Robert J. Habicht
Mangla S. Gulati
Editors

Hospital Medicine

Perspectives, Practices and Professional Development

Springer

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Preface

Hospital Medicine: Perspectives, Practices and Professional Development examines the field of hospital medicine and provides practical guidance on how to become successful in this evolving specialty. Given the rapid growth of hospital medicine and its impact on the current and future landscape of medicine, this book offers perspectives on the healthcare system as a whole and how hospitalist and hospital medicine teams can effectively engage this system to provide cost-effective and high-quality care.

This book applies to all levels of hospital medicine expertise and proposes approaches to help guide the trainee, early career hospitalist and those more experienced along paths toward career success. It is structured in such a way that, regardless of one's level of experience, each reader will walk away with insights into his/her own style, knowledge, and practice that will lead to greater success. Starting with a primer on the healthcare system, this book will walk the reader through the process of self-assessment, career planning and strategies to avoid pitfalls, approaches to patient and interdisciplinary care, and administrative tasks critical to the hospitalist. As the book unfolds, chapters geared specifically towards more experienced hospitalists including how to "manage from the middle" and understanding financial and regulatory drivers in hospital medicine are discussed. In addition, there are chapters geared specifically towards considering or actively engaged in an academic setting including how to be an effective teacher and begin the process of delving into research.

We believe this book can serve as a blueprint for success in the field of hospital medicine. We hope you enjoy reading it and gain perspectives, practical approaches, and professional development skills that will contribute to you becoming a highly successful hospitalist.

Baltimore, MD, USA

Robert J. Habicht
Mangla S. Gulati

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Chapter 1
Primer on the Healthcare System

Norman F. Retener and Andrew Delapenha

Dr. Lane is a new graduate and has entered into the field of hospital medicine. During her limited time as a hospitalist, it has become clear to Dr. Lane that she has a gap in her working knowledge of the healthcare system as a whole. During residency, she focused most of her attention on patient care and less on understanding the system in which she works. She is also starting to realize the impact the current healthcare system has not only on her patients but on herself as a healthcare provider.

Understanding the basics of healthcare and the healthcare systems in which you work is an important aspect of being a successful hospitalist. This chapter will aim to provide a brief overview of the U.S. healthcare system and introduce you to the different aspects of the Affordable Care Act.

The Healthcare System Before the Affordable Care Act

On a basic level, the healthcare in the U.S. prior to the affordable care act was not really a system, but was a mix of public and private insurance as well as "safety nets" for the uninsured that has developed overtime [1]. Private companies in the U.S. covered the vast majority of healthcare costs, accounting for 58.3 % of the population, compared to 26.4 % who had public insurance. The remaining 15.3 % were

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uninsured [2]. The uninsured were left to navigate the community health centers, voluntary and public hospitals, and local emergency departments to obtain care.

Private Insurance is comprised of employer-sponsored insurance (ESI) and private non-group insurance. ESI dominated insurance coverage at 53.4 %, compared to 4.9 % that purchased insurance on their own. Under ESI, employers and employees share the cost of the healthcare premiums, with employers paying the majority of the cost. Employers are able to deduct what they pay as an ordinary and necessary business expense and employees are allowed by the federal government to pay for their share of their premium from their pretax salary. This amounts to a tax subsidy for those with ESI. ESI has many advantages. First, any employee of an employer with ESI is eligible for coverage regardless of preexisting conditions. Second, the risks and the costs are spread out among all the individuals in the company, not just the sick. Third, ESI plans are cheaper and more comprehensive than individual plans because of the bargaining power that employers have over insurance companies. The disadvantage to ESI plans is tied to employment. If one loses his/her job, one loses coverage. Also, small employers and the self-employed do not enjoy the benefits of ESI and often went without insurance all together.

Private non-group insurance consists of individuals paying out-of-pocket to private insurers. With these insurance plans, premiums tended to be higher and the risk of insuring the non-group individual was based on the health of the individual, with sicker individuals absorbing higher costs.

Public Insurance

Public insurance is dominated by Medicare and Medicaid, with some smaller programs also providing coverage such as the State Children's Health Insurance Program (S-CHIP) and the Veterans Administration. Medicare, a federal program, insures all individuals aged 65 and over as well as qualifying disabled individuals. Medicare is composed of multiple parts. Part A (hospital insurance) covers inpatient healthcare as well as skilled nursing facilities, hospice and some services like lab tests and surgery. Part B (medical insurance) covers outpatient care, healthcare provider services, home healthcare, durable medical equipment, and some preventive services. Part D is Medicare's prescription drug plan. Medicare, while providing relatively good coverage with remarkable efficiency, has many gaps. Medicare does not cover skilled nursing facilities for all conditions or for an unlimited period of time, does not cover all of preventive care and does not cover dental, hearing or vision care. Because of this, most under Medicare also obtain supplemental insurance [3].

Medicaid is a state run program that covers low-income and disabled individuals. By law, these programs are required to cover low-income pregnant women, children, elderly, and the disabled. In general, Medicaid plans tend to be comprehensive but with lower physician reimbursement rates.

The "Safety Net"

The safety net encompasses the patchwork of "public and voluntary hospitals, community health centers, public health clinics, free clinics, and services donated by private physicians" to provide care of the uninsured [3]. The financing of this safety net varied, from patients paying all costs out of pocket to state and federal appointed funds. This net allowed individuals who did not have insurance to still get medical care when needed; however, uninsured individuals who navigated this net often ended up paying a large amount of their income into providing their own healthcare, often cannot afford preventive medicine screens and relied heavily on the emergency departments of hospitals for urgent care.

The Patient Protection and Affordable Care Act

On March 23, 2010 the Patient Protection and Affordable Care Act (ACA) was officially signed into law. After roughly 50 years of minimal change in healthcare legislation, the largest bill to affect the U.S. healthcare system narrowly passed through the house and senate and became law.

Major Provisions of the ACA

The Individual Mandate

The individual mandate is largely considered to be one of the essential lynchpins of the ACA. Without the mandate, the ACA would be unable to function as intended and would be unable to sustainably expand health insurance access to the millions of Americans that are expected to receive it. Starting on January 1, 2014, the law mandates that American citizens must obtain and maintain "minimum essential coverage" throughout the year. In order for a health insurance plan to count as "minimum essential coverage," it must follow a number of set rules and regulations stipulated by the ACA. There are a large variety of currently available healthcare plans that qualify as meeting minimum essential coverage but the rules can vary depending on the source of insurance. In general, however, for health insurance to be considered minimum essential coverage it must typically include:

1. **Affordability**: Plans cover at least 60 % of out-of-pocket costs for required services
2. **Guaranteed Availability of Coverage**: Individuals cannot be denied coverage for any reason (other than ability to pay)
3. **Guaranteed Renewability of Coverage**: Individuals must be able to renew the policy regardless of health status

4. **Fair Health Insurance Premiums**: Price limits are in place to cap the amount an individual can be charged based on age, tobacco use, family size, and geography
5. **Ten Essential Benefits**: Plans must provide coverage for at least 10 essential health benefits
6. **Dollar Limits**: Insurers cannot place dollar limits on essential benefits
7. **Coverage must provide minimum value**: A plan must cover at least 60 % of the total allowed costs (what the plan pays vs. what the customer pays due to deductibles, copays, and coinsurance)

When an individual is without an insurance plan that counts as a minimum essential coverage and that individual does not qualify for any exemptions, he/she are required to pay a fee (known as the tax penalty or Shared Responsibility Fee) for every month for which there is no coverage. These fees are paid on the individual's federal tax returns for that year and, starting in 2017, the tax penalty will be adjusted according to the rate of inflation or 2.5 % of income (whichever is greater for that individual). While the law requires that most Americans obtain insurance or face a penalty, it does include a number of exemptions which provide a 3 month reprieve from the fee. Some of these exemptions include:

1. **Unaffordable coverage option:** for those who would have to pay >8 % of their household income for health insurance after subsidies
2. **No filing requirement**: For those with incomes that do not exceed the tax filing threshold (in 2014, $10,150—Single person, $20,300—Married filing jointly)
3. **Hardship**: For those that have been certified by the health insurance market place to have suffered a hardship that makes them unable to obtain coverage
4. **Short coverage gap exemption**: For those that go without health insurance coverage for less than 3 consecutive months
5. **Religious conscience:** People who qualify for religious exemptions
6. **Not lawfully present**: People who are undocumented immigrants; Not a U.S. citizen, U.S. national, or is an alien lawfully present in the U.S.
7. **Indian tribes**: Members of federally recognized Indian Tribes
8. **Incarceration**: People who are currently incarcerated

Healthcare Exchanges

Prior to the establishment of the Affordable Care Act, purchasing health insurance for many Americans was a complicated process. Plans tended to have widely differing benefits, so comparing plans directly based on service and price according to each individual's needs often proved challenging. With the decision to include an individual mandate in the ACA, legislators understood that Americans would need

a new marketplace that would allow them to efficiently and effectively purchase health insurance. To meet this need, the law required that every state must maintain a health insurance marketplace, also known as a health exchange, which allows customers to easily compare a number of insurance plans based on rates and benefits. Each exchange not only facilitates the ability of consumers to purchase insurance, but they are also tasked with ensuring that insurers comply with the newly developed consumer protection laws, compete in cost-efficient ways, expand access to coverage to more Americans as well as promote insurance transparency and accountability. There are several different ways that a health insurance market place can be organized in each state [4]:

- ***State-Based Marketplaces***: States are responsible for conducting all marketplace functions. Consumers apply for coverage through these states-specific marketplace website that is established and maintained by that state.
- ***Federally Supported State-Based Marketplace***: States are responsible for performing all marketplace functions, but the state will rely on the federally operated marketplace website. Consumers in these states apply for coverage through healthcare.gov.
- ***State-Partnership Marketplace***: States are responsible for in-person consumer assistance but the Department of Health and Human Services is responsible for performing all other marketplace functions. Consumers in that state apply for coverage through healthcare.gov.
- ***Federally Facilitated Marketplace***: The Department of Health and Human Services is directly responsible for all marketplace functions. Consumers in these states apply for coverage through healthcare.gov. Aside from the ease of being able to purchase insurance through the exchanges, one of the other major draws to encourage use of the health exchanges are government subsidies to purchase insurance. These tax credits are available to those who earn less than 400 % of the federal poverty level and do not have access to employer-based insurance. It is important to note that these tax credits for purchasing insurance are only available to individuals that purchase their plans through the exchanges.

Medicaid Expansion

The ACA has considerable provisions to try to expand Medicaid so that it covers more of the public. The law extends Medicaid coverage to all non-Medicare eligible individuals under age 65 (children, pregnant women, parents and adults without dependent children) with incomes up to 133 % of the Federal Poverty Level [5]. All eligible adults are guaranteed to receive a benefit package that meets the minimum essential requirement of all health plans available through the health exchanges. The decision to expand Medicaid in this manner, however, is at the discretion of each state.

Changes to the Private Insurance Market

The ACA instituted a number of rules to regulate health insurance companies. These changes were mainly put in place to protect consumers and ensure that all Americans received the greatest number of benefits possible for reasonable prices. The most important of these rule changes was the prohibition of individual and family health plans from denying coverage based on preexisting conditions. Along these same lines, insurers became prohibited from placing lifetime and annual limits on the dollar value of coverage. These rule changes ensure that all Americans, regardless of their health status, are able to purchase insurance and keep that insurance even if extensive medical care is required.

The other significant change to the private insurance market is the establishment of a set of preventative services that all marketplace plans must provide to consumers without any additional cost. Many of these services for adults and children include immunizations and screenings that are considered essential to effective primary care. Some of the services that are now assured through the passage of the ACA include blood pressure, cholesterol, depression and autism screening as well as colorectal cancer screening for adults over 50, HIV screening for ages 15–65, breast cancer mammography screening every year for woman over 40, contraceptive coverage, and obesity screening and counseling.

Changes to Employer-Sponsored Insurance

The ACA does very little to change the landscape for employer-provided health insurance. The biggest change that was implemented comes for those who are employed by companies with 50 or more employees and do not have health insurance. These companies will be required to provide health insurance to their employees if they do not have minimal essential coverage already. Companies that do not offer coverage will be assessed a financial fee per employee if they do not offer coverage. Employees are allowed to opt-out of coverage so long as they purchase health insurance in the healthcare exchanges.

Small companies (those with less than 50 employees) are not required to provide health insurance to their employees but are encouraged to do so. The insurance marketplace has a specially designated part, the Small Business Health Options Program, which is specifically designed for small companies to purchase health plans for their employees.

Healthcare Cost and Quality Performance

There are a variety of new programs and policies through the ACA to improve healthcare quality and attempt to contain rising costs. Most of these programs have been implemented through Medicare. One of the more notable programs includes a national Medicare pilot program that will develop and evaluate bundled payments

for acute, inpatient hospital services, physician services, outpatient hospital services, and post-acute care services. Bundled payments are reimbursements paid to healthcare providers that are based on the expected costs for clinically defined episodes of care [6]. If providers are able to supply care for less than the payment, they are able to profit from the savings. If the care given costs more than the payment the provider is then responsible for absorbing the additional costs.

One of the other notable Medicare-based programs is a hospital value-based purchasing program to help pay hospitals based on performance on quality measures. Along with this program, the ACA calls for the development of a national quality improvement strategy that will improve the delivery of healthcare services and patient outcomes in addition to creating a process that will determine quality measures to be used in reporting and payment determination.

Impact on Hospitalists

From the time the ACA was signed into law, there has been speculation over how the legislation would impact physicians, hospitals and other healthcare providers. We have yet to see the full impact that the law will have on providers. As the final provisions of the ACA reach the implementation phase, there are several thoughts as to how physicians, and more specifically hospitalists, will be affected.

