sussex and the South Yorkshire	-	-	Measles
2006	Scotland	26	-	Measles
2006 July	Scotland	-	-	Q fever
2006 April-May	Norfolk	-	-	H7N3 avian influenza
2006 August	Northeast England	-	-	Legionnaires' disease
2006-2008	Nationwide	-	-	Mumps
2007	Nationwide	990	-	Measles
2007 May	North East and North Central London	105	-	Measles
2007 August	South Yorkshire	21	-	Measles
2007 March-May	London, East of England, South East, South West, East Midlands, and Yorkshire	92	-	Measles
2007 February	Lowestoft in Suffolk	-	-	H5N1 avian influenza ("bird flu")
2007 September	Surrey	-	-	Foot-and-mouth disease
2007 May	Cheltenham (Gloucestershire)	30	-	Q fever
2007 May	Smallholding	17	-	H7N2 avian influenza ("bird flu")
2007 January	Nationwide	165	-	Variant Creutzfeldt-Jakob disease
2008 October	Gloucestershire	-	-	Mumps
2008 May	London	-	-	Mumps
2008		-	-	Mumps
2008 November	North West, South East and West Midlands	-	-	Measles
2008 October	South Warwickshire, Cheshire, Wrexham and Flintshire	-	-	Measles
2008 June	Banbury, Oxfordshire	-	-	H7N7 avian influenza
2008		1217	-	Measles
2009	Nationwide	-	-	Mumps
2009 October	Bedfordshire	-	-	Mumps
2009 June	Cumbria and North East Lincolnshire	-	-	Mumps

Current Outbreaks and Mortality (Continued)

Date	Area	Cases	Mortality	Diseases
2009 February	Chichester, Swansea	-	-	Mumps
2009 January	Wales	-	-	Mumps
2009	Nationwide	210	-	Measles
2009 April	Llandudno, Conwy, Wales	-	-	Measles
2009	England and Wales	382	-	Measles
2010 May	Sussex, Brighton and Hove	-	-	Mumps
2010 July	Nationwide	112	-	Mumps
2010 September	Northeast England	22	2	Legionnaires' disease

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Southern Europe

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Albania

Population and Geographical Location

In 2011, Albania had a population of 2,994,667 and an area of 28,748 km². It is located in the West Balkan Peninsula and the eastern Adriatic coast. Albania is bordered by Yugoslavia to the north, by Macedonia to the east and Greece to the southeast.

Climate and Health Status

Albania has a mild temperate climate. It has cool, cloudy, wet winters and hot, clear, dry summers.

The population using improved drinking - water sources (%): urban 96%, rural 98%, total 97% (2008). The average life expectancy for males and females: 74.82 and 80.3 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, respiratory infections, malignant neoplasm and digestive diseases.

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Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old 2. Hypersensitivity to vaccine components 3. Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Healthcare providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children Adults who have not received the booster dose	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2006 February	Cuka	-	-	H5N1 avian influenza ("bird flu")

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

In 2011, the infant mortality rate was 14.61 per 1000 live births.

The population of people infected with HIV and the prevalence rate of 15- to 49-year-old adults infected with HIV are not available (unreported).

General government expenditure on health as % of total government expenditure in 2007 was 9.5%.

In 2007, there was one physician per 987 people and there were 29 (2007) hospital beds per 10,000 individuals.

The Albanian government has considered benefits for working people and their families in limited cases; it provides free healthcare and insurance for working people. Despite existing financial constraints, the government has taken action to compensate for the lack of health personnel.

Other Infections

- Tick-borne encephalitis
- Brucellosis
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
129	127	128

Bosnia-Herzegovina

Population and Geographical Location

In 2011, Bosnia-Herzegovina had a population of 4,622,163 and an area of 51,197 km². It is located in Southern Europe and northwest of the Balkan Peninsula. It is bordered by Croatia to the south, west and north and by Yugoslavia to the east.

Climate and Health Status

Bosnia-Herzegovina has hot summers and cold winters; areas of high elevation have short, cool summers and long, severe winters. There are mild and rainy winters along the coast.

The population using improved drinking - water sources (%): urban 100%, rural 98%, total 99% (2008).

The average life expectancy for males and females: 75.25 and 82.63 years, respectively (2011).

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Healthcare providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1995	Nationwide	400	5	Hemorrhagic fever
2002	Nationwide	-	-	Q fever
2004 May	Banja Luka	-	-	Q fever
2008 December	Nationwide	757	-	Brucellosis
2009 March and July	Republika Srpska	342	-	Rubella
2009 May	Western Bosnia	161	-	Measles

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

The main causes of mortality are: cardiovascular disease, malignant neoplasm, injuries and respiratory infections.

In 2011, the infant mortality rate was 8.67 deaths per 1000 live births.

The population of people infected with HIV is <1000 but the prevalence rate of 15- to 49-year-old adults infected with HIV was <0.1% (2007).

General government expenditure on health as % of total government expenditure in 2007 was 13.5%.

In 2005, there was one physician per 834 people and there were 32 (2008) hospital beds per 10,000 individuals.

Other Infections

- Rubella
- Measles
- Brucellosis
- Q fever
- Hemorrhagic fever
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
107	104	105

Croatia

Population and Geographical Location

In 2011, Croatia had a population of 4,483,804 and an area of 56,594 km². It is located in Southern Europe, northwest of the Balkan Peninsula and northeast of the Adriatic coast. Croatia is bordered by Slovenia and Hungary to the north, by Yugoslavia to the east, Bosnia and Herzegovina to the south and the east and the Dalmatian coast in the Adriatic Sea to the south and the west.

Climate and Health Status

Croatia has a Mediterranean and continental climate. Continental climate is characterized by hot summers and cold winters. There are mild winters, dry summers along the coast.

The population using improved drinking - water sources (%): urban 100%, rural 97%, total 99% (2008).

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Healthcare providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Tick-borne encephalitis	Recommended	Persons who are going to have long stays in rural and forested areas in spring and summer	Before traveling	2 other doses through one year	-	Fever, myalgia, malaise, tenderness, allergic reactions
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	<ol style="list-style-type: none"> 1. The oral vaccine is approved for travelers at least six years old 2. Injectable vaccine is approved for children over 2 years old 3. Severe local or systemic reaction to a prior dose 4. There is no data about the safety of typhoid vaccine in pregnancy 	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	<ol style="list-style-type: none"> 1. Pregnancy 2. Known severe immunodeficiency 3. History of immediate hyper sensitivity reaction to gelatin or neomycin 	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2002 May	Nationwide	100	1	Hemorrhagic fever with renal syndrome
2002 November	Istria	-	-	Trichinellosis
2003 February	East Croatia	-	-	Trichinellosis
2008 April to June	Zagreb and Slavonski Brod	49	-	Measles
2010 June	Northern Croatia	-	-	Tick-borne encephalitis

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

The average life expectancy for males and females: 72.17 and 79.6 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, injuries and digestive diseases.

In 2011, the infant mortality rate was 6.16 deaths per 1000 live births.

The population of people infected with HIV is <1000 but the prevalence rate of 15- to 49-year-old adults infected with HIV is < 0.1% (2009).

General government expenditure on health as % of total government expenditure in 2007 was 17.6%.

In 2007, there was one physician per 380 people and there were 53 (2008) hospital beds per 10,000 individuals.

Other Infections

- Brucellosis
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
192	112	112

Greece

Population and Geographical Location

In 2011, Greece had a population of 10,760,136 and an area of 131,957 km². It is located in Southeastern Europe, and in the eastern coast of the Mediterranean Sea.

This country is bordered by Macedonia and Bulgaria to the north, by Turkey to the northeast, by the Aegean Sea to the east, by the Mediterranean Sea to the south, by the Ionian Sea to the west and by Albania to the northwest.

Climate and Health Status

The summers are hot and dry in Greece and the winters are mild, humid and rainy.

The population using improved drinking - water sources (%): urban 100%, rural 99%, total 100% (2008).

The average life expectancy for males and females: 77.36 and 82.65 years, respectively (2011). The main causes of mortality are: cardiovascular disease, malignant neoplasm, respiratory infections and injuries.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Cholera	Not recommended	-	-	-	-	Tenderness, headache, malaise
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Healthcare providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia

Malaria			Yellow fever	
Recommended prophylaxis	Chloroquine-resistant area	Risk areas	CDC recommendations	Requirements
Not confirmed	Not seen	Not seen	-	-

Important Points for Safely Traveling with Children

Vaccination	Routine vaccination Children younger than 2 years old should not receive hepatitis A or typhoid vaccines
Nutrition	Using safe food and water Breast feeding, special food for babies or cow milk Adequate hydration Sunlight protection
Main requirements	Medical Kit Diaper rash cream Oral saline compounds Antibiotics for travelers' diarrhea and infections

Common diseases	Malaria	Malarone should not be used for prophylaxis in children weighing <5 kg(25lb) Doxycycline should not be prescribed Precautionary measures like bed nets and DEET formulations for children older than 2 years
	Travelers' diarrhea	Using safe food and water Washing hands and avoiding contaminated objects Adequate hydration with fluids and ORS Consulting a physician and using antibiotics if necessary

Important Points for Pregnant Women in Travel

Travel contraindications	Diseases like diabetes mellitus or hypertension Pregnancy complications Third semester pregnancy	
Health and nutrition	Using safe food and water Taking precautions to prevent diseases Washing hands and personal hygiene consideration	
Common diseases	Malaria	Using Mefloquine in first semester and proguanil in pregnancy is not recommended Preventive instruments like bed nets and DEET formulations
	Travelers' diarrhea	Using Azithromycin or 3 rd generation Cephalosporin's Not using quinolones like ciprofloxacin Symptomatic treatment with Kaolin/Pectin and adequate hydration with fluids and ORS Not using Cotrimoxazole in first semester

Current Outbreaks and Mortality Table

Date	Area	Cases	Mortality	Diseases
2002 April	Nationwide			Coxsackie virus
2006 February	Northern Greece	171		Measles
2006February	Roma			Measles
2008	Nationwide	55		Brucellosis
2008 June	Thassos		55	Brucellosis
2010	Nationwide	128		Measles

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

In 2011, the infant mortality rate was 5.00 deaths per 1000 live births. The population of people infected with HIV is 88,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.1% (2009). General government expenditure on health as % of total government expenditure in 2007 was 13.2%. In 2006, there was one physician per 180 people and there were 48 (2008) hospital beds per 10,000 individuals. Greece has a system of social insurance and state facilities for patients across the entire country.

Other Infections

- Crimean-Congo hemorrhagic fever
- Tick-borne encephalitis
- Leishmaniasis
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
100	166	199

Italy

Population and Geographical Location

In 2011, Italy was an island-like country with a population of 61,061,804 and an area of 301,340 km². It is located in southern Europe. Italy is bordered by Switzerland and Austria to the north, Slovenia and the Adriatic to the east, the Mediterranean Sea to the south, and the Mediterranean Sea and France to the west.

Climate and Health Status

Italy has a predominantly Mediterranean climate. It is Alpine in far north and it is hot and dry in south. The population using improved drinking - water sources (%): urban 100%, rural 100%, total 100% (2008). The average life expectancy for males and females: 79.16 and 84.53 years, respectively (2011). The main causes of mortality are: cardiovascular disease, malignant neoplasm, respiratory infections and digestive diseases. In 2011, the infant mortality rate was 3.38 deaths per 1000 live births. The population of people infected with HIV is 140,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.3 % (2009). General government expenditure on health as % of total government expenditure in 2007 was 13.9%. In 2006, there was one physician per 270 people and there were 39 (2008) hospital beds per 10,000 individuals.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2002 April	Campania	114	4	Measles
2002 May	San Giovanni Rotondo	6	1	Measles
2003	Abruzzo, Puglia, and Calabria	-		Measles
2006 June-September	Balzo-south,Lazio	3	--	Measles
2006	Grosseto	40	-	Measles
2006 September	Venice	15	0	Legionnaires' disease
2007 August	Castiglione di Cervia and Castiglione di Ravenna, Ravenna, Region Emilia-Romagna, Bologna	214	-	

Current Outbreaks and Mortality (Continued)

Date	Area	Cases	Mortality	Diseases
2007 September	Nationwide	-	-	Chikungunya fever
2007 January	Apulia	18	-	Measles
2008 May	Nationwide	1000	-	Measles
2008 January-March	Apulia	16	-	Measles

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Other Infections

- Tularemia
- Leishmaniasis
- Anthrax
- Rabies
- HIV (human immunodeficiency virus)
- Scorpion stings
- Black widow spider bites
- West Nile Virus
- Toscana Virus
- Ehrlichiosis
- Tick-borne encephalitis
- Trichinosis
- Brucellosis

Emergency Numbers

Police	Medical	Fire
113	118	115

Montenegro

Population and Geographical Location

In 2011, Serbia and Montenegro had a population of 7,972,362 (Serbia: 7,310,555 – it does not include the population of Kosovo - and Montenegro: 661,807) and an area of 91,286 km² (Serbia: 77,474 Montenegro: 13,812). It is located in Southeast Europe and the Balkan Peninsula. It is bordered by Hungary to the north, by Romania and Bulgaria to the east, by Macedonia and Albania to the south, the Adriatic Sea to the southwest and by Croatia and Bosnia and Herzegovina to the west.