One of the prevailing beliefs is that hospitalists will be relied upon more to deliver care. With implementation of pilot programs to facilitate payment changes, hospitalists may have an opportunity to play a bigger role. For example, with the ACA placing penalties on hospitals that readmit patients within 30 days, hospitals are incentivized to optimize patient care on the initial admission. Hospitalists can play a crucial role in making sure that hospitals are able to achieve lower readmission goals as they are more available to care for inpatients and have more expertise caring for hospitalized patients on a day to day basis. Similarly, with bundled payment value-based purchasing pilot programs being developed with the hopes of expanding them nationally, hospitals will likely turn to hospitalists to ensure that cost effective high quality care is provided.

As hospitalists continue to become a more prominent force in the U.S. healthcare system, there are great opportunities to engage those systems at a meaningful level. The first step in doing so, is understanding the systems in which you work and through which your patients receive their care.

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Chapter 2
Knowing Yourself and Your Style

Neda Frayha and Robert J. Habicht

Dr. Lane is a hospitalist at a busy tertiary care center in a large city. She is in her fifth year of practice. She has always received praise for her ability to work quickly and effectively and her attention to detail. Her partners appreciate that she gets her work done and provides clean, thoughtful signouts. Some nurses and house staff members view her as no-nonsense, and she likes things to be done "her way." She acknowledges the importance of her hospital's mission but tends to avoid committee work at her hospital because she gets frustrated that she cannot just do the work herself, and she feels she could use her time more productively.

Whether working on a busy inpatient service or in a corporate boardroom, knowing yourself and your working style can reap a wide variety of personal and professional benefits, including increased efficiency and productivity and more fruitful collaborations with your colleagues. Introspection into the types of obstacles that impede your personal success the most, whether systems inefficiencies or communication difficulties, can allow you to identify strategies to prevent such barriers or to cope with them more productively. Knowing yourself and your style can pave the way for you to develop leadership skills to advance your career, align personal goals with senior leadership goals, become a more successful educator, and even deal more effectively with burnout.

In this chapter, we propose four domains of self-assessment to help you better understand yourself and your working style in order to excel in hospitalist medicine. These four domains are:

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1. Personality
2. Communication
3. Emotional intelligence and leadership
4. Time management

As you walk through each of these four domains, we encourage you to consider not just your own style but the styles of close colleagues and collaborators, and to envision how common workplace scenarios may go more smoothly if every health care worker truly knew themselves and their working styles.

First Domain of Self-assessment: Personality

The director of Dr. Lane's hospitalist group asks Dr. Lane to join a committee tasked with reducing the incidence of central line-associated bloodstream infections (CLABSI) in their hospital. Dr. Lane agrees; she is not particularly excited about committee work, but she knows she needs to increase her visibility in the workplace in order to advance her career. As Dr. Lane attends this committee's monthly meetings, she becomes frustrated by how much time is wasted. She has very concrete, reasonable suggestions to decrease the hospital's cases of CLABSI, and yet every month other committee members seem more interested in socializing with each other than in actually completing work. At one meeting, she snaps at a fellow committee member for questioning one of her ideas. If the group will not move forward with one of her suggestions, then Dr. Lane wonders why she serves on this committee in the first place.

According to the American Psychological Association, personality is defined as "individual differences in characteristic patterns of thinking, feeling and behaving" [1]. It has also been defined as "the set of emotional qualities and ways of behaving that make a person different from other people" [2]. Our personalities make us unique, and they tend to remain remarkably consistent over time, resisting change even as our life circumstances shift and evolve. At our core, personality determines how we respond to the world around us; it influences how we behave, make decisions, and interact with other human beings.

Through the years, a variety of personality inventories have been validated and used in a wide range of settings, from clinical practice to the business world. Two personality inventories lend themselves well to the hospitalist. The first is the five-factor model [3, 4] that espouses five major categories of personality traits, each with its own dichotomy of personality types:

I. Openness—inventive/curious versus consistent/cautious
II. Conscientiousness—efficient/organized versus easygoing/careless
III. Extraversion—outgoing/energetic versus solitary/reserved
IV. Agreeableness—friendly/compassionate versus analytical/detached
V. Neuroticism, or emotional stability—sensitive/nervous versus secure/confident

Any thorough discussion of personality assessment must include the five-factor model, given its prevalence of use in non-medical sectors and its predominance in the sociological literature on personality. The inventory itself has multiple sections and is far more detailed than the summary above, but it is worth considering these five factors and reflecting on which ends of these spectra you may fall.

The second personality inventory with wide commercial use is the color code personality profile [5]. In this assessment model, a person completes a 45-item self-rating instrument and is categorized into one of four personality types: red, blue, white, or yellow. Each of these colors is associated with specific characteristics, motivations, strengths, and weaknesses. Moreover, different dynamics emerge when a person of one color type collaborates with a colleague of a different color type. A free version of the color code personality test is found at https://www.colorcode.com/choose_personality_test/. In order to best understand the motives that drive your individual behavior in different scenarios, we encourage you to take the basic test and determine your specific color type.

According to the Color Code personality profile, each color stands for one particularly strong behavioral motive. Each color-based personality has its own strengths, weaknesses, needs, wants, and behavior patterns, and each personality type can achieve great professional success if a person takes the time to understand the motives underlying his or her actions. Reds, for example, seek power in their personal and professional lives. They crave productivity, are often thought of as workaholics, and like to have things their way. They want to look good in front of others, to appear knowledgeable and be respected. They are confident and visionary, and they can be perceived as arrogant, impatient and insensitive. They enjoy leadership opportunities and appreciate working with facts, rather than opinions or emotions.

Blues, on the other hand, are motivated by intimacy. They seek to connect with others and to be understood and appreciated. They are often selfless, looking for opportunities to make others feel valued. They need to love and to be loved. Their work is characterized by integrity and driven by a strong moral code; according to Hartman, a Blue "would rather lose than cheat" [5]. Blues are disciplined, goal-oriented, dependable, and loyal. They thrive on the quality of their work product, often leading to the perception that they are perfectionists; they can also be worry-prone, insecure, and moody.

Whites are driven by peace. They avoid confrontation and seek kindness in interactions with others. They enjoy a quiet independence and value their alone time. They may not share their opinions or thoughts proactively, and they are likely to shut down when working with someone hostile or confrontational. Unlike Reds, they do not wish to control others; rather, they refuse to be controlled themselves. They are often even-tempered and diplomatic. They are open to suggestions to improve or resolve situations, making eager students and open-minded executives. They can be viewed as indecisive, unexpressive, and sometimes stubborn.

Yellows are thought of as the life of the party. They are playful, fun, charismatic, and sociable. They love praise and attention, and they thrive on popularity. Friendships are very important to them. They seek adventure and opportunity for

Table 2.1 Summary of four color code personality types

Color	Red	Blue	White	Yellow
Motive	Power	Intimacy	Peace	Fun
Needs	To look good (academically)	To be good (morally)	To feel good (inside)	To look good (socially)
	To be right	To be understood	To be understood	To be popular
	To be respected	To be appreciated	To be respected	To be praised
Wants	To hide insecurities (tightly)	To reveal insecurities	To reveal insecurities	To hide insecurities (loosely)
	To please self	To please others	To please others	To be noticed
	Leadership	Autonomy	Protection	Freedom
	Challenging adventure	Security	Contentment	Playful adventure

play whenever possible. They can be easily bored and viewed as disorganized, impulsive, or irresponsible, depending on the professional setting. A summary of the four personalities is in the below Table 2.1 [5].

The color code books and web-based materials delve into greater detail regarding each color-based personality type, including strengths, limitations, ideal career types, and how best to develop positive connections with each color. If we return to the example of Dr. Lane and her work on the CLABSI committee, her predominant Color Code personality type is most likely Red. Her confidence, desire to be productive and do things her way, and even her impatience with the more relationship-driven members of her committee all speak to the Red elements of her personality. Reds can work well with other Reds, and this same-color combination can lead to great productivity; however, it can also lead to great competition and impatience. In general, Reds tend to work most harmoniously with White personality types. They share certain traits, such as the need for respect and a desire for power, and their differences even complement one another's. For example, while a Red likes to lead, a White is happy to follow. Reds tend to be impatient, while Whites are more patient, and this can bode well for productive working partnerships. Reds and Yellows can work together effectively as well, often engaging in dynamic and animated conversations with a certain degree of playfulness to the back-and-forth of their dialogue. Both Reds and Yellows prefer to hide their insecurities and watch out for themselves primarily, and both are comfortable with the idea of change. Reds and Blues, on the other hand, tend to have a harder time striking harmonious working relationships, and their color combination is a relatively incompatible one. Both Reds and Blues are strong and used to enjoying great professional success, but their needs and wants are nearly polar opposite to one another's. Reds and Blues have difficulty understanding one another's behavior, given Reds' tendencies toward self-promotion, adventure, productivity, and logic,

in contrast to Blues' proclivity for pleasing others, stability, perfectionism, and emotion. This may help explain Dr. Lane's frustration with some of her fellow committee members.

Regardless of the specific color combination and the dynamics to follow, understanding your own personality type and considering the personality types of your colleagues will lead to greater ease and productivity in the hospital work place. You can play up your strengths more successfully and then cope more effectively with frustration as you reflect on what is actually bothering you and why. You can prioritize partnerships with personality types that mesh melodiously with your own; conversely, if you must collaborate closely with a personality type that tends to clash with yours, being mindful of each other's underlying motivations will hopefully reduce the amount of friction you encounter on a daily basis. Acknowledging what a different personality type may need, such as being respected as a Red versus appreciated as a Blue or praised as a Yellow, will allow you to provide that colleague with the type of feedback they are able to hear best, and even to meet in the middle in situations that could be otherwise contentious. Being in touch with your personality type's needs and wants, as well as what drives your behavior, will allow you to lead a more examined professional life in hospitalist medicine.

Second Domain of Self-assessment: Communication

At a CLABSI committee meeting, Dr. Lane suggests incorporating a central line check box in the electronic medical record so that nurses must document each day whether or not a patient has an indwelling central line. One of her fellow committee members, Dr. Stevens, responds that they will need to form a joint task force with nursing leadership and obtain nursing input before exploring and then implementing such a change. Dr. Lane becomes frustrated and angry that yet another reasonable suggestion of hers is met with resistance. She is on this committee to decrease the rate of CLABSI at his hospital, not to hear about the need for additional task forces.

The ability to communicate effectively with one's colleagues is crucial to success in the workplace, especially in a patient care setting when a seemingly simple miscommunication can lead to medical errors and even adverse outcomes. In any professional setting, a single message has the power to either inspire or deflate its audience, depending on its delivery; similarly, professional partnerships can flourish amidst excellent communication or crumble in its absence.

Communication, which is defined formally as "the act or process of using words, sounds, signs, or behaviors to express information or your ideas, thoughts, or feelings to someone else" [6]. It is tied heavily to both personality type and leadership skills. Numerous studies in the business literature highlight the importance of communication to both individual and organizational success [7–10], including one

which found that the quality of a manager's communication skills was the greatest predictor of employee job satisfaction [11].

As with personality, there are several communication style inventories that have been used in the business world since the 1970s. Paul Mok's landmark communication style survey [12] was updated and modified by Jackie L. Hartman and Jim McCambridge in 2010 [13], and this more modern survey has been used in communication courses and executive development programs across the country. It provides a framework in which most people have one dominant style, everyone uses a combination of different styles, and the majority of people tend to respond most readily to communication that matches their dominant style. One area in which our communication styles differ from our personalities is that the former are far more malleable and adaptable; in fact, Hartman and McCambridge discuss an important notion of communication style-flexing, which we will explain further in a moment.

We encourage you to complete this communication style survey (see Table 2.2) and determine which one of four main communication styles is your dominant style: Analytical, Driver, Amiable, or Expressive [13]. Moreover, each of these four styles can be modified by four different dimensions: assertiveness (controlling a situation, working quickly, talking more than listening), responsiveness (expressing one's emotions, listening more than talking), priority (focusing on people versus tasks, or vice versa), and pace (communicating quickly versus slowly).

People with an Analytical communication style are content to remain in the background and are often industrious and serious. They are comfortable working with facts and figures, and they are most likely to ask "why" questions. Their goal is to work within the system. Drivers, on the other hand, are more assertive, decisive, and demanding. They are more control specialists, and they ask "what" questions. Their goal is to obtain results. Amiables are different from both Analyticals and Drivers in that they are very responsive and supportive. They are respectful, personable, and potentially emotional. Their goal is to cooperate. Expressives are similar to Amiables in that both styles' priority is people, but Expressives are both assertive and responsive and communicate at a faster pace. They can be enthusiastic and stimulating, but also excitable and undisciplined. Their goal is to create alliances. A summary of the four main communication styles is found in Table 2.3.

A brief scan of Table 2.3 will show that some communication styles have certain traits in common with one another, such as pace, priority, or level of assertiveness. People with different communication styles will tend to connect effectively if their styles share some similar characteristics. As a general rule, people with two communication styles that have no basic traits in common will have difficulty engaging in effective dialogue. In the case of Dr. Lane, we can imagine that she is a Driver, working at a quick pace, prioritizing task completion, and focusing on the results of her efforts. Dr. Stevens may be more of an Expressive, focusing on creating alliances with nursing and prioritizing the people in the process, rather than the tasks at hand. Both Dr. Lane and Dr. Stevens prefer a fast pace of communication, but otherwise their styles of communication are likely to be quite different.