In May 2006, Montenegro invoked its right to secede from the federation and - following a successful referendum - it declared itself an independent nation on 3 June 2006. Two days later, Serbia declared that it was the successor state to the union of Serbia and Montenegro. A new Serbian constitution was approved in October 2006 and put into practice the following month. In February 2008, after nearly two years of inconclusive negotiations, the UN-administered province of Kosovo declared itself independent from Serbia - an action Serbia refuses to recognize.

In May 2006, Montenegro invoked its right under the Constitutional Charter of Serbia and Montenegro to hold a referendum on independence from the state union. The vote for severing ties with Serbia exceeded 55% - the threshold set by the EU - allowing Montenegro to formally declare its independence on 3 June 2006.

Climate and Health Status

Montenegro has a continental climate in the north. It has cold winters and hot, humid summers with well distributed rainfall. The central region has a continental and Mediterranean climate.

In Serbia, the population using improved drinking - water sources (%): urban 99%, rural 98%, total 99% (2008).

In Montenegro, the population using improved drinking - water sources (%): urban 100%, rural 96%, total 98% (2008).

In Serbia, the Average life expectancy for males and females: 71.49 and 77.34 years, respectively (2011).

In Montenegro, the Average life expectancy for males and females is not available (unreported).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, respiratory infections and injuries.

In Serbia, the infant mortality rate was 6.52 deaths per 1000 live births (2011).

In Montenegro, the infant mortality rate is not available (unreported).

In Serbia, the population of people infected with HIV is 6,400 but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.1% (2009).

In Montenegro, the population of people infected with HIV and the prevalence rate of 15- to 49-year-old adults infected with HIV is not available (unreported).

In Serbia, general government expenditure on health as % of total government expenditure in 2007 was 13.8%.

In Montenegro, general government expenditure on health as % of total government expenditure in 2007 was 26.4%.

In Serbia, there was one physician per 367 people (2007) and there were 54 (2007) per 10,000 individuals.

In Montenegro, there was one physician per 540 people (2007) and there were 40 (2007) hospital beds per 10,000 individuals.

Other Infections

- *Trichinellosis*
- *Brucellosis*
- *Tick-borne encephalitis*
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
122	124	123

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria - tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components 3. Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Healthcare providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash

Portugal

Population and Geographical Location

In 2011, Portugal had a population of 10,760,305 and an area of 92,090 km². It is located in Southwest Europe and in the west of the Iberian Peninsula. Portugal is bordered by Spain to the north and the east, and the Atlantic Ocean to the south and west.

Climate and Health Status

Portugal has a maritime temperate climate. It is cool and rainy in north but it is warmer and drier in south.

The population using improved drinking - water sources (%): urban 99%, rural 100%, total 99% (2008).

The average life expectancy for males and females: 75.28 and 82.01 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, respiratory infections and digestive diseases.

In 2011, the infant mortality rate was 4.66 deaths per 1000 live births.

The population of people infected with HIV is 42,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.5% (2009).

General government expenditure on health as % of total government expenditure in 2007 was 15.4%.

In 2005, there was one physician per 297 people and there were 35 (2008) hospital beds per 10,000 individuals.

Portugal has a complex public-private health system.

Other Infections

- Toscana virus
- West Nile virus
- Mediterranean spotted fever
- Israeli spotted fever
- Tick-borne relapsing fever
- Brucellosis
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
112	112	112

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Healthcare providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection Who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hyper-sensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia
Yellow fever	Recommended	Travelers over 9 months old with a history of travel to eastern regions of Andes mountains, endemic parts of Africa or America	4 to 6 weeks before traveling		Immunocompromised patients Pregnancy Allergic reaction to egg Diseases of thymus (e.g. Thymectomy)	Soreness, redness or swelling at the site of injection, headache, myalgia, fever, allergic reactions

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2011	Nationwide	1	-	Variant Creutzfeldt-Jakob disease

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Serbia

Population and Geographical Location

In 2011, Serbia and Montenegro had a population of 7,972,362 (Serbia: 7,310,555 – it does not include the population of Kosovo- and Montenegro: 661,807), an area of 91,286 km² (Serbia: 77,474 Montenegro: 13,812). It is located in Southeast Europe and the Balkan Peninsula. It is bordered by Hungary to the north, by Romania and Bulgaria to the east, by Macedonia and Albania to the south, the Adriatic Sea to the southwest and by Croatia and Bosnia and Herzegovina to the west.

In May 2006, Montenegro invoked its right to secede from the federation and - following a successful referendum - it declared itself an independent nation on 3 June 2006. Two days later, Serbia declared that it was the successor state to the union of Serbia and Montenegro. A new Serbian constitution was approved in October 2006 and put into practice the following month.

In February 2008, after nearly two years of inconclusive negotiations, the UN-administered province of Kosovo declared itself independent of Serbia - an action Serbia refuses to recognize.

In May 2006, Montenegro invoked its right under the Constitutional Charter of Serbia and Montenegro to hold a referendum on independence from the state union. The vote for severing ties with Serbia exceeded 55% - the threshold set by the EU - allowing Montenegro to formally declare its independence on 3 June 2006.

Climate and Health Status

Serbia has a continental climate. It has cold winters and hot, humid summers with well distributed rainfall. The central region is continental and it has a Mediterranean climate; to the south, Adriatic climate along the coast, hot, dry summers and autumns and relatively cold winters with heavy snowfall inland.

In Serbia, the population using improved drinking - water sources (%): urban 99%, rural 98%, total 99% (2008).

In Montenegro, the population using improved drinking - water sources (%): urban 100%, rural 96%, total 98% (2008).

In Serbia, the Average life expectancy for males and females: 71.49 and 77.34 years, respectively (2011).

In Montenegro, the Average life expectancy for males and females is not available (unreported).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, respiratory infections and injuries.

In Serbia, the infant mortality rate was 6.52 deaths per 1000 live births (2011).

In Montenegro, the infant mortality rate is not available (unreported).

In Serbia, the population of people infected with HIV is 6,400 but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.1% (2009).

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health-care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash

In Montenegro, the population of people infected with HIV and the prevalence rate of 15- to 49-year-old adults infected with HIV are not available (unreported).

In Serbia, general government expenditure on health as % of total government expenditure in 2007 was 13.8%.

In Montenegro, general government expenditure on health as % of total government expenditure in 2007 was 26.4%.

In Serbia, there was one physician per 367 people (2007) and there were 54 (2007) hospital beds per 10,000 individuals.

In Montenegro, there was one physician per 540 people (2007) and there were 40 (2007) hospital beds per 10,000 individuals.

Current Outbreaks and Mortality

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Emergency Numbers

Police	Medical	Fire
192	194	193

Spain

Population and Geographical Location

In 2011, Spain was a country with a population of 46,754,784, an area of 505,370 km². It is located in Southwest Europe. Spain is bordered by Gulf Biscay, France and Rwanda to the north, by the Mediterranean Sea, the Strait of Gibraltar and the bay of Cadiz to the south and north and by Portugal and the Atlantic Ocean to the west.

Climate and Health Status

Spain has a temperate climate. It has clear and hot summers. It has cloudy, cold winters.

The population using improved drinking - water sources (%): urban 100%, rural 100%, total 100% (2008).

The average life expectancy for males and females: 78.16 and 84.37 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, respiratory infections and neuropsychiatric conditions.

In 2011, the infant mortality is 3.39 deaths per 1000 live births.

The population of people infected with HIV is 130,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.4% (2009).

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria- tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health-care providers Close contact with the natives People who receive blood products regularly	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April Pregnant women in the second and third semesters	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1997	Castilla y Leon	534	-	Tuleramia
2001 July	Murcia	420	4	Legionella
2004 June-July	Zaragoza	30	-	Legionella
2005	Madrid	-	-	Rubella
2005	Vic and Gurb	55	-	Legionella
2006 June	Pamplona	149	-	Legionella
2006	Barcelona	213	-	Measle
2006	Madrid	-	2	Viral meningitis
2006 February	Madrid	59	-	Measle
Date	Area	Cases	Mortality	Diseases
2006 August	Navarra	-	-	Mumps

Date	Area	Cases	Mortality	Diseases
2007	Palencia	507	-	Tularemia
2007 February	Nationwide	300	-	Mumps
2008 August	Nationwide	-	-	Tick-related lymphadenopathy
2008 February	Algeciras	57	-	Measles
2010 February	Jumilla	65	-	Measles
2010 June	Alcoy	-	-	Legionella
2010 July	Vallgorguina	43	-	Legionella
2010 November	Madrid	51	-	Legionella

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

General government expenditure on health as % of total government expenditure in 2007 was 15.6%.

In 2007, there was one physician per 284 people and there were 34 (2008) hospital beds per 10,000 individuals.

The law of gratuitous aid to families (which passed in 1939) pays gratuitous money to workers based on the number of children; its budget comes from employers and employees. The program of paying an allowance to the elderly and providing facilities for childbirth has been prevalent since 1949.

Other Infections

- Trichinellosis
- Anthrax
- Brucellosis
- Q fever
- Echinococcosis
- Mediterranean spotted fever
- Visceral leishmaniasis
- Tick-borne relapsing fever
- Rabies
- Toscana virus
- Scorpion stings
- Black widow spider bites

Emergency Numbers

Police	Medical	Fire
112	112	112

Chapter 18

Western Europe

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Austria

Population and Geographical Location

In 2011, Austria was a landlocked country with a population of 8,217,280 and an area of 83,871 km². It is located in Central Europe. Austria is bordered by Germany and the Czech Republic to the north, Slovakia and Hungary to the east, by Slovenia and Italy to the south and by Switzerland and Liechtenstein to the west.

Climate and Health Status

Austria has a temperate and continental climate. It has cloudy and cold winters with frequent rain in lowlands and snow in mountains and it has cool summers with occasional showers.

The population using improved drinking - water sources (%): urban 100%, rural 100%, total 100% (2008).

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Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Influenza	Recommended	In Influenza outbreak season from November to April. Pregnant women in the second and third semesters.	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine. Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Tick-borne encephalitis	Recommended	Persons who are going to have long stays in rural and forested areas in spring and summer	Before traveling	2 other doses through one year	-	Fever, myalgia, malaise, tenderness, allergic reactions
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia

The average life expectancy for males and females: 76.87 and 82.84 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, injuries and digestive diseases.

In 2011, the infant mortality rate was 4.32 deaths per 1000 live births.

The population of people infected with HIV is 15,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.3% (2009).

General government expenditure on health as a % of total government expenditure in 2007 was 15.9%.

In 2007, there was one physician per 263 people and there were 78 (2008) hospital beds per 10,000 individuals.

Austria has a comprehensive social insurance system which includes: disability, incidents, aging, unemployment pensions, children's rights and house rent subsidies. The budget of the insurance scheme is provided by compulsory aid of employers. Health insurance for the self-employed is optional.

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2006 May-June	Drau, Drava	214	-	Mumps
2008 April	Salzburg area	200	-	Measles
2008 August	Western Vorarlberg	-	-	Tick-borne encephalitis
2009 February	Styria and Burgenland	143	-	Rubella

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Other Infections

- Lyme disease
- Visceral leishmaniasis
- Alveolar echinococcosis
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
133	144	122

Belgium

Population and Geographical Location

In 2011, Belgium was a country with a population of 10,431,477 and an area of 30,528 km². It is located in Western Europe. This country contains mostly flat land, often referred to as the Flanders Plain.

Climate and Health Status

Belgium has a temperate climate. It has mild winters and cool summers.

The population using improved drinking - water sources (%): urban 100%, rural 100%, total 100% (2008).

The average life expectancy for males and females: 76.35 and 82.81 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, neuropsychiatric conditions and respiratory infections.

In 2011, the infant mortality rate was 4.33 deaths per 1000 live births.

The population of people infected with HIV is 14,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.2 % (2009).

General government expenditure on health as a % of total government expenditure in 2007 was 14.4%.

In 2006, there was one physician per 236 people and there were 53 (2008) hospital beds per 10,000 individuals.

Healthcare is the duty of the public institutions in every city. These institutions discharge people from private hospitals, and supervise public hospitals and manage nursing and clinical services.

Social security services which were passed in 1944 are for all working people who have a contract job. The national central office of social security, based on studies, collects the needed budget for services from employers and disperses it between different areas. Implementing this comprehensive welfare system has improved health status and economic stability. In May 2002, Belgium became the second country in the world (after the Netherlands) to pass a law that would allow the killing of people with diseases under very specific conditions.