This brings us to Hartman and McCambridge's notion of style-flexing [13]. Once a person understands his or her own communication style as described above,

Table 2.2 Communication style survey by Hartman and McCambridge [13] (Put a number 1 (one) by each statement you feel describes you)

	1	I am an aggressive person
	2	I change my mind often. I zigzag through life rather than plodding down one monotonous path
	3	I don't worry about the past or the future. I live for today
	4	I am not very spontaneous or emotional. I believe the head should guide the heart
	5	I have been called impractical
	6	I don't like people who live for today without regard to the future. I look ahead and prepare for the rainy days
	7	My workspace looks very orderly and fairly stark
	8	I rather like to be different: to dress differently from other people, to go to strange and exciting places, to do the unusual
	9	I do not mind having people do sloppy work over as many times as necessary until they do it right
	10	I sometimes go to extremes. My "highs" are very high, and my "lows" are very low
	11	I am very sociable
	12	I believe that the best technique for achieving results is through thorough, objective analysis
	13	I like being in charge
	14	I think that I would succeed as an accountant
	15	I am sensitive to the feelings of others
	16	I believe that the best technique for achieving results is through freedom and individual motivation
	17	I value relationships. Getting along well with others is very important to me
	18	My workspace looks somewhat messy but it does have a "homey" charm
	19	It is important to me to feel that I "belong." I want very much to be accepted by the people with whom I work, my friends, and my family
	20	I like to compete
	21	I believe the majority is right. I usually go along with the group. Whatever they think and do usually suits me
	22	I am a dynamic, high-drive person
	23	When people begin to get upset, I try to calm them down. I don't like for people to be upset with each other
	24	I have a vivid imagination. I can see all sorts of possibilities that others don't see
	25	I love to be complimented and recognized
	26	I am neat. I'm bothered by messy people
	27	I play hard to win and I hate losing
	28	I enjoy meeting new people
	29	I am very practical. I believe in and value "what works"

(continued)

Table 2.2 (continued)

	30	My workspace is a showcase for awards, plaques, posters
	31	Sometimes I overlook details in implementing my big ideas and sometimes my ideas seem ahead of their time
	32	Sometimes people say I am a perfectionist. I guess I am because I believe that anything that is worth doing is worth doing well
	33	I like to learn by experience, by actually doing it rather than reading books about it
	34	I think that I could be a social worker
	35	I like people like Vince Lombardi, Clint Eastwood, and Oprah Winfrey
	36	I think through and try to do everything on a logical basis
	37	I have a "take charge" attitude
	38	I feel that I have great destiny. I know I am going to amount to something
	39	I am very goal or task oriented. I like to have specific goals or tasks to accomplish
	40	My favorite colors include black, white, and silver
	41	Sometimes people say I'm visionary, that I am a dreamer, and maybe I am
	42	I believe in myself, particularly my physical strength and ability
	43	I believe in doing things because of principles – hard work, efficiency, morality, justice. I believe the world would be a much better place if everyone would live by the great principles of religion and justice
	44	My favorite color is red
	45	I am very orderly. I believe "there is a place for everything, and everything belongs in its place"
	46	I am very excitable
	47	My workspace is precisely organized and displays diplomas and other signs of achievement
	48	I believe that the best technique for achieving results is through deadlines and managed schedules
	49	My life is well organized. There is an appropriate time and place for everything, which is important
	50	I like to deal with people and be dealt with in a very direct manner. I "tell it like it is," and I expect others to do the same
	51	I love to go to parties
	52	I am very creative
	53	I have many friends
	54	I admire people like judges and religious leaders who put principle above everything else
	55	Sometimes I am extravagant
	56	I believe in rules—in the home, at work, and in society. I am for law and order
	57	I like to read about great explorers and inventors. People who accomplished great feats against seemingly insurmountable odds

(continued)

Table 2.2 (continued)

	58	I like people like Tina Fey, Ellen DeGeneres, and Jay Leno—friendly, nice people who laugh a lot
	59	I think that I would enjoy being a creative designer
	60	My favorite colors are earth tone
	61	My favorite colors are vibrant/mixed combinations
	62	I am punctual. I get my work done on time. I am never late for appointments. I expect others to do the same
	63	In my work and social life, I try to be very cooperative. I like to get along
	64	I hate weakness in myself and others
	65	I believe that the best technique for achieving results is through nonthreatening encouragement
	66	Things to me are right or wrong, "black or white," never gray
	67	I never spend time thinking about the past. I think very little about the present. My thoughts are on the future—the great things that are going to happen to me!
Scoring: count one point for each of the items associated with the different communication styles as listed below and enter the total for each style in the space provided		
Total	Style	
	Driver	Items: 1, 3, 7, 13, 20, 22, 27, 29, 33, 35, 37, 39, 42, 44, 48, 50, 64
	Amiable	Items: 11, 15, 17, 19, 21, 23, 25, 28, 30, 34, 43, 51, 53, 58, 60, 63, 65
	Analytical	Items: 4, 6, 9, 12, 14, 26, 32, 36, 40, 43, 45, 47, 49, 54, 56, 62, 66
	Expressive	Items: 2, 5, 8, 10, 16, 18, 24, 31, 38, 41, 46, 52, 55, 57, 59, 61, 67

Table 2.3 Summary of four main communication styles (Hartman and McCambridge [13])

Communication style	Analytical	Driver	Amiable	Expressive
Assertiveness	Low	High	Low	High
Responsiveness	Low	Low	High	High
Priority	Tasks	Tasks	People	People
Pace	Slow	Fast	Slow	Fast
Type of specialist	Systems	Control	Support	Social
Question most likely to ask	"Why?"	"What?"	"Who?"	"How?"
Goal	Work within the system	Obtain results	Cooperate	Create alliances
When stressed	Retreats to comfort zone	Dictates	Conforms	Attacks

he or she can begin to understand the communication styles of those around them and then modify his or her dominant communication style to better interact with others. If you realize that the person you are working with has a different communication style from your own, you can "flex" your style to collaborate more effectively. For example, if you are partnering with an Analytical, you can make an

effort to ask more "why" questions and provide more objective facts and figures in your discussions with this person. If you are working closely with a Driver, such as Dr. Lane, you may ask more "what" questions and show a greater focus on net results, such as a decrease in CLABSI rates or improvements in length of stay. If you are in a team with an Expressive, you may show more of a focus on team-building and alliances, maintaining an emphasis on people.

Each of us employs different styles of communication throughout the day, depending on the circumstance or conversation at hand; it is our dominant communication style that is most worthy of analysis as we get to know ourselves and our working styles. Much like personality types, each communication style has its benefits and drawbacks. Much like your personality type, knowing your particular communication style and reflecting on the styles of your colleagues can help you communicate more effectively and be more productive in the hospital, whether in patient care, teaching endeavors, or on committees.

Third Domain of Self-assessment: Emotional Intelligence and Leadership

Emotional intelligence (EI), the ability to understand and recognize emotional states and use that understanding to manage yourself and other individuals or teams [14], is central to the concept of knowing yourself and your working style. It speaks to the notion that being in touch with both your own and others' emotions can allow you to manage people more effectively, elicit your colleagues' best performance, and run a successful business unit, which can include anything from an inpatient team to a hospitalist practice to a health system. It is a crucial addition to standard intelligence and technical skills in defining great leaders. According to the Harvard Business Review, "emotional intelligence, it turns out, isn't so soft. If emotional obliviousness jeopardizes your ability to perform, fend off aggressors, or be compassionate in a crisis, no amount of attention to the bottom line will protect your career. It's a basic tool that, deployed with finesse, is key to professional success" [15]. EI training has already taken off in the business sector and is being incorporated ever more frequently into health care management and even medical school curricula [16, 17].

In Goleman's approach, there are five main foundational pillars of EI [18]:

1. Self-awareness, or the ability to know yourself, your emotions, moods, and drives and to recognize their impact on others
2. Self-regulation or controlling your disruptive impulses and thinking before acting
3. Social skill, or managing relationships, building networks, and finding common ground with others
4. Empathy or understanding other people's emotional makeup and treating others according to their emotional reactions

5. Motivation, or pursuing goals with energy and persistence, working for reasons that go beyond money or status

Together, these five skills can be cultivated to lead to greater EI and more effective leadership. And Goleman maintains that EI can be learned and developed, as opposed to standard intelligence or even personality that are largely innate or static.

A variety of emotional quotient (EQ) or EI inventories have been developed, the best known and most highly validated of which is the Bar-On Emotional Quotient Inventory (EQ-i). The EQ-i is not accessible to the general public; it is available for purchase by educators and organization leaders with at least a Master's degree in psychology, counseling, or social work. It is a 125-question survey, and the respondent's answers are analyzed using an algorithm developed by Reuven Bar-On, a clinical psychologist who has been researching EI since 1980 and who developed the EQ-i [19]. It consists of five composite scales, which in the latest version of the EQ-i are: (1) self-perception, (2) self-expression, (3) interpersonal, (4) decision making, and (5) stress management [20]. Each of these has associated subscales, such as stress tolerance and flexibility under the composite scale of stress management, or problem-solving and impulse control under the larger umbrella of decision making.

While a hospitalist may perform well enough without delving into his or her own emotional intelligence, insight into one's EI quotient is a vital component of being a successful leader or even just thriving in the workplace. If Dr. Lane were to take the EQ-i, we can imagine that she would score highly on some composite scales, such as Decision Making, and perhaps not as highly on others, such as Interpersonal, which includes subscales such as Empathy and Social Responsibility.

As we explore the processes by which you can know yourself and your working style, an important step in this journey is to increase your self-awareness of your own emotions as well as your empathy toward your collaborators and their emotions. This heightened EI will allow you to think before you act, diffuse moments of interpersonal tension, treat others in a way to which they will respond best, and find common ground with colleagues, thereby allowing you to manage your professional relationships to mutually beneficial ends.

Fourth Domain of Self-assessment: Time Management

The director of Dr. Lane's hospitalist group is writing a paper on their group's successful efforts to reduce rates of catheter-associated urinary tract infections (CAUTIs). She assigns sections of the paper to different hospitalists, and she asks Dr. Lane to write the Methods section. Rather than become overwhelmed by her various tasks in addition to patient care, Dr. Lane carves out 5 min of quiet time to create a prioritized to-do list of her endeavors. She sets goals for projects such as writing the Methods section, completing tasks for the CLABSI committee, and

putting together a 45-minute talk on syncope that she has agreed to give the hospitalist group in two weeks' time. She breaks these tasks down into individual steps and then prioritizes the steps, assigning deadlines for each. She builds in some additional time in her schedule to deal with unanticipated interruptions.

Our last domain of self-assessment is a bit different from the others; how we manage our time involves a very personal and individualized set of decisions, whereas our personalities, communication styles, and emotional intelligence have everything to do with our interactions with the world around us. Some of today's business literature examines the alignment of individual with organizational time management goals as a major opportunity to improve an organization's success [21], but first a hospitalist must juggle patient care responsibilities with teaching tasks, committee work, and other tasks and projects for the hospital and health system at large. Focusing on personal time management strategies is a helpful starting point for improving efficiency, streamlining one's work flow, and preventing a sense of "initiative overload" [22] that contributes so frequently to burnout. Moreover, an abundance of literature in the realms of psychology and sociology illustrates that perceived control of time is a meaningful predictor of job satisfaction [23].

In contrast to our other domains of self-assessment, there is a relative paucity of validated instruments with which to identify your own time management style, strengths, and weaknesses. Mind Tools®, an online resource that provides numerous self-assessment surveys and tool kits for career skills such as problem solving, decision making, stress management, and communication skills, offers a helpful and brief time management survey. You may access and take the quiz for free at http://mindtools.com/pages/article/newHTE_88.htm; access to tool kits and other quizzes requires a monthly membership to the site and its services [24]. The Mind Tools® team breaks down effective time management into five main categories, which are also seen consistently in the literature on time management training: (1) goal setting, (2) scheduling, (3) prioritization, (4) managing interruptions, and (5) limiting procrastination. Dr. Lane demonstrates a number of admirable time management skills, as she sets aside time to craft an organized and prioritized to-do list with deadlines associated to different tasks. Building in time to account for interruptions or unanticipated distractions is also an effective strategy; any person who works in patient care knows well that emergencies arise, causing a 30-min task to take closer to 60 or 90 min to complete.

Another business strategy outlined by Peter Bregman is the "management by six-box to-do list," which involves identifying five overarching priorities that should take 95 % of your time [21]. These can include anything from improving your patient care metrics to increasing your scholarly productivity to gaining visibility with executive leadership to developing your teaching skills. Then, take a piece of paper and divide it into six boxes: one for each of the above five priorities, and then a sixth for the items that consume the other 5 % of your time. The next step is to fill those boxes with all of your to-do list items. This will allow you to quickly determine which tasks are not critical or high-yield to any of your top goals. If the "other 5 %" box becomes filled with crucial items, it may be worth

reconsidering your top five priorities. Whether you set more concrete goals for project completion, develop a highly prioritized task list, avoid the temptation to procrastinate, or create the six-box to-do list described above, fine-tuning your time management skills will allow you a sense of control over your daily work life and enhance your satisfaction in your job.

Putting It All Together

Perhaps not surprisingly, your working style consists of a wide variety of personal traits, such as (but not limited to) the four domains discussed in this chapter: personality type, communication style, emotional intelligence, and time management skills. Equally predictably, these dimensions of your working style are intertwined with one another and affect each other in numerous and sometimes imperceptible ways. Your underlying personality determines much of how you share your thoughts with others and perceive information from them in turn; your emotional intelligence involves insight into your own personality; your communication style ties directly into using emotional intelligence to manage others effectively toward common goals; and improving all of the above domains can lead to time saved through prevention of misunderstandings and unnecessary conflict. Some elements of your working style, such as communication style or time management, can be modified readily after basic self-assessment and a modicum of insight and effort. Other elements, such as emotional intelligence, may be developed and honed with a bit more time and energy. The element of personality may be more resistant to change, but deeper knowledge of your specific personality type and how it works with others' personality types can lead to greater interpersonal successes and collaborations, which ultimately lie at the heart of success in the workplace.