Other Infections

- Lyme disease
- Brucellosis
- Q fever
- HIV (human immunodeficiency virus)

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Influenza	Recommended	In Influenza outbreak season from November to April. Pregnant women in the second and third semesters.	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine. Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1999 October-November	Nationwide	80	-	Legionnaires' disease
2002 September	Nationwide	6	-	Legionnaires' disease
2007 August	Antwerp	137	-	Measles
2008-2011	Namur and Hainaut	-	-	Hantavirus infections
2011	Nationwide	1	-	Conjunctivitis (pink-eye)

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Emergency Numbers

Police	Medical	Fire
112	112	112

France

Population and Geographical Location

In 2011, France had a population of 65,102,719 and an area of 643,427 km².

It is located in Western Europe, beside the Atlantic Ocean. France is bordered by the Manch Sea, Belgium and Luxembourg to the north, Germany to the northeast, Switzerland and Italy to the east, the Mediterranean Sea, Spain and Andorra to the south and the Gascony Gulf and the Atlantic Ocean to the east.

Climate and Health Status

France has a mild and humid climate in the north and western areas and it is alpine mild in the east. France also receives heavy rainfalls from the gulf coasts of the southern Mediterranean Sea.

The population using improved drinking - water sources (%): urban 100%, rural 100%, total 100% (2008).

The average life expectancy for males and females: 78.02 and 84.54 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, injuries and neuropsychiatric conditions.

In 2011, the infant mortality rate was 3.29 deaths per 1000 live births.

The population of people infected with HIV is 150,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.4% (2009).

General government expenditure on health as a % of total government expenditure in 2007 was 16.6%.

In 2007, there was one physician per 285 people and there were 72 (2008) hospital beds per 10,000 individuals.

The curative service insurance of France, in some cases, accepted a part of medical, medicinal and hospital expenses and all of the medical service costs of individuals with low income, unemployment and children who are under 10.

The health insurance and other social services are under the control of the social security organization.

The social insurance includes family salaries, the employees reward program, childbirth assistance, old age and disability insurances.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Influenza	Recommended	In Influenza outbreak season from November to April. Pregnant women in the second and third semesters.	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine. Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1996 March-June	Briancon	-	-	Q fever
1998 June-July	-	19	-	Legionnaires' disease
1999 December	-	26	7	Listeriosis
2002	Hautes-Pyrenees, Pyrenees Atlantiques and Landes	-	-	Meningococcal disease
2002 August	Chamonix	-	-	Q fever
2002 May-June	Nationwide	8	1	Listeriosis
Date	Area	Cases	Mortality	Diseases

Current Outbreaks and Mortality (Continued)

Date	Area	Cases	Mortality	Diseases
2003 November	Nord Pas de Calais	71	9	Legionnaires' disease
2003 August	Herault district, Montpellier	30	3	Legionnaires' disease
2003 October	Paris	5	-	Typhoid fever
2003 - 2005	Nationwide	86	-	Meningococcal disease
2004 August	Nationwide	-	-	Rabies
2005 May	Nationwide	-	-	Rabies
2005 May	Lyon	34		Legionnaires' disease
2005	Ardenne, Aisne, Nord, Oise, and Jura	-	-	Hantavirus infections
2006 October	Picardie	2	-	Leptospirosis
2006 September	Nationwide	26	2	Legionnaires' disease
2006 September	Lorquin, Moselle	12	-	Legionnaires' disease
2006		3	-	Trichinellosis
2007 July	Eastern France	3	-	H5N1 avian influenza ("bird flu")
2008	Northwest and southeast of France	579	-	Measles
2008 June	Cote d'Or, Bourgogne, Camblain l'Abbe	2	-	Measles
2008 July	Faye d'Anjou			Measles
2010 August	Nationwide	5000	3	Measles
At 2011	Nationwide	15		Variant Creutzfeldt-Jakob disease

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Other Infections

- Toxoplasmosis
- Leptospirosis
- Tularemia
- Brucellosis
- Chikungunya virus infection
- Dengue fever
- Cutaneous leishmaniasis
- Tick-borne encephalitis
- Mediterranean spotted fever
- Rickettsia helvetica infections
- Lyme disease
- West Nile virus
- Measles
- Toscana virus
- Marseilles tick bite fever
- Hemorrhagic fever with renal syndrome
- Alveolar echinococcosis
- Malaria
- Tick-borne encephalitis
- Hepatitis E
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
17	15	18

Germany

Population and Geographical Location

In 2011, Germany had a population of 81,471,834 and an area of 357,022 km². It is located in the northwest of Central Europe.

This country is bordered by Denmark and the Baltic Sea to the north, by the North Sea to the northwest, by Poland and the Czech Republic to the east, Austria and Switzerland to the south and by France, Luxembourg, Belgium and the Netherlands to the west.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Influenza	Recommended	In Influenza outbreak season from November to April. Pregnant women in the second and third semesters.	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine. Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Tick-borne encephalitis	Recommended	Persons who are going to have long stays in rural and forested areas in spring and summer	Before traveling	2 other doses through one year	-	Fever, myalgia, malaise, tenderness, allergic reactions

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2001 May	North-Rhine Westphalia	73 cases	-	Q fever
2003	Mecklenburg-Vorpommernin	-	-	Vibrio vulnificus
2003 May	Schwalmtal	-	-	H7N7 avian influenza ("bird flu")
2004 - 2006	Nationwide	546	-	Tick-borne encephalitis
2005	Saxony, Hessen and Thuringia	3	-	Vibrio vulnificus
2006 January	Duisburg and Wesel	1452	-	Measles
2006	Mecklenburg-Vorpommernin.	3	-	Vibrio vulnificus
2006 March	Saxony	100	-	H5N1 avian influenza ("bird flu")

Current Outbreaks and Mortality (Continued)

Date	Area	Cases	Mortality	Diseases
2006 March	Mecklenburg-Vorpommern	17	-	Trichinellosis
2007	Nationwide	-	-	Hantavirus infections
2007 October	Southern Bavaria	-	-	Measles
2007 January-June	Passau and Rottal-Inn	-	-	Measles
2007 December	Altglobsow, Bensdorf	-	-	H5N1 avian influenza ("bird flu")
2007	Baden-Wuerttemberg and Bavaria	326	-	Tick-borne encephalitis
2008 October	Saxony	-	-	H5N1 avian influenza ("bird flu")
2010 January	Ulm and Neu-Ulm	65	5	Legionnaires' disease
2010 January	Berlin	62	-	Measles
2010	Baden-Wuerttemberg	700	-	Hantavirus infections
2010 March and May	Essen	71	-	Measles

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country-specific data is not available.