In order to increase your knowledge of yourself and your style in a meaningful way, we recommend identifying one goal for self-awareness and improvement within each of the four domains and incorporating progress toward those goals in your daily work. To return to the example of Dr. Lane, a Red Driver with excellent time management skills and perhaps average emotional intelligence, her goals may include:

1. Understand my own personality type (Red) and how I can make the most out of working with other personality types, namely the Blues on my CLABSI committee.
2. Understand my own communication style (Driver) and how to identify other communication styles (Analytical, Amiable, Expressive). This way, I can style-flex as needed to communicate more effectively with others, e.g., slow down my pace of communication and focus on cooperation, support, and "who" questions when working with Amiables.
3. Assess my emotional intelligence and try to improve my empathy in particular.

4. I am already an effective time manager. Perhaps I can minimize procrastination by checking email and social media accounts only at designated times, such as on the hour for 5 min before resuming my work.

For Dr. Lane and for all of us, the pivotal first step toward improving our performance and promoting success in the workplace is attention to who we are and how we work. Without early introspection and honest self-assessment across a variety of professional domains, we cannot identify our strengths and weaknesses, nor can we improve how we work with others. There are no value judgments attached to the facets of oneself or one's working style; no personality type or communication style is better than any other, and even the most emotionally intelligent leader or organized, efficient worker has room for growth. The effort spent on the self-assessment tools described in this chapter and creating realistic, tangible goals in the domains of personality type, communication style, emotional intelligence, and time management can yield tremendous downstream benefits. In a world of bountiful continuing medical education opportunities, learning about yourself and your style may prove to be the most important knowledge you can gain, improving your productivity, relationships with colleagues, and satisfaction with your career.

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Chapter 3
Planning for a Career in Hospital Medicine

Kathryn Novello Silva and Abel Joy

Dr. Lane is a second year internal medicine resident. After much thought and investigation into the field of hospital medicine she has decided to pursue a career as a hospitalist. Now, she must navigate the process of preparing herself to be a highly competitive and sought after candidate, and decide on a strategy to identify and apply to potential positions.

Making the final decision on which direction to take your career is an exciting and anxiety provoking one. For those who choose to enter into the field of hospital medicine, you will find it a rich, rewarding, and impactful one. This chapter aims to provide some considerations for those interested in the field of hospital medicine as well as practical guidance on preparing for, and pursuing, a hospitalist position.

Hospitalist Career Options and Pathways

When planning for your hospitalist career, begin by first considering your long-term career goals, as well as practical factors related to geography and work–life balance. Weighing each of these appropriately is a critical first step to help you narrow in on what aspects of hospital medicine you wish to focus most. There are a wide variety of career pathways for the hospitalist. The setting may be community or academic;

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strictly clinical or with administrative responsibilities. Other options include those of clinician-educators, including roles in medical schools and graduate medical education (GME). As hospitalists develop professionally, they may choose to pursue more advanced roles in administrative leadership, including leadership roles in a hospitalist practice/group, medical center, medical school, government office, or related to quality improvement and patient safety. Considerations in deciding on a pathway include time commitment, work schedule, compensation, clinical and other responsibilities, and geography. These are important factors to keep in mind during the job search process as they will dictate where you search for jobs, what kind of jobs you choose to apply for, and your final decision-making process.

For those seeking additional formal training, you may consider pursuing a fellowship in hospital medicine. Available hospitalist fellowships inal medicine, family practice, and pediatrics are described on the Society for Hospital Medicine (SHM) website at www.hospitalmedicine.org. Completing a hospital medicine fellowship is currently not a requirement to become a hospitalist but may be beneficial if it aligns with your long-term career goals.

Building an Effective Curriculum Vitae

Your time in residency is a time to build your skills and experience as you move towards your ultimate career goals. While many physicians enter residency knowing their career plan, others decide later with 66.4 % making their initial decision to become a hospitalist in their third year of residency training [1]. Those residents who make a decision to pursue hospital medicine early in residency have the opportunity to pursue experiences and projects during residency that will further career opportunities. For example, while many residents become quite experienced with inpatient care during their training, skills in consultative medicine, neurology, perioperative medicine, geriatrics, and palliative care are an important part of many community hospitalist practices and may be underemphasized [2–4]. This should be a consideration when choosing electives. If your residency has a "hospitalist track," it may incorporate the above skills. When it comes time to write your Curriculum Vitae (CV), be sure to highlight your hospitalist track or specially chosen electives, and the skills obtained. As well, hospitalists are often called upon to participate in quality improvement, electronic medical record implementation, and guideline development [2, 5]. Search for opportunities to participate in these activities during your residency to gain experience, and highlight these skills on your CV.

For those who have decided on a hospitalist career later in your residency, there is still opportunity for your CV to reflect your individual skills. Take advantage of your PGY-3 year to take an elective geared toward hospital medicine, such as palliative care or consultative medicine. Any participation in hospital committees is valuable, can bolster your experiences and CV, and can serve as an opportunity to network with hospitalists in your institution. Seeking out a hospitalist mentor who can guide you on electives, provide project involvement opportunities, offer

feedback on your CV, and advocate for you when looking for a job is an important step. Joining a society focused on the field of hospital medicine, like the Society of Hospital Medicine (SHM), while in residency provides opportunities for networking, mentorship, and professional development. In addition, most professional societies offer discounted memberships to residents.

The CV is your opportunity to showcase your experience and individual skill set. The CV should be clearly organized in a chronological fashion with labeled sub-headings. Proofread your CV multiple times for typos and other errors. Have multiple people look over your CV for both content and typographical errors. Sections should include research projects, publications, and institutional committees. If at all unsure of the format, refer to your local institutional guidelines. Ask a colleague or mentor if you may view their CV as a sample. Each entry should include a headline statement, followed by a brief description. The brief description should highlight your contributions to the activity, especially if you have had a leadership or founding role.

Include any research projects to which you have contributed, whether or not they have yet to result in publication. The brief entry should emphasize your contributions to the project as well as your ability to concisely explain the project. Include any resultant publications under a separate publications section with proper bibliographical format. Underline, bold, or italicize your name in the publication entry.

The section for institutional committees and leadership should illustrate your roles on these committees as well as the function of the committee itself. Ask your mentors, program directors, or GME leadership for available institutional committees to join during your residency. Not only will this give you valuable experience for your future career, but you can have an impact on your current institution and residency. Especially valuable are committees for which you have a founding or leadership role. For any awards that are not well known, include a brief description of the award and reason given.

Your cover letter should be concise. Tailor the letter to the specific position you are seeking at that institution, including specific reasons why you are interested in that position. Give examples of skills and training that you will bring to the position.

All residency programs are now requiring education in patient safety and quality improvement. Any projects done for this reason may be included. In the description, add whether it was an interdisciplinary and/or institutionally sponsored project. Interdisciplinary team work skills are necessary and valuable for a hospitalist career. Highlight any additional training, skills used, or certificates earned. Be sure to be entirely truthful with the information on your CV.

For those who have completed a general medicine or hospital medicine fellowship, look to your fellowship mentors to help guide you and advocate for you during the job search process. Highlight those research and institutional leadership skills you have gained from your fellowship in your CV. Many of those leaving fellowships are interested in academic positions, so be sure to review those considerations for academic programs discussed below.

Finding a Hospitalist Position

Finding a position can seem overwhelming at first. For some, this is the first time you have applied to an employed position other than residency. Others may have more experience in the "working world". When to begin? Many residents begin researching positions in July and August of their PGY-3 year. This is helpful in terms of gaining broad knowledge of the area you are searching as well as potential employers. However, many hospitalist groups will not yet know of openings in the coming academic year. Some programs lose hospitalists to fellowships, and they will not know this until December of the year prior. Others lose physicians to geographic moves or career changes which may occur at any time. A suggested timeline for your position search is included in the accompanying graphic (Fig. 3.1).

There are a number of options available for finding an open position. Networking is an excellent way to begin and can often be the most fruitful way to find a desirable position. Have a discussion with your program director, hospitalist mentor, and any hospitalists with whom you have networked both inside and outside of your institution. They may know other hospitalists in the area of your job search, and may even know of open positions. Attending local hospitalist fairs is an invaluable opportunity to meet hospitalist employers from the surrounding community, chiefly if you are interested in staying in that area. Also recommended are SHM's career center, the classified ads from the Journal of Hospital Medicine, The Hospitalist, Today's Hospitalist, ACP Hospitalist, and general medicine journals. For those looking outside the local area, blindly contacting hospitalist groups to inquire about a position may be helpful. Physician recruiters may be useful if you are having great difficulty and truly feel you are unable to find a position, but be cautious. While contingency recruiters may be "free" to the physician, they charge

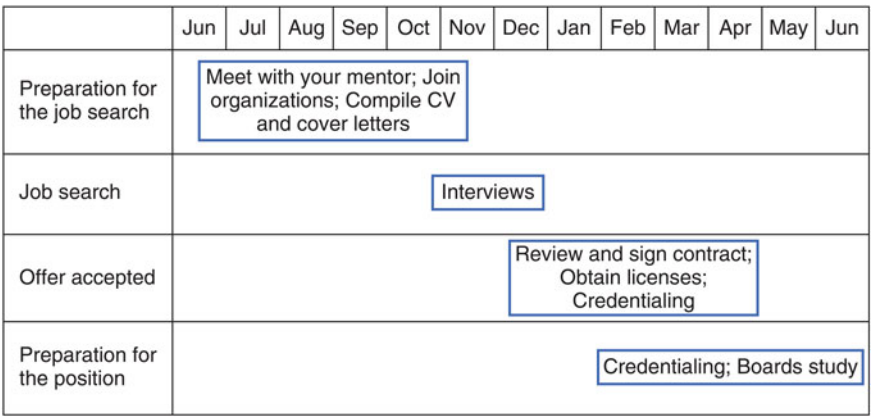

Fig. 3.1 Suggested timeline for obtaining a hospitalist position

an (often large) fee to the employer, which can come from the physician's compensation package, or perhaps make the physician a less desirable candidate.

As you search for positions and speak with hospitalists, you will discover different types of positions with differing responsibilities. There are many factors that go into the process of deciding where to apply. Are you looking for a community position, or an academic position? Many positions are a combination of both, and some positions at academic institutions may be non-teaching in nature. Some positions require co-management, intensive care unit coverage, or surgical patient care. Residents often start with a certain geographical location in mind, based on family or other commitments and desires. Consider researching and applying broadly, and narrow your search based on your prioritization of factors.

The Interview Process

Many interviews start with an initial phone interview with the hospitalist director, followed by a day-long in-person interview. The day-long interview often involves meeting with the hospitalist director as well as other members of the hospitalist group. Be sure to research the hospital and the hospitalist group prior to the interview, and come prepared with appropriate questions. Some programs may have a structured interview process, while others may be more informal [6]. Bring multiple copies of your CV, and know your CV well.

During the interview, you may be asked about weaknesses as well as difficult situations you have navigated. You may also be asked about times when you have demonstrated leadership. Interviewers will be looking for your ability to deal with stress, adapt to new situations, and multitask [6]. They may also ask about your ultimate career goals, and how you see your career path developing. Interviewers are looking to see if your personality is a good fit for the group. They will also likely ask you about the items on your CV, including your quality improvement projects and patient safety activities. Hospitalist directors are interested in candidates who will show a commitment to their program, work well, and communicate well with others. On the other hand, in most states, interview questions related to marital status, family planning, age, ethnicity, religion, or sexual preferences are considered potentially illegal, as they may reveal a job applicant's membership in a class protected by federal and state civil laws [7]. When asked such a question, you may refuse to answer or choose to answer. Another option is to answer the underlying concern. For example, if asked "Are you planning to have a family?" you could answer regarding your long-term career goals.

While the interviewer(s) are looking to see if you are a good fit for them, you should also use the interview day as time to figure out if the program is a good fit for you. Find out who you are working for: a hospitalist group or the hospital? How will you be evaluated and against what metrics will you be compared? What are the opportunities for advancement and what are the timelines for advancement? Is a there a formal mentoring system in place? What type of schedule will you be

working, and what is the workload? Is there any home call? How are vacations and holidays worked into the schedule? In a 2011 survey of academic hospitalists, factors associated with low job satisfaction included, among others, low satisfaction with the amount of personal/family time, amount of control over work schedule, and level of support from their division chief [8]. Be sure to ask the current hospitalists if they feel the expected workload is manageable. If compensation is volume based, is the volume achievable? Evaluate the program for provider turnover. While some physicians may plan to pursue hospitalist year prior to fellowship, frequent turnover for other reasons may be a sign of a program in trouble.

When asking about patient load and expected tasks, be sure to ask about co-management. Different hospitals have varying systems of co-management. For example, all stroke patients or all hip fracture patients may be admitted to the hospitalist service. What will your responsibilities be here? How do the hospitalists view the fairness of the co-management system? In a well-functioning system, hospitalists and specialists agree upon the rules together, and expectations are clearly defined [9]. Under such a system, the reasons for co-management are evidence-based and patient-centered. For example, patients with hip fractures are more likely to benefit from co-management than patients undergoing elective joint replacement [9]. How well do the hospitalists view the collaborative nature of co-management at the institution? Are you interested in co-managing these patient populations?

Compensation and benefits are an important part of the discussion with your potential hospitalist employer. This includes salary, which may be related to productivity, and may be increased with incentives. Also included may be health insurance, disability insurance, bonuses, and raises. Again, when meeting your potential hospitalist colleagues, discuss the feasibility of these incentives. Is malpractice tail coverage provided? Will you be working with physician assistants or nurse practitioners? How are the different types of providers integrated into the system?

In a published survey in 2011, hospitalists were most satisfied with the quality of care provided and relationships with staff and colleagues. Satisfaction with organizational climate, quality of care provided, organizational fairness, personal time, relationships with leadership, compensation, and relationships with patients were all factors leading to job satisfaction [10]. Other surveys have shown that overall job satisfaction and burnout were similar across hospitalist practice models, including both academic and community [11]. Keeping these factors in mind during your job search process and asking questions regarding these factors will hopefully contribute to improved overall job satisfaction once you have secured a position. Prioritize which factors are most important to you and continue to think about them as you interview at different institutions.

At the end of the interview, be sure to wrap-up with the hospitalist director and determine the next step. After the interview, thank the hospitalist interviewer and communicate your interest in the position.

Academic Considerations

For those looking at academic hospitalist positions, additional considerations come into play. For example, understanding the promotion process is important. Some institutions have a clinician-educator track, while other institutions continue to use a research and publication model of advancement. In a survey of promoted hospitalists, respondents considered peer-reviewed publication to be the most important activity in achieving promotion [12]. In a different study, factors associated with publication of a peer-reviewed first author paper included male gender, >20 % "protected time", and a better-than-average understanding of the criteria for promotion. A lack of mentorship was negatively associated with producing any first author publications [13]. A 2011 survey pointed to a need for mentoring and career development programs for academic hospitalists [14]. Therefore, asking questions about the mentorship and faculty development programs will help you gain an understanding of your ability to be successfully promoted. How much, if any, "protected time" is available, and how is it determined?

As well, many academic centers have non-teaching services, which have their own separate challenges [15]. How are the non-teaching hospitalists viewed by their colleagues? How are the patients assigned, and what is the type of patient population you will be caring for? Many centers combine teaching and non-teaching duties, while others have separate positions. When you are interviewing, know which type of position you are interviewing for. It is important to recognize that academic medical centers have varying relationships with their associated medical schools. Hospitals may be the financial backers of the hospitalist program, and are thus possibly focused on clinical care, productivity, and patient safety/quality improvement. Medical schools may place a greater emphasis on research and education, among other interests [16]. How well will you be able to realize both goals, and how well do the hospital and medical school work together? Inquiring about these issues in a tactful and careful manner may be prudent.

Offers, Acceptance, and Decision-Making

Now is the time to reconsider the factors you prioritized prior and during your job position search. Is the position offered consistent with your long-term career goals? Often, compensation is inversely related to work–life balance. Consider not only what is important to you now, but what may be important 5 or 10 years from now if you stay in the same position. If advancement to an administrative or academic role is a priority, is this position a step in the right direction? Were the hospitalists that you met happy and collegial, and did you feel that your personality was a good fit? These colleagues will be your coworkers, and you will have to work closely with them every day.

Before accepting a position, ask any remaining questions and clarify any confusion regarding details. Consider having a day where you "shadow" a current hospitalist. Following the offer, there is a time of negotiation. This will include salary, but may also include relocation expenses, bonuses, and malpractice insurance. The contract may include bonuses related to productivity and/or quality improvement. Are they fair and achievable? How will they be adjusted for payment structure changes that occur in the future? Many contracts also include restrictive covenants that include working for a competitor, with geographic ranges. State law determines their enforcement [17]. Make sure to have your contract be reviewed by a professional, preferably a lawyer who is well versed in physician contracts.

After accepting an offer and signing a contract, the process of "onboarding" will begin. This will require that you have the requisite licenses (medical license to practice in your state, DEA license, state-specific licenses). Keep in mind that obtaining each of these can take some time, so be sure to follow a timeline and start the process for obtaining a license early. You will need to be credentialed by the hospital, which will involve obtaining references from supervisory attending physicians and colleagues. The group and hospital you are joining should guide you through the process. Your mentors at your home institution can also assist with advice.

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Chapter 4
Common Career Pitfalls: Real-World Guidance of Common Mistakes to Avoid that May Impact a Hospitalist's Ability to Be Successful

Christopher Jason and Himati P. Patel

Introduction

Physicians are expected to be able to navigate a multitude of challenges. Whilst the clinical component is well defined; the soft skills, transitioning from a trainee to an independent practitioner and all this entails is dynamic and often not as well defined. By the end of a training program, residents have transitioned from the classroom to the wards mastering multiple clinical skills. Transitioning from a resident to an attending can be just as complicated. Without proper preparation and guidance, a new attending may encounter numerous pitfalls. These pitfalls can occur not only in the clinical arena, but also in the meeting room, as well as in one's personal life. This chapter will help highlighting some of these difficult areas and offer helpful solutions.

Bob Hospitalist is seeing a patient in the ED. The patient is a 56-year-old male with a past medical history of hypertension and COPD presenting with acute onset of chest pain. The emergency department physician diagnoses him with threatened Acute Coronary Syndrome and requests admission for further workup. However there are areas of the case that are incongruous. He reports that the chest pain is not related to rest, it is accompanied by a drop in his O_2 saturations to 88 % on room air, and tachycardia to 120s. Is the ED physician right in his assessment or should other diagnoses be considered?

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Pitfalls in Medical Practice: The Buck Stops with You

The transition to an attending comes with new roles and responsibilities. By this time in many newly graduating resident careers, the attending's oversight of day to day medical decisions can be cloying and the freedom of complete autonomy welcoming. Now you can practice independently. However, this also means that decision-making ultimately rests on your shoulders. Errors are unfortunately, a part of medicine. The landmark Institute of Medicine report "To Err is Human" determined that 44,000–98,000 people die each year in the hospital due to medical mistake [1]. Furthermore, autopsy studies have shown a diagnostic error rate between 10 and 15 % [2]. This means that making a medical error is not a matter of if, but when. Hospitals are complex places where the interaction of numerous physicians, nurses, pharmacists, and support staff are intimately intertwined when treating patients. In each step of the patient's care, something can go awry that can cause injury or death. One area is diagnostic error.

To prevent errors, one must know the types of diagnostic errors. Broadly speaking there are three categories of diagnostic error. The first category is system-related errors. These errors occur due to a combination of decision-making mistake and a defect in the organizational policy. Poor organizational policies can make it easier for errors to occur. Take the example, without overnight radiology coverage, hospitalists would need to read their own imaging studies. The ED and medicine physicians are not trained in radiology so it may be anticipated that findings may be missed or misread. Another example is a failure in communication between hospital doctors and their outpatient counterparts due to extended delays in transcription of discharge summaries leading to a break in continuity of care. These errors occur, and are larger than a single physician. These may be remedied through standardization in policies practices and expectations the institutional level.

Errors in diagnosis that may arise occur from gaps in clinical knowledge, gaps in data gathering, and faulty information synthesis. These errors are most common in family medicine, emergency medicine, and internal medicine [3]. Of these three errors, knowledge errors are one of the least common, occurring in one study in only 4 out of 100 cases [2]. This should give readers pause because when an error occurs, the physician's response to "read more" may be inaccurate. Instead, the physician should review data gathering, and information synthesis that preceded a diagnosis. Faulty data gathering occurs because of an incomplete clinical evaluation and sometimes omission of data review. Either the records are not reviewed in a timely manner, critical portions of the physical exam or medical history is missed, or there is an overreliance of data that is collected from another clinician [2]. This type of error often occurs because physicians are busy and effective collection of data may not occur. Furthermore, relationship factors with the patient, either a combative or noncommunicative patient may lead physicians to decrease the amount of data they collect to the detriment of the patient.

The largest source of diagnostic error lies in faulty synthesis of information and the largest subset of this is premature closure or search satisfying [2]. This occurs when a diagnosis satisfies the practitioner. This can lead them to form too small of a differential diagnosis. The best shorthand for this is that when the "When the diagnosis is made the thinking stops" [3]. For example, diagnosing the above patient with unstable angina when they actually have a Pulmonary Embolus (PE). Rolled into this is either under or overestimation of salience of a finding and confirmation bias. These biases reflect how physicians process and integrate new information into a diagnosis. For instance, in the above patient with chest pain, tachycardia may be thought to be due to pain. Decreased oxygenation may be thought to be due to the patients underlying COPD, or completely discounted. Additionally, there are numerous other cognitive biases that go beyond the scope of this chapter. Though all physicians have biases, and biases cause errors, the question is what can be done to decrease them?

Decision-making in itself is a complicated process including factors intrinsic and extrinsic to the physician. Extrinsic factors such as stress, cognitive fatigue, and sleep deprivation all increase the chances of biased decision-making [4]. Whilst these three qualities occur with many residents, this raises the question: how do residents not harm more patients? The answer lies in teaching rounds. When rounding with a teaching attending, residents present a review of the case, elicit outside information, discuss alternatives and settle on a plan of care. This method actually uses many of the steps to decrease bias. By reviewing the plan, residents are forced to reevaluate the data. Attending teaching the team can elicit new differentials and make residents aware of biases. By formulating a joint plan, the bias can be reduced. This can also be done by an individual. Stepping back after seeing a patient and formulating a diagnosis, the question "What biases am I using?" can be asked. Recognizing the biases used and the magnitude of them can help you to understand your thinking process [5]. Then you can formulate a strategy to decrease the biases. Either seeking more information from a patient or broadening the differential may allow you to arrive at the correct diagnosis. While this system is not foolproof it may decrease the risk of an error for a patient.

Bob was right to suspect another diagnosis. In the time it took him to go down to the ED, the patient decompensated and required intubation. After a CT of the chest, the patient was diagnosed with a massive PE. Bob ran into the ED physician who felt awful that he missed the diagnosis. The patient's family was upset and wanted to know what happened. The ED physician asked Bob what he should say to them.

Medical errors may be decreased by recognizing biases but they still occur. When an error does occur, the physician is not alone; risk management and patient care advocacy resources are available to help. However, the question remains how and when to disclose the error to the patient and family? Concerns that apologizing for a situation increases the culpability has led to multiple "I'm Sorry" Laws throughout the United States [6]. Though ethicists and physicians agree that disclosure and apology are indicated, it can be difficult because over concerns for increased liability [7]. In the last 10 years states have moved to decrease the risk of "I'm Sorry" being used in a trial. The laws vary state by state and whether the

physician is apologizing for the error or the patient's situation. This can make using the words more complicated and any questions can be sent to the hospitals risk management or patient advocacy departments.

Though saying "I'm Sorry" is ethically right, does it provide any other benefits? Apologies have been shown to decrease amount of payment in lawsuits. The University of Michigan has decreased payments by 47 % per case with the advent of apology and disclosure agreements [8]. Furthermore, studies have shown that apology laws reduce monetary damages for cases that go to court and lower settlements and cost for physicians who apologize [8]. It can also increase emotional healing for the patient and family. Though there are numerous benefits to saying "I'm sorry," it does not make it easier to say those words. Know that there are numerous physicians that have had to apologize and that the words are beneficial.

Bob enjoyed running a resident team. He liked teaching the enthusiastic residents. However, one resident on the team was "difficult" and began to cause problems. Nurses complained to Bob that this resident did not respond to their pages. He also was rude to them when he did respond. One day Bob observed the resident in a loud argument with one of the nurses on the floors. Upon reviewing, the resident was in the wrong and Bob knew he had to do something. He explained to the resident how a professional should act.

Pitfalls in Inter-hospital Communication: You Are Always on Stage

Transitioning to an attending brings changes other than the responsibility of medical decisions made on a patient. You are a model for younger physicians, medical students, nurses and all other members of the health-care team. The way that an attending interacts with all staff in the hospital becomes very important. Attending should dress and act professionally at all times. They should treat consultants and primary teams with respect. Unlike residents, they are permanent members of the teams, no longer rotating on and off the service. Attending physicians are permanent members of the wards and constant role models. Therefore, they are always on stage and should act as such. Though it takes a shift in thinking and focus, a successful transition is an opportunity to lead by example.

One of the most used skills during residency is the act of "blocking." Though there may be reasons that a primary team does not especially need your help as a consultant or the emergency department does not need to admit the patient, this is counterproductive. A successful medical career relies on mutual respect and avoiding or refusing to see patients decreases respect in others eyes. Also, productivity in hospital medicine relies on seeing patients appropriate for acute care. Refusing a patient today might decrease the chances of attending asking you to see their patient in the future [9]. As an attending, you are a leader for members of the team and fellow hospitalists. Transitioning to a leadership role can be difficult, but

there are several things which can ease the transition. It is important to provide regular feedback to residents and medical students during their rotation [10]. It is also important to define the goals that you want to accomplish with the team. More than just "taking care of patients" these should be specific educational, quality improvement or other metrics when working with residents.

One day while Bob was on Facebook. He noticed a post from a resident.

"*Another day of med con another day of surgeon tricks. Not giving a 38 y/o F w/DMI insulin for 3days? Hello DKA*!"

Bob was concerned about the post. He had seen the patient with the resident and even laughed when the resident cracked the joke. However, numerous other people had commented on the post. Bob was concerned this as an inappropriate comment by the resident.

Social media has become a dominant and omnipresent force in our lives over the last several years. It can connect us in our personal and professional lives and offer avenues to increase a physician's exposure for good or for ill. Websites like Sermo (www.sermo.com) and Doximity (www.doximity.com) allow doctors to network together and share treatment options and query peers for expert advice. These sites have safeguards to make sure patient information is compliant with the Health Insurance Portability and Accountability Act (HIPAA)—a law to protect health-care information. In addition to these sites, doctors may also network across general sites such as Facebook or LinkedIn. Other avenues, such as blogs, microblogs, and Twitter, allow doctors to discuss relevant patient care. These forums are often not private and available to anybody, hence content can "go viral," spread throughout the internet, and receive significant media attention. Wikis, especially Wikipedia, are used as a source of information for many clinicians for clinical information [11]. Social media's prominence in our lives raises the questions of how are physicians using it and how can these methods go awry? One of the biggest issues with the information on the internet is its reliability.