Climate and Health Status

Germany has a temperate and marine climate. It has cool, cloudy, wet winters and summers.

The population using improved drinking - water sources (%): urban 100%, rural 100%, total 100% (2008).

The average life expectancy for males and females: 77.82 and 82.44 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, digestive diseases and injuries.

In 2011, the infant mortality rate was 3.54 deaths per 1000 live births.

The population of people infected with HIV is 67,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.1% (2009).

General government expenditure on health as a % of total government expenditure in 2007 was 18.2%.

In 2007, there was one physician per 286 people and there were 83 (2008) hospital beds per 10,000 individuals.

Germany has developed a comprehensive system of social insurance which includes: disease, incidents, aging, disability and unemployment.

Other Infections

- Lyme disease
- Tularemia
- Brucellosis
- Alveolar echinococcosis
- Leptospirosis
- Cowpox infections
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
112	112	112

The Netherlands

Population and Geographical Location

In 2011, the Netherlands had a population of 16,847,007 and an area of 41,543 km². It is located in West Europe and in the south coast of the North Sea. This country is bordered by Germany and Belgium to the south.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Influenza	Recommended	In Influenza outbreak season from November to April. Pregnant women in the second and third semesters.	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine. Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1996 and 1997	Nationwide	-	-	Pertussis (whooping cough)
1999 February-March	Nationwide	188	21	Legionnaires' disease
1999	Nationwide	3200	-	Measles
2001 July	Klundert and Zevenbergen	5	-	Measles
2003 March	Nationwide	89	1	Meningococcal disease
2004 September	Nationwide	387	-	H7N7 avian influenza (H7N7) ("bird flu")
2006 Summer	Nationwide	-	-	Rubella
2006 July	Oosterschelde	3	-	Vibrio alginolyticus
2006 July	Amsterdam	27	1	Vibrio alginolyticus

Current Outbreaks and Mortality (Continued)

Date	Area	Cases	Mortality	Diseases
2007 May	Noord-Brabant	-	-	Legionnaires' disease
2007	Nationwide	89	-	Q fever
2008 June	The Hague	36	-	Psittacosis
2008 July	Nationwide	-	-	Mumps
2008 October	Nationwide	16	-	Measles
2008	Gelderland	1000	-	Q fever
2009 April-May	Noord-Brabant	2357	6	Measles
2009 December	Nationwide	172	-	Q fever
2010	Nationwide	421	5	Q fever

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

Climate and Health Status

The Netherlands has a temperate climate. It has marine and cool summers and mild winters.

The population using improved drinking - water sources (%): urban 100%, rural 100%, total 100% (2008).

The average life expectancy for males and females: 77.06 and 82.44 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, neuropsychiatric conditions and respiratory infections.

In 2011, the infant mortality rate was 4.59 deaths per 1000 live births.

The population of people infected with HIV is 22,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.2% (2009).

General government expenditure on health as a % of total government expenditure in 2007 was 16.2%. In 2007, there was one physician per 260 people and there were 48 (2008) hospital beds per 10,000 individuals.

Other Infections

- Trichinellosis
- Hemorrhagic fever with renal syndrome
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
112	112	112

Switzerland

Population and Geographical Location

In 2011, Sweden had a population of 7,639,961 and an area of 41,277 km². It is located in Central Europe, east of France, north of Italy.

Climate and Health Status

Switzerland has a temperate climate but varies with altitude. It has cold, cloudy and rainy/snowy winters and cool to warm, cloudy, humid summers with occasional showers.

The population using improved drinking - water sources (%): urban 100%, rural 100%, total 100% (2008).

The average life expectancy for males and females: 78.24 and 84.05 years (2011).

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Influenza	Recommended	In Influenza outbreak season from November to April. Pregnant women in the second and third semesters.	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine. Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Tick-borne encephalitis	Recommended	Persons who are going to have long stays in rural and forested areas in spring and summer	Before traveling	2 other doses through one year	-	Fever, myalgia, malaise, tenderness, allergic reactions
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia

Current Outbreaks and Mortality Table

Date	Area	Cases	Mortality	Diseases
2006	Nationwide	4415	-	Measles
2007 October	Basel	-	-	Measles
2009 February	Canton of Vaud	-	-	Measles
2011	Nationwide	-	-	Bovine spongiform encephalopathy

Influenza A/H1N1 (Swine Origin) pandemic occurred during 2009-2010. Country specific data is not available.

The main causes of mortality are: cardiovascular disease, malignant neoplasm, neuropsychiatric conditions and injuries.

In 2011, the infant mortality rate was 4.08 deaths per 1000 live births.

The population of people infected with HIV is 18,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.4% (2009).

General government expenditure on health as a % of total government expenditure in 2007 was 19.8%.

In 2006, there was one physician per 265 people and there were 60 (2008) hospital beds per 10,000 individuals.

Other Infections

- Alveolar echinococcosis
- Lyme disease
- HIV (human immunodeficiency virus)

Emergency Numbers

Police	Medical	Fire
117	144	118

Section V: Oceania

Chapter 19

Australia and New Zealand

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Australia

Population and Geographical Location

In 2011, Australia had a population of 21,766,711 and an area of 7,741,220 km². It also includes continental plates and the Pacific island of Tasmania. It is a vast country surrounded by three oceans: the Pacific, Indian and Antarctic. This country can be geographically divided into four distinct areas:

1. The central plains, which have an abundant supply of groundwater
2. The western plateau, which is largely a desert
3. The eastern coastal plain, which is, in fact, the eastern mountains of the Great Dividing Range
4. The eastern highlands, which are known as the Great Dividing Range

Climate and Health Status

Northern Australia receives the highest amount of rainfall. Its humid and tropical climate has resulted in the growth and development of dense forests. Seventy five percent of the population is living in southeast Australia, where its climate is semi-tropical and rainy in all

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seasons and generally arid to semi-arid. It is temperate in the south and east and tropical in the north.

The population using improved drinking - water sources (%): urban 100%, rural 100%, total 100% (2008).

The average life expectancy for males and females: 79.4 and 84.35 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, injuries and respiratory infections.

In 2011, the infant mortality rate was 4.61 deaths per 1000 live births.

The population of people infected with HIV is 20,000 but the prevalence rate of 15- to 49-year-old adults infected with HIV is 0.1% (2009).

General government expenditure on health as a % of total government expenditure in 2007 was 17.6%.

In 2006, there was one physician per 1,097 people and there were 39 (2008) hospital beds per 10,000 individuals.