Wikipedia, Blogs, and various websites not run by journals or professional organizations can suffer from a variety of biases. The information can be incomplete or unreferenced. This can make finding accurate and useful information difficult. Even blogs written by physicians often involve case reports or case series. This can decrease external validity and make scientific observations drawn from the cases more difficult to interpret. Patients can also use this faulty or incomplete information when discussing health matters with their physician. Patients with inaccurate information should be directed to a website with more accurate information such as a disease specific foundation or a government website [11].

There can be consequences for physicians who post information that is viewed as unprofessional. Physician's comments about patients, hospitals, colleagues, pictures, links to websites and interests, or forwarded or liked comments contribute to the public perception of a physician. This information can be used to influence choices on residency or job selection and used by professional societies [11]. This is possible because shared information is available to friends and the entire network [12]. Controlling a physician's brand becomes important for physician's in the age of the internet as much as it is for publicly traded companies such as Coca Cola or

PepsiCo. It is therefore recommended to unfriend, delete, or use privacy settings to remove friends and information that can be deemed as inappropriate. However, removing friends from network can lead to hurt feelings and this must be balanced against damage to your "brand" [12]. Searching for oneself on the internet, so called "Googling," is also helpful to ensure that the search results show appropriate information [11].

Interactions with and about patients on social media can also be a source of potential danger. There are two main ways this can be problematic: disclosing inappropriate patient information and having inappropriate relationships with patients. Disclosing patient information on social media, through blogs, networking sites, or websites in general can be fraught with peril due to a variety of laws. All releases must conform to the (HIPAA) as well as the Health Information Technology for Economic and Clinical Health (HITECH) Act. Unauthorized disclosure of individually identifiable information can be subject of federal fines and penalties. To avoid this, all patient information including photos and imaging should be de-identified when posting. This can be done by removing names, ages, photos, and rare conditions and locations [11]. However, de-identifying information can make sharing information on social media, including HIPAA safe websites, cumbersome without patient's permission. Another source of controversy involving patient interaction on websites involves inappropriate relationships between doctors and patients. Patients may try to friend their doctor on Facebook and other social networking sites but this opens the door to an inappropriate relationship or hurt feelings [13]. Because of a change in the relationship dynamic online doctors and patients may post more intimate or unprofessional information about the patient or other patients in the practice. Examples include posting information that can identify a patient, posting derogatory or racist information, or showing physicians publically intoxicated [13]. This can lead to hurt feelings on either end of the relationship. Physician's using search engines to find out more information about patients may also cross a line. This "Googling" of patients may help finding information about patients that can improve their healthcare. For example, finding that a patient is contemplating suicide. However, it may provide embarrassing information which may change the patient/doctor relationship [14]. Therefore, the best advice for using or sharing this information is to use it only when it involves the care of a patient and may improve an outcome for that patient.

There are numerous consequences for inappropriate use of social media. State License Boards can discipline physicians for unprofessional behavior including inappropriate use of social media, breaches of privacy and misrepresentation of credentials [11]. In addition, hospital systems or employers may take steps to manage employees who post unprofessional information. Another important area is misstating credentials or stealing copyrighted information. It is important that any credit that is due to copyright holders is given when posting material that was not completely created by you [13]. This could include blogs or any instance where a physician provides advice. Physicians are held to a higher standard and though this can be daunting, as we are always under scrutiny. Using social media appropriately is a powerful way with which to interact and help patients.

Two years into his career, Bob realized that the saying "More money, more problems" was true. After upgrading his car, putting a down payment on his house, and building a home theater, he started saving money. However, after 2 years as an attending he realized that he only saved $10,000 for retirement. Furthermore, with a baby on the way, his wife was planning on going part time in her job while their children were young. He knew that this would put more of a strain on his finances. He was not sure where to turn for advice.

Pitfalls in Personal Life: Planning for a Family and Retirement

Arguably the best thing about the transition from residency to attending is the increase in pay. Hospitalists can expect to earn around $200,000 in salary including incentives and many earn more that [15]. Though it seems like a large amount of money, per the 2014 AMA report of physician's financial preparedness, 42 % of physicians are behind where they would like to be and 44 % have less than 500,000 dollars to save for retirement [16]. Physicians are at a unique disadvantage in saving for retirement and early career physicians are especially at risk for personal financial pitfalls. Several things make saving for retirement more complicated. Physicians start their careers later, reaching their full earning potential around the age of 30 as opposed to many college graduates who have been working for several years. Many physicians also have significant student loans which can decrease the amount they can save [15]. Although the loan interest is tax deductible, the loan interest deduction is phased out at higher incomes [17]. Additionally, physicians earning higher incomes are taxed at higher percentages due to the progressive nature of the US federal income tax system [18]. Physicians earning higher incomes may also encounter the Alternative Minimum Tax (AMT) which decreases the overall deductions that a physician can take [18]. These together can rapidly increase a physician's tax rate and decrease their take home pay. Hence the question, how to save appropriately for retirement?

There are numerous investment vehicles, the discussion of which is outside the realm of the book and should be tailored to your investment style. However, one universal way to save for retirement while reducing your overall taxable income is to use a 401k or 403b. A recent report showed that 81 % of physicians had a 401k and 26 % had a 403b [16]. Both 401k and 403b are tax advantage retirement pension plans [18]. The benefit of these plans is twofold. First, the money placed into these plans grows tax free until retirement. In traditional stocks or mutual funds, the capital gains or amount of money the stocks make every year is subject to tax. However, retirement savings plans are not taxed until the money is withdrawn. This compounding over the course of a career can add up to a significant amount of money. Furthermore, the money is put into these plans pre-tax which reduces your overall taxable income [19]. As above, because the tax code is progressive, by reducing your

total income you decrease the amount that is taxed at a higher rate. Finally, your employer may match the money deposited by a certain percentage. These advantages makes using employer sponsored tax deferred retirement savings a good idea. However, because the government caps the total amount of money put into 401k or 403b plans, physicians may have to use other resources to invest their money.

A recent report showed that only 37 % of physicians feel very knowledgeable or knowledgeable about personal finance issues [16]. This raises the question of where else can a physician seek advice about financial issues. One of the easiest ways to get advice on investing is to work with a financial advisor. Financial advisors are different than stockbrokers and are used by 57 % of physicians [16]. These advisors can offer retirement plans, mortgage or loan advice, general budgeting, and other financial services. Though they may work for a bank or investment institution, they are supposed to act in a fiduciary relationship; that is to put your best interests ahead of their employer's. However, not all financial advisors may have your best interests in heart. Even if they appear they do, it is unclear of the quality of the advice they are giving. Therefore, it is important to seek advice from several people before choosing one as a financial advisor and verify any doubtful information [20]. One of the most important things a financial advisor can assist with is writing a budget and comprehensive financial plan. Budgets allow a clear idea of where your money is going and can give opportunities to cut unnecessary spending. A financial plan can help appropriately allocate resources among stocks, mutual funds, and bonds. This can decrease a problem some physicians encounter: how much risk should they take in their portfolios. Young physicians and employed people can have a higher percentage of stocks as part of their savings but as time goes on it is better to increase the amount of bonds and money market funds. This is because though the stock market overall increased 7 % yearly over the last 140 years the stock market can swing wildly over the course of a year [20]. Therefore, most investing guides recommend placing money in the stock market that one does not need for 5–10 years [21]. Also it is important that each investor feels comfortable with the amount of risk they want to assume. Stocks and mutual funds that generally have an increased risk also have increased reward as well as bigger downfalls. Therefore, it is important to thoroughly research and understand all investments before committing and to monitor them for their progress.

While money is necessary to purchase things for daily living, many physicians draw comfort from their personal relationships. Long-term relationships, especially marriage, are part of a large majority of physicians' lives as 80 % of us are married [16]. Unfortunately, physicians' challenging careers can compete with their family for time and attention. On the bright side, physician's marriages tend to last longer and be more resistant to divorce [22]. How do these marriages last despite the time constraints and hectic schedules? Several of the themes from Perlman et al. paper give strength to physician marriages; mutual support, role clarity, shared values and the benefits of a being a physician. It is important that the physician and their spouse mutually support each other. This can involve support for each spouse in pursing career goals, recreational activities and dreams. Physicians lead hectic lives

and the support and shared values of a spouse can improve their career morale. It is essential for physician couples to decide and mutually agree upon what is important for their marriage. When to begin a family, where to live, work versus leisure time are all issues that should be discussed in relationships. These early discussions and decisions are invaluable when responsibilities begin to place more demands on a relationship. Role clarity is especially important for couples. Which roles will be covered in the family and who if any will be able to cover issues if both family members are indisposed? For example if both parents work in a relationship, the grandparents may help out when family crises arise. Finally, being a physician can be a benefit to help with family emergencies and maintain a stable income. All of these factors add strength to a physician marriage.

Conclusion

The transition to an attending is the next step in a medical career full of new challenges and opportunities. This chapter highlights some pitfalls facing the new attending. The best piece of advice that can be given is to find a senior physician and mentor, whom you trust, and discuss the challenges All attendings make this difficult transition and only by helping the lesser experienced can we truly succeed. Also enjoy the time and remember your transition thus affording you the opportunity to become a mentor to an early career hospitalist in the future.

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Chapter 5
Goal Setting: Effective Strategies to Plan for a Successful Career

Christopher Jason and Lana R. Elpert

Dr. Lane has just finished her first year in a hospitalist group. Confident that her clinical skills are improving and enjoying the patient interaction, she knows she picked the right field. The Director of her hospital medicine group meets with each of the hospitalists on an annual basis to discuss performance and career planning. In preparation for the meeting, Dr. Lane has been asked to bring with her a list of one-, three-, and five-year goals. This has created quite a bit of anxiety for Dr. Lane. She knew that she wanted to continue in hospital medicine but had not really considered concrete goals beyond securing a job after residency.

Planning for a career in hospital medicine does not end with securing a hospitalist position. Rather, your professional development is an ongoing process that will lead to both anticipated and unexpected opportunities and rewards. While unexpected opportunities cannot be foreseen, the wise hospitalist plans in advance to ensure selection as the recipient of the anticipated opportunity or reward. Hard work without a goal only guarantees that you will be working hard. Without clear direction, you can toil for years without advancement in your career. With focused effort toward appropriate goals, you can use that hard work to find satisfaction in your career. After reading this chapter, you should have a basic understanding of types of goals, how to set an appropriate goal, and how to achieve that goal despite distractions.

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What Are Goals: Introduction to Goal Theory

Goals are our mental representations of outcomes that we want and are committed to achieving [1]. When you think of a goal, you think of yourself in some future state like as a Chair of an important committee or partner in a hospitalist group. Though the mental image is important, the true essence in setting goals is to commit to achieving the mental state. This willingness to work toward a certain state affects how we work. Goals focus our attention toward certain activities and away from distractions. Hard work becomes directed and thus, useful. Goals also can increase motivation. By identifying a goal, the work done toward that goal becomes measurable. By seeing progression, motivation and satisfaction can increase. This motivation can also increase our persistence in working toward a goal. Studies have shown that people put in more worthwhile time working toward a goal than they otherwise would toward non-goal activities [2]. Finally, by pursuing goals we can uncover new knowledge that can make achieving future goals easier [2].

Dr. Lane thought about her 5-year goals. The practice had recently created a RVU-based bonus structure. She envisioned herself as a successful hospitalist earning bonuses because of excellent RVU productivity.

Types of Goals

There are several types of goals to consider when planning for the future. One way to define a goal is whether it approaches or avoids an outcome [1]. An approach goal is one that seeks to move toward a desired outcome. An example of an approach goal is trying to generate enough RVUs to get your maximum annual bonus. Avoidance goals try to move away from an undesired outcome. An example of an avoidance goal would be to bill just enough to avoid being fired. It is often more difficult to achieve avoidance goals because clear goals of success in avoiding the outcome are nebulous. When creating your goals in this way, be deliberate in choosing approach goals.

Considering the amount of risk is also important when planning for a goal. Risk taking may improve goal performance by inspiring higher achievement [3]. However, choosing a goal of higher risk may increase the riskiness of the strategies used to achieve that goal [3]. An example from the financial world would be using riskier stock trading strategies to improve profit. These strategies might increase profit but also may increase the chances of losing money. The balance of risk and reward must be considered when creating goals. After selecting a goal you must then create a framework for goal achievement.

Goal Setting Strategies I: The S.M.A.R.T. System

There are many types of strategies to achieve goals. One format that can be applied utilizes the S.M.A.R.T. System, which places the goals in a framework that makes attainment easier [4]. S.M.A.R.T. stands for Specific, Measurable, Achievable, Realistic, and Time related or time bound. Each goal should delineate a specific area which needs improvement. This step encompasses the what, why, and how of the S.M.A.R.T. model. Without being specific in your goals, your goals will be vague and difficult to assess if achieved. The goal should also be specific in how much that area should be improved. The goal should be measurable and progress toward the goal should be quantifiable. Goals that are not clearly measurable are impossible to assess for success or failure. The goal should be achievable, meaning you should choose a goal that you are actually capable of attaining. The goals should be realistic and relevant with a clear purpose. Finally, a goal should be time related, meaning that there should be a due date to achieve the goal. This allows for creation of a timeline to achieve the goal. The strength of this system is that it allows for goals that are readily achievable and helps gauge how much time to spend on them. These goals are also easy to communicate to others.

Dr. Lane considered many goals for her overall 5-year plan. However, she also knew that she had pressing day-to-day matters. Her state licensure needed to be renewed in 9 months, and she had not performed any of the CME in order to renew it. She needed to complete 50 h of CME in the next 9 months or be unable to renew her license. Using the SMART method she planned this goal.

Specific: *To achieve 50 h of CME in the next 8 months.*
Measurable: *Plan to go to grand rounds (1 h) 2 times a month and do 1.5 h of CME every week or 6 h a month. Total time 8 h every month.*
Achievable: *Will plan time in schedule to go to grand rounds and move schedule to open time to attend. Have already joined two professional societies so will use CME in those societies and one journal as a basis for fulfilling requirement.*
Realistic/Relevant: *Goal is necessary to renew license to continue practicing medicine.*
Time related: *Will plan to achieve goal in 7 months. Will review total CMEs at end of each month. If deficient in 1 h will add to next month if deficient in 2 h will add 1 h to next 2 months if deficient in more reassess goal strategy. Will set aside time on first day off each week to spend on CME time. If not halfway point in 4 months will reassess strategy. Will leave month 8 for catch up.*

The weakness of the S.M.A.R.T. System is that goals that are distant or aspirational do not fit neatly into this system. If one has all the skills, then the SMART system allows for time planning toward a goal. However, the truly transformational goals often have large gaps and do not fit well into this system. The question is "How to achieve a dream goal?"

Table 5.1 Pathway to associate program director

Obstacle	Intermediate objective
1. Never have been a teaching attending	1. Increase teaching time on the wards
2. Unsure of clinical skills	2. Incorporate evidence-based medicine into clinical practice, save illustrative cases to use to teach residents in future
3. No medical education experience	3. Consult local SHM or ACP chapters on available workshops, attend conferences on medical education
4. Not involved in residency program	4. Go to morning report, interview future residents, mentor residents, assist program director in any way possible, meet with the program director and express interest in being involved in any educational activities with residents and students

Goal Setting Strategies II: The B.H.A.G

The answer is through a system called the Big Hairy Audacious Goal or BHAG [5]. The purpose of this system is to help navigate a goal that is transformative and often daunting. These goals are very difficult to achieve because the skills needed, timeframe, and measurement of progress can be unknown. The BHAG system first looks not at the objective to achieve the goal but the obstacles standing in the way. Each obstacle blocking access to the goal is outlined and ordered chronologically. An intermediate objective to solve each obstacle is then put in place. This directs work toward solving each objective. As each objective is conquered the overall goal is closer to achievement. Once all objectives are achieved then so will the overall goal. The strength of this system is that a larger problem can be broken into smaller achievable goals [5].

After much consideration of his career plans, Dr. Lane realized she would very much like to be involved in resident education and set a 5-year goal of becoming an associate program director. However, she had no idea how to achieve this goal. Using the BHAG method she tried to come up with a plan to become an associate program director.

Overall Goal: To become an associate program directory for the Internal Medicine residency program at my new institution (Table 5.1).

Goal Striving: Tips for Improving Goal Success

Goal Striving I: Planning

Once a goal has been set, the process of goal striving can begin. This is the process taken to achieve a goal. One important aspect to recognize when striving for a goal is that there are multiple paths to achievement. If intermediate objectives or specific

goals seem very difficult using one avenue, they may become significantly easier using a different path. This mental exercise demonstrates one of the first steps toward goal striving, or mental planning [1]. In the process of planning for the goal, you may also have the ability to anticipate challenges before they occur. These challenges may then be added to list of obstacles and goals set to overcome them. An important part of planning is timing and chronologically arranging goals. This will allow you to decide which goals to work toward first. It will allow you to push goals that seem distant or more difficult to achieve until later, and will give you time to learn strategies that allow easier completion of the goal.

Dr. Lane knew that some goals, like becoming more involved in the residency would take time, so she started working on becoming more involved as a teaching attending. She knew that she wanted to become a better instructor so she began to plan presentations for the students. In addition, she planned to go to morning report. She emailed the residency program director and asked to help with resident activities. She planned to use the time getting CMEs to find those pertinent to medical education.

Goal Striving II: Goal Habits

The next strategy to improve goal attainment is to make the behavior involved in goal striving automatic. Making behaviors that lead toward goals automatic affords several benefits. First, you can work toward goals without putting in significant mental effort each time. Choosing when to begin any task is difficult. Automating this cue allows us to start to develop habits that improve goal attainment [1]. For example, doing CME for one and half hours each week on the first day off. Though it is not enjoyable to work on CME, it is difficult to procrastinate when the time is set. Automating goal striving allows good habits to form. These habits help propel one to goal achievement.

One of the most difficult things for Dr. Lane was finding time to read journals for her CME. She wanted to read them as soon as she awoke on his days off, but she was too tired. In addition, she had numerous errands to run and procrastinated reading. As a result, she consistently fell behind on her weekly reading goal. She decided that the easiest way to carve out time was to do it at night. When her day off arrived, she would finish her errands. Instead of watching TV at night, she read the literature. This improved her ability to complete CMEs and soon was hitting her goal for both reading and preparing teaching material for the team.

Goal Striving III: Maintaining Motivation

Setting a goal has been shown to increase motivation. However, motivation is often difficult to continue during the long process of goal striving. As the distance toward

the goal remains great, fatigue and disappointment can set in. Keeping motivation high when the goals are distant can be difficult. Research has shown that setting proximal goals can improve goal striving and motivation [6]. Goals that are almost achievable elicit effort on our part to achieve them above what we would normally contribute [6]. When goals are distant, our natural tendency toward procrastination increases. Proximal goals create a sense of urgency and keep motivation and persistence high. This is the benefit of setting deadlines for yourself. Deadlines create a sense of urgency and motivation to complete goals. By creating deadlines for yourself, goal achievement increases.

Knowing what motivates us and our tendencies toward putting off distant goals can help us plan and strive toward goals more effectively [6]. This is even more important because research has shown that motivation itself is not infinite [1]. Our motivation depletes as we seek to remain focused on our primary goal. Since motivation is the driver for goal achievement, it must be preserved. Planning for a goal allows you to focus your motivation on areas that will lead to goal achievement. Setting up goal achievement habits allows you to automate and decrease the conscious motivation in goal striving. Finally, setting proximal goals can give the extra burst of motivation to achieve a goal. Using the goal striving strategies can improve your chances of achieving your goal, but how do you keep motivation high when you did not choose the goal?

Dr. Lane was meeting her deadlines for her CME as well as preparing presentations for the residents. She was able to make it to grand rounds and felt confident that she was progressing toward her goal. Recognizing Dr. Lane's high aptitude for teaching, Dr. Lane's hospitalist director assigned Dr. Lane the task of creating a new hospitalist curriculum for physician assistants (P.A.'s) in the group. Dr. Lane would be monetarily incentivized for her work; however, Dr. Lane recognized this assignment would require a significant amount of effort and time on her part. Unsure of how she would work this into her already busy schedule, Dr. Lane began to plan for this goal as well.

Goal Striving IV: Goal Conflict

Your personal goals and those attributed to you by others may not align. This problem is known as goal conflict. Goal conflict can undermine performance on our primary goals if it motivates movement toward contrary goals [2]. This can be difficult, especially if the contrary goals are important as would be the case if your hospitalist director assigned you a new task. The fact that both goals are important and competing for time can make choosing which goal to pursue more difficult. Though mentally it is difficult to work on two goals at once, research has shown that when the motivation to work toward goals is self-determined, goal conflict is lessened [7]. That is to say, when we choose which goals motivate us and focus on those goals, our motivation remains high in the face of contrary goals. Using the goal striving strategies above can also help increase motivation. If you realize that,

then both goals can exist together and can be achieved through planning, habits, and setting proximal goals. Though you may not be able to strive toward both goals simultaneously, organizing them so that there is protected time may improve attainment. If you feel as though you are progressing toward both goals, the sense of conflict decreases. Though you have little choice in goals assigned by superiors, it is important to avoid choosing too many goals. Therefore, before taking on additional responsibilities or goals, it is important to judge if they will come into conflict. If there is a chance of conflict, careful planning should be used to minimize it; otherwise, you run the risk of feeling overwhelmed. In Dr. Lane's situation, she believed she could indeed meet the expectations of her hospitalist director without sacrificing progress on her own goals.

Dr. Lane reviewed her presentations for the P.A.'s prior to giving them. However, she noticed that the P.A.'s asked questions that suggested they did not understand the presentations. She reviewed her presentations and went online to look at P.A. textbooks to try to find appropriate topics. However, nothing worked, and she was unsure how to tailor the presentations to improve understanding. She decided to ask one of the lead P.A.'s to sit in on the presentations so she could offer advice on how to change the presentations. In addition, Dr. Lane developed a short survey for the P.A.'s to complete after presentations in order to gauge the effectiveness of the presentations.

Eliciting Feedback I: Feedback Sources

Feedback is vital to goal striving. An important aspect of working toward a goal is judging the progress toward goal completion. Both internal and external feedback help assure that we remain on track and effective in pursuit of our goals. When you review your goal progress weekly, you are eliciting internal feedback. Internal feedback helps ensure that the idea of the goal has not changed and progress is being made [2]. However, for objective evidence of progress external feedback is vital. This feedback can be given by several people including your direct supervisor, colleagues, and mentors. Physicians crave feedback and research has shown that even interns have this need [8]. Feedback-seeking behaviors should continue even after residency. This provides an opportunity for hospitalists to gain insight into performance and perceptions of performance by hospitalist directors. Other sources of feedback are also helpful as feedback from a single supervisor may not provide adequate information to a junior physician. Incorporating the use of 360° evaluations, or multisource feedback, can be a powerful approach to gain additional feedback. These questionnaires can be given to colleagues, patients, and other healthcare providers. They generally cover the five areas of professionalism, clinical competence, communication, managerial relationships, and interpersonal skills. These evaluations can help fill the gaps in feedback and offer different insights than that of a single manager [9]. By using multiple sources of feedback, quite a bit can

be learned and your progress toward improving clinically and educationally can be ascertained.

Dr. Lane was concerned. Though she received a good review at her annual meeting, she still felt like she was having trouble progressing toward the goal of Associate Program Director. She approached a senior hospitalist, Dr. Matthews, who previously worked in the education program. He offered to meet with Dr. Lane to discuss her goals and strategies to achieve them. After the meeting, Dr. Lane felt like she had her questions answered and had new ideas for reaching her goals. She wanted to meet with Dr. Matthews regularly for advice and he agreed to be her mentor.

Eliciting Feedback II: Mentorship

Mentorship is invaluable in a hospitalist's career development. Mentorship brings with it the benefits of career satisfaction, protection against burnout, sufficient opportunity for promotion, and a more productive career [10]. Unfortunately, given the relative infancy of hospital medicine a plethora of seasoned mentors may not be readily available at your institution. In order to find a mentor there are several options consider. If seasoned hospitalist mentors are not available, look for physicians with similar interests. For instance, a veteran surgeon who is intimately involved with decreasing central line associated blood stream infections (CLABSI) may be a good mentor if you have a similar interest in CLABSI. Alternatively, you can seek out a mentor who has served you well in the past even if they are in a different institution. An additional way to find an appropriate mentor is through hospitalist societies like the Society of Hospital Medicine. In order to get the most out of the mentor–mentee relationship, the mentee should keep several points in mind. They should be clear in expressing what goals they have and what they need from the mentor to achieve them. They should be prepared and come to each meeting with a list of questions and take adequate notes. In addition, the mentee should update the mentor on the progress toward goals since the previous meeting. This will allow information to flow smoothly and the relationship to remain positive. The mentee should also elicit feedback and advice from the mentor as this makes the process easier and more productive [11]. Finding and building a strong relationship with a mentor is a critical piece in providing feedback when striving toward a goal.

Conclusion

Goals are essential to turn a job in hospital medicine into a career. Goals can be simple or complex, but with the proper planning and goal striving strategies, any goal is achievable. However, the journey does not end when a goal has been achieved. Goal setting is a cycle. Once one set of goals is complete another should

already be planned. Just as your dreams change with time, your goals will evolve as you achieve them. This can allow your career to grow in the way that you choose and bring you much satisfaction through the years.

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Chapter 6
Work–Life Balance and Preventing Burnout

Lana R. Elpert and Lee-Ann Wagner

Dr. Lane is an early career hospitalist, now in her 4th year at a large tertiary care hospital. She has used the knowledge she has gained about knowing herself and her style to build solid, productive relationships with those around her. She applied S.M.A.R.T. goals and has been successful in increasing her RVU's and was recognized by her hospitalist director as an "up-and-comer." As a result of her planning, efforts, and attitude, she has been recognized as a valuable member of the hospital system. She has joined committees, recently took over as Chair of one of the committees, and has been asked to be physician lead on a major patient safety initiative at the hospital. Dr. Lane feels exhausted and overwhelmed most of the time, and has noticed a change in her disposition where she now finds herself using harsh tones at times with others at work.

Most physicians enter the medical profession with genuine enthusiasm to care for sick patients. They anticipate the long hours and emotional stress of the training, but few can foresee the true, challenging lifestyle that is common among doctors. More and more, physicians are expected to be responsible not just to their patients by providing careful, conscientious care but also to the larger health care system. There are many work responsibilities outside of direct patient care such as keeping up with evolving evidence-based medicine, the newest performance measures, and current maintenance of licensure requirements that can be overwhelming on their own. Balancing these professional duties with obligations outside of the hospital, like family life, can easily take a toll and lead to burnout.