The Australian federal and state government has played an important role in the development of social services. The government supports patients, the elderly, widows, orphans, disabled and unemployed people. Financial aid is paid to parents for childbirth, for children's expenses and their education until the age of 24. The cost of Medicare is provided by 1.5 % of additional income taxes. This project includes medical assistance and free care in and out of hospitals.

An important note regarding healthcare in Australia is the Royal Air Medical Services, which has the duty of providing health services to those who are living in remote areas. These services cover about two-thirds of Australia with the aid of physicians, surgeons, radio equipment (for communication with distant stations), hospitals, air ambulances and nursing staffs.

Other Infections

- Leptospirosis
- Murine typhus (Western Australia)
- Queensland tick typhus
- Scrub typhus
- Barmah Forest virus
- Flinder's Island spotted fever
- Brucellosis
- Giardiasis (Tasmania)
- Psittacosis
- Ross River fever
- Japanese encephalitis
- Dengue fever
- Jellyfish stings
- HIV (human immunodeficiency virus)

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria-tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Hepatitis A	Recommended	Age \geq 1 year	2 to 4 weeks prior to travel	After 6-12 months	Children younger than 1 year old Hypersensitivity to vaccine components Pregnancy (precaution)	Soreness, headache, loss of appetite, fatigue, allergic reaction
Hepatitis B	Recommended	Health care providers. Close contact with the natives. People who receive blood products regularly.	4 to 6 weeks prior to travel (3 doses at 0,1, and 6 months)	-	Moderately to severely ill patients History of immediate hypersensitivity to yeast	Soreness, headache, loss of appetite, fatigue, allergic reaction, fever, alopecia
Influenza	Recommended	In Influenza outbreak season from November to April. Pregnant women in the second and third semesters.	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine. Negative history of previous infection with measles or negative blood test results for immunity to measles.	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Poliomyelitis	Recommended	Unvaccinated children. Adults who have not received the booster dose.	4 to 6 weeks prior to travel	-	Allergy to streptomycin, neomycin polymixin B Pregnancy Immunodeficiency	Myalgia, allergic reaction

Immunization Planning (Continued)

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Rabies	Recommended	People at high risk of exposure	4 to 6 weeks before traveling	-	History of severe hypersensitivity reaction	Tenderness, redness, swelling, itching, headache, nausea, abdominal pain, myalgia, dizziness, hives, arthralgia, fever, Guillain-Barré syndrome
Typhoid	Recommended	Age \geq 2 years	4 to 6 weeks prior to travel	-	The oral vaccine is approved for travelers at least six years old Injectable vaccine is approved for children over 2 years old Severe local or systemic reaction to a prior dose There is no data about the safety of typhoid vaccine in pregnancy	Fever, headache, redness or swelling at the site of the injection, abdominal discomfort, nausea, vomiting, rash
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
1994	Queensland	3	2	Hendra virus
1995 and 1996	Tal, Perth	-	-	Ross river virus infections
2000 – 2003	Busselton-Margaret	-	-	Sporotrichosis
2000 – 2005	Darwin	4	3	Vibrio vulnificus infections
2000 April	Melbourne aquarium	76	2	Legionnaires' disease
2001 January	Northern Territory	-	-	Ross River virus infections
2001 August	St. Leonards	-	-	Mycobacterium

Date	Area	Cases	Mortality	Diseases
2002 April	Tasmania	-	-	Ross River virus infections
2002 October	Noah Beach, Daintree	-	-	Malaria
2002 March-May	New South Wales		-	Psittacosis
2002 April	Melbourne	5	-	Legionnaires' disease
2003 November	Torres Strait, Thursday Island, Murray Island and Yam Island	214	-	Dengue fever
2003 February	Cairns, Parramatta Park, Manunda, Cairns North, Yorkeys Knob, and Trinity Beach	280	-	Dengue fever
2003 December	Western Australia	-	-	Ross River virus infections
2004 March	Torres Strait	-	-	Dengue fever
2004 March	Nationwide	2000	-	Ross River virus infections
2004 December	South Australia	-	-	Q fever
2004 April	Northern Territory	6	-	Kunjin virus infections
2004 June to July	Town of Point Lonsdale			Mycobacterium ulcerans infections
2006 December	-	30	5	Melioidosis
2006 February	Cranbrook			Dengue fever
2006 January	Victoria, South Australia and New South Wales	-	-	Ross River virus infections
2007 September	Queensland	-	-	Ross River virus infections
2007 March	South Australia	-	-	Cryptosporidiosis
2007 March	Townsville and Thuringowa	17	-	Dengue fever
2007 September	Adelaide	-	-	Mumps
2007 June	Town of Waikerie, northeast of Adelaide, in South Australia	5	-	Q fever
2007 February	North of Western Australia			Kunjin virus
2008 January	-	11	1	Melioidosis
2008 March	Port Douglas and Mossman	14		Dengue fever
2008 July	Queensland, Cannonvale, near Prosperine	2	1	Hendra virus infections
2009	Northern Territory	200		Ross River virus infections
2009 October	Northern Territory	72	10	Melioidosis
2009 January	Northern Territory	2		Melioidosis
2009	New South Wales, Queensland, and Victoria	7000		Pertussis
2009 November	Southern Australia	3500	3	Pertussis
2009	Northern Territory	-	2	Murray Valley encephalitis
2009 March	Darwin	-	1	Murray Valley encephalitis
2009 May	Port Hedulund		1	Murray Valley encephalitis
2009 February	New South Wales	250		Cryptosporidiosis

Current Outbreaks and Mortality (Continued)

Date	Area	Cases	Mortality	Diseases
2009 February	Victoria	12		Measles
2009 May	Northern suburbs of Cairns	900		Dengue fever
2009 May	Townsville	-	-	Dengue fever
2009 November	Northern Queensland	13		Dengue fever
2009 August	Queensland veterinarian	-	1	Hendra virus infection
2009 March	North of Western Australia	-	-	Kunjin virus
2010 May	Riverina Murray region in New South Wales	-	-	Ross River virus infections
2010 March and May	Tully and Townsville	7	-	Dengue fever
2010	Kimberley	-	-	Kunjin virus, Ross River virus, and Barmah Forest virus

Emergency Numbers

Police	Medical	Fire
000	000	000

New Zealand

Population and Geographical Location

In 2011, New Zealand had a population of 4,290,347 and an area of 267,710 km².

New Zealand is a country in Oceania, which is located in the southwest Pacific waters and in the southeast of Australia. The country is established by two main islands of North and South, a small island called Stewart Island and several others.

Climate and Health Status

New Zealand has a temperate climate with sharp regional contrasts.

The population using improved drinking - water sources (%): urban 100%, rural 100%, total 100% (2008).

The average life expectancy for males and females: 78.61 and 82.67 years, respectively (2011).

The main causes of mortality are: cardiovascular disease, malignant neoplasm, respiratory infections and injuries.

In 2011, the infant mortality rate was 4.78 deaths per 1000 live births.

The population of people infected with HIV is 2,500 but the prevalence rate of 15- to 49-year-old adults infected with HIV was 0.1% (2009).

General government expenditure on health as a % of total government expenditure in 2007 was 18.0%.

In 2002, there was one physician per 519 people and there were 62 (2002) hospital beds per 10,000 individuals.

Medical services included medical care, free hospitals, free pensions, unemployment, family, disability and illness insurance. Since then, many of these welfare benefits have decreased in terms of value and ease of access. For some medical services, paying the costs is also mandatory.

Complaints made by church officials and other institutions and popular protests forced the government to remove the costs related to hospitals.

Immunization Planning

Vaccine	Necessity	Who	When	Booster dose	Contraindications	Side effects
Diphtheria- tetanus	Recommended	All travelers who have not received vaccine in the last 10 years	4 to 6 weeks before traveling	Every 10 years	History of neurologic or severe hypersensitivity reaction in previous doses	Fever, Redness, Swelling or tenderness, nausea, vomiting, diarrhea, abdominal pain, fatigue, headache, chills, myalgia, arthralgia, rash, allergic reaction
Influenza	Recommended	In Influenza outbreak season from November to April. Pregnant women in the second and third semesters.	2 to 4 weeks before traveling	-	History of immediate hypersensitivity reaction to eggs History of GBS within 6 weeks after a previous influenza vaccine dose	Soreness, redness or swelling at site of injection, fever, malaise, myalgia, GBS, hoarseness, cough, headache, pruritus, fatigue, seizures, allergic reactions
MMR	Recommended	Travelers who have not received at least 2 doses of the vaccine. Negative history of previous infection with measles or negative blood test results for immunity to measles	4 to 6 weeks before traveling	After 15 years	History of immediate hypersensitivity reaction to gelatin or neomycin Pregnancy Known severe immunodeficiency	Fever, rash, lymphadenopathy, seizure, arthralgia, thrombocytopenia, allergic reaction, deafness
Varicella	Recommended	Persons over one year old and negative history of chickenpox infection who have received one dose of vaccine with negative blood test results of chickenpox immunity	Before traveling	-	Pregnancy Known severe immunodeficiency History of immediate hypersensitivity reaction to gelatin or neomycin	Soreness or swelling at the site of injection was given, fever, rash, seizure, pneumonia, cytopenia

Current Outbreaks and Mortality

Date	Area	Cases	Mortality	Diseases
2006	Waikato region of North Island	-	-	Murine typhus
2010	Hokianga	-	-	Measles

Other Infections

- Leptospirosis
- Legionnaires' disease
- *HIV (human immunodeficiency virus)*

Emergency Numbers

Police	Medical	Fire
111	111	111

Appendix A: Emergency Contact Numbers

Africa

Country	Police	Medical	Fire
Algeria	17	14	14
Angola	113	112	115
Cameroon	112		
Central African R.	21611300		
Chad	17		18
Egypt	122	123	180
Ethiopia	991		
Ghana	191	193	192
Kenya	122	999	
Ivory Coast	180		170
Libya	193	193	193
Mali	17	15	18
Mauritius	999	114	115
Morocco	19	15	15
Nigeria	199	199	199
Republic of Congo	242 06 665-4804		
Sierra Leone	019	999	
South Africa	10111	10177	10111
Sudan	999		
Tanzania	999	999	999
Togo	101		
Tunisia	197	190	198
Uganda	999		
Zambia	999	991	993
Zimbabwe	995	994	993

Asia

Country	Police	Medical	Fire
Afghanistan	119	102	119
Armenia		103	
Bahrain	999		
Azerbaijan	02	03	01
China	110	120	119
Cambodia	117	119	118
Cyprus	199	199	199
India	100	102	101
Indonesia	110	118	113
Iran	110	115	125
Japan	110	119	
Jordan	911		
Kazakhstan	112		
Kuwait	112		
Kyrgyzstan	103	103	103
Lebanon	112	140	175
Malaysia	999	999	999
North Korea	119		
Pakistan	15	115	16
Palestine	100	101	102
Philippines	911	911	911
Qatar	999		
Saudi Arabia	999	997	998
Singapore	999	995	995
South Korea	112	119	
Sri Lanka	118	110	111
Syria	112	110	113
Taiwan	110	119	
Tajikistan	112		
Thailand	191	1669	199
Turkmenistan	03	03	03
Turkey	155	112	110
United Arab Emirates	999	998	997
Uzbekistan	03	03	03
Yemen	194	191	191
Vietnam	113	115	114

Europe

Country	Police	Medical	Fire
Albania	129	127	128
Austria	133	144	122
Belarus	102	103	101
Belgium	112	112	112
Bosnia and Herzegovina	107	104	105
Croatia	192	112	112
Czech Republic	112	112	112
Denmark	112	112	112
Finland	112	112	112
France	17	15	18
Germany	112	112	112
Greece	100	166	199
Hungary	107	104	105
Italy	113	118	115
Montenegro	122	124	123
Netherlands	112	112	112
Norway	112	113	110
Poland	997	999	998
Portugal	112	112	112
Romania	112	112	112
Russia	112	112	112
Serbia	192	194	193
Slovak Republic	158	155	150
Spain	112	112	112
Sweden	112	112	112
Switzerland	117	144	118
Ukraine	112	112	112
United Kingdom	999	999	999

Australia and Oceania

Country	Police	Medical	Fire
Australia	000	000	000
New Zealand	111	111	111

America

Country	Police	Medical	Fire
Argentina	101	107	100
Brazil	190	192	193
Canada	911	911	911
Chile	133	131	132
Colombia	112	112	112
Costa Rica	911	911	911
Cuba	106		105
Dominican Republic	911	911	911
Guatemala	110/120	125/128	122/123
Jamaica	119	110	110
Mexico	066	065	068
Nicaragua	118	128	115
Panama	911	911	911
Paraguay	911	911	911
Peru	115	141	116
Puerto Rico	911	911	911
Trinidad and Tobago	999	990	990
United States of America	911	911	911
Uruguay	911	911	911
Venezuela	171	171	171

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