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Defined, burnout is a psychological term referring to feelings of persistent exhaustion and diminished interest in one's work. The generation of burnout is multifactorial with contributions from prolonged stress at work and also one's individual disposition to coping with chronic stress. In his essay in The Atlantic, "For the Young Doctor About to Burn Out," Richard Gunderman suggests that burnout is really a loss of idealism, that "at its deepest level is not the result of some train wreck of examinations, long call shifts, or poor clinical evaluations. It is the sum total of hundreds and thousands of tiny betrayals of purpose, each one so minute that it hardly attracts notice" [1]. Whether from lost idealism or being plagued by too many responsibilities on and off the job, hospitalists are predisposed to burnout. In this chapter, we aim to help you identify contributors to burn out and review techniques to prevent and overcome this common phenomenon.

Symptoms of Burnout

We all expect to feel tired occasionally as we balance the many aspects of our lives. But how do you know if you are approaching burnout? Fatigue, although a symptom of burnout, is a common symptom among Americans. We all expect to feel tired occasionally. Burnout, however, is further characterized by emotional exhaustion, depersonalization, cynicism, and a diminished sense of personal accomplishment [2]. Other symptoms include inability to concentrate, anxiety, insomnia, irritability, feelings of increased dejection and depression, loss of interest in one's work and or personal life, and increased incidence of substance abuse.

Prevalence of Burnout

Although burnout is common among many professions, it is especially prevalent among physicians. In 2011–2012, medical students, residents/fellows and early career physicians were surveyed for symptoms of burnout, fatigue, depression, suicidal ideation, and quality of life. Results showed that at each stage of training, burnout is more prevalent among medical professionals than their life-stage matched, American peers. Among early career physicians (less than 5 years in practice), results showed that just over half reported burnout, half reported high levels of fatigue, and 40 % reported at least one symptom of depression. Employed peers outside of medicine were half as likely to experience burnout, and reported less fatigue and depressive symptoms [3].

Internists may be at even higher risk for burnout than their physician peers. Specifically, hospitalists may be at particular risk for burnout given the nature of their shift work and numerous patient care and administrative responsibilities. In the 2013 Today's Hospitalist Compensation and Career Survey, 68 % of hospitalists endorsed significant or very significant personal burnout [4].

Women in Medicine

The presence of women in the general work force and within medicine has been increasing over the last several decades. American medical school graduating classes are now comprised of nearly 50 % women, compared to approximately seven percent in 1966 [5]. However, many women feel more stress balancing work and home life than their married male colleagues. Women are 60 % more likely than men to report burnout proportionate to hours worked >40 h/week [6]. This discrepancy may be due to the so-called double burden with societal pressures for women to maintain traditional roles in the home with more of the responsibilities of child-rearing and household chores, despite working full-time outside of the house. In spite of this increase in burnout, men and women have been found to report similar satisfaction with their careers (76 % vs. 79 %) [7].

Contributing Risk Factors to Burnout

Physicians are often prone to burnout because of the very personality traits that originally attracted them to the profession: drive, competitiveness, desire, and ability to excel [8]. The intrinsic idiosyncrasies of these personality traits coupled with an individual's personal method of or ability to manage stress can be significant risk factors for burnout. Hospitalists are no strangers to the external stressors that contribute to burnout. Long shifts, overnight shifts, and weekend shifts can affect sleep schedules and personal relationships outside of the hospital. Financial stress from changing compensation targets and levels of reimbursement as well as personal debt can weigh heavily on physicians. Additional stress builds from navigating the hospital bureaucracy and attempting to incorporate administrative responsibilities and paperwork into daily schedules. Finally, stress is generated by work obligations interfering with family needs and friendships. The competing responsibilities, desires, and needs often lead to a perceived lack of control, one of the biggest risk factors for burnout [9].

Consequences of Burnout

A physician affected by burnout does not suffer alone. Other outcomes include:

- Diminished quality of care: one study showed that burned out residents reporting symptoms of burnout, stress, depression, or anxiety were two to three times more likely to self-report suboptimal patient care practices [10]
- Diminished physician–patient relationships: stemming from physician depersonalization and withdraw [11]
- Effect on personal relationships with significant others and children

- Increased substance abuse: 8–12 % of healthcare professionals develop a substance-related disorder at some point in their lives [12]
- Increased levels of suicide: male physicians are 2× more likely to commit suicide than average Americans, and female physicians 3× more likely [13]
- Earlier retirement and decreased time in the work force.

How to Assess for Burnout

There are many scales to evaluate burnout. The most commonly used assessment tool is the Maslach Burnout Inventory (MBI), which is a survey that uses 22 questions to assess an individual's sense of personal accomplishment, emotional exhaustion, and depersonalization [2]. You can go to http://www.mindgarden.com/products/mbi.htm to learn more or to purchase the MBI. Another commonly used metric is the shorter Short Form 12 (SF12). It uses 12 questions to provide both a physical and a mental health score. You can learn more about this at: http://www.sf-36.org/tools/sf12.shtml.

For the busy hospitalist, it may be easy to self-assess burnout using the previously validated exercise:

"Using your own definition of 'burnout,' circle one:

1. I have no symptoms of burnout.
2. I don't always have as much energy as I once did, but I don't feel burned out.
3. I am definitely burning out and have one or more symptoms of burnout, such as physical and emotional exhaustion.
4. The symptoms of burnout that I am experiencing won't go away.
5. I feel completely burned out and wonder if I can go on."

A score of 3 or higher is indicative of burnout [14].

Combating Burnout with Prevention and Treatment

Ideally, one would be able to take appropriate measures to prevent burnout from ever complicating his or her life professionally or personally. This requires calculated care of one's own physical and emotional well-being. In a study of physicians' own wellness techniques, five major categories of self-protective practices were identified: relationships, religion or spirituality, self-care, work specifics (e.g., choice of specialty, setting limits on hours), and approaches to life (i.e., general philosophical outlooks such as being positive, and aiming to maintain a healthy balance in life). It was concluded that physicians use various approaches, all correlated with improved levels of well-being, but adopting a personal healthy

philosophical outlook was most significantly associated with increased psychological well-being [15].

Most people are not identical in how they find joy. You must acknowledge what areas are most important in making you feel whole. Use this knowledge to focus your efforts toward well-being. This can include making a concerted or even scheduled effort to:

- engage in important relationships with family and friends
- attend a religious or spiritual home
- exercise, practice yoga, meditate, simply get outside
- read for pleasure, learn something interesting
- cook, perfect your hobbies, travel
- give back to the community
- have a personal primary care physician to look after your health

Many of us struggle with self-awareness. The nature of our work often requires that we appear "strong." We must be able to find comfort in acknowledging when we are overworked so that we can better ask for help, share responsibilities, learn when and how to set limits at work, and learn to say "no." Many medical organizations and practices are acknowledging the role burnout and physician well-being play in the work environment. One such group is called Renew! They define *renewing* as a "means to revive values, motivation, and energy and to reformulate and refresh goals and skills." These efforts can serve as both prevention and treatment for burnout [8]. Many hospitals have physician wellness committees, as well as policies and procedures to serve as guidelines when physicians observe impairment in colleagues or in oneself. However, healthcare workers are notoriously bad at self-policing. A generally accepted code of silence exists among physicians, borne from mutual respect and loyalty that serves to protect one another and to avoid consequences, shame, and social stigmatization.

Perhaps due to the knowledge that many people find it hard to ask for help, a growing number of hospitals and institutions have begun to study the effects of hospital-supported interventions in reducing burnout and improving physician well-being. A recent randomized, controlled trial investigated the impact of a facilitated, small group intervention curriculum compared to unstructured protected time on burnout. The intervention group engaged in guided topics including reflection, self-awareness, mindfulness, and community building and skill acquisition to promote connectedness and meaning in one's work. Those who completed the curriculum felt an increase in empowerment and engagement and significant decrease in symptoms of burnout [16].

Another study examined mindfulness-based stress reduction (MBSR) that focused on training in the Eastern contemplative practice of mindfulness, a form of meditation derived from the Theravada tradition of Buddhism. Those who engaged in the training experienced a mean reduction in perceived stress (27 % vs. 7 %) and decreased burnout, while feeling increased self-compassion and satisfaction with life (19 % vs. 0 %) versus controls [17]. This suggests that by simply practicing

mindfulness, or "seeing with discernment," one can successfully reduce stress and burnout and improve self-compassion and life satisfaction. Even the simple act of purposefully engaging in positive thinking has been shown to have a beneficial effect on one's outlook and perspective. This can help with stress reduction and in finding, or refinding, meaning in one's work.

Benefits of Well-Being

Freeborn's data suggests that as physician satisfaction and organizational commitment increased, burnout decreased [9]. Happier employees generally provide better and safer care. When physicians rate higher well-being and satisfaction scores, there are a number of correlating benefits. These include:

- improved patient satisfaction and trust
- improved quality of care and patient safety
- improved retention of staff and physicians
- improved mental and physical health of the provider
- reduced risk of substance abuse [18]
- improvement in supportive personal and intimate relationships [19].

Resources for Help

The ACP-ASIM Board of Governors has compiled a list of resources like books, websites, and contact information for experts/workshop leaders trained in combating burnout that can be accessed at: https://www.acponline.org/system/files/documents/about_acp/chapters/dc/phys_burnout.pdf. In addition, most institutions have Employee Assistance Programs that can offer individualized assistance should you feel any symptoms of depression that are concerning to you.

Conclusion

Having a career heavily focused on caring can at times have deleterious effects such as increased burnout. Burnout is just one element of something referred to as compassion fatigue. Remember, self-love is self-preservation. Often, the better we take care of ourselves, the better we can take care of others.

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Chapter 7
Women in Medicine

Ada Ibe Offurum, Kathryn Novello Silva and Mangla S. Gulati

Sylvia is a veteran hospitalist who works at a major academic center as well as a satellite sister community hospital affiliated with her hospital. She has been working for 5 years and has watched colleagues of hers obtain leadership positions in the residency training program as well as in leadership positions at the satellite hospital. She was once offered a position to co-chair a patient safety committee with significant visibility with the hospital executives at her main hospital, but she had just had her first child and was anxious about the time commitment associated with the committee. Her colleague who took the committee chair position was recently promoted to Chief Informatics Officer after a very high performance with patient safety tools in EPIC.

Epidemiology

Women have made great strides toward equality in the medical profession as a whole. Despite denial of entrance to medical school for many years, women have made up nearly half of medical school graduates since 2005–6 [1]. Women

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currently make up 46 % of applicants and 47 % of medical students [2]. However, women continue to be under-represented in leadership positions. Only 38 % of faculty in academic institutions is women, only 21 % are full professors, and only 16 % are deans [2]. Within academia, women are more likely to clinicians and educators than researchers [3].

The trend of lack of leadership representation continues beyond academia. A 2012 survey conducted by the American College of Healthcare Executives found that, comparing women and men of equal experience, women attained CEO status at about 50 % of the rate of men. In fact, compared to the previous study in 2006, there had been a slight decrease in the proportion of women relative to men who achieved CEO status among the study group [4]. In 2006, women attained CEO status at about 63 % the rate of men. A significant salary gap existed among those studied. In 2011, women with approximately equal levels of education and experience as men earned on average $32,800 less than men did, or about 20 % less overall [4].

These gender gaps carry over to hospitalist physicians. A 2012 AAMC survey found that men under 45 years of age were one and a half times as likely as women to be hospitalists (15.8 % vs. 9.9 %). For older physicians identifying themselves as hospitalists, no statistically significant gender difference was found [5]. Surveys have shown salary discrepancies between men and women for many years [6]. Considering only full time compensation, the pay gap is still more than $30,000 [6]. The pay gap persists when the lower salaries among pediatricians and those in academics are factored in, both of which have a higher percentage of women.

Far reaching consequences for this gap in leadership if not dealt with

1. Reduced funding for non-reproductive women's health research.

It has been argued that the relative paucity of research focused on women's health across their life span may have something to do with the lack of presence of women in these clinical trials. While women are better represented in clinical trials related to reproductive health, it has taken many initiatives to expand NIH dollars to investigate women's health across the full course of their lives and if female researchers are not continually supported, this scarcity will continue [3].

2. Fewer role models for future generations of physicians.

Studies have shown that the proportion of female physician leaders has decreased since the mid-2000s and this has consequences for female physicians on the academic and non-academic sides. Though there may be many reasons why female physicians are not naturally chosen for leadership positions, female physicians use other successful female physician leaders as a strong motivating factor for breaking through the glass ceiling [7]. On a more global scale, the more female leaders there are, the more the road can be paved for even young and disadvantaged females who need not only the extra push to advance in their careers but to model their efforts after [8].

Women physician role models serve many purposes including career development assistance, teaching new skills and mentoring younger female faculty to provide both psychological and emotional support to those they mentor [9].

3. Perpetuated vicious cycle of the gender gap.

The absence of female physicians at high ranking positions in academic medicine and in hospital executive leadership can create a vicious cycle of not being able to recruit the best and brightest female physicians and therefore having even smaller pickings for top positions. The vicious cycle is perpetuated even further by the accolade and resources given to those who do well, which encourages them to do even better as opposed to those who may not be recognized as easily for their work [10].

4. Absence of great leaders.

Women leaders are more likely to be sensitive to the needs of employees. They are more likely to understand the importance of work–life balance, and are more likely to be humble and honest, creative and outgoing. Though surveys of female leaders show that they may not be as decisive as men, in general, female leaders bring many benefits to any position [8]. The fact that the number of women leaders in top positions is virtually non-existent means that there is also a significant lack in great leaders [3].

5. Gender discrepancies in salary and access to resources.

Studies have shown that departmental and divisional leadership are responsible for shaping the norms and policies that shape the culture of the work place for their faculty members. Female physicians cite salary, administrative staff support and access to general resources and space as some of the predictors for retention. Without women leaders as departmental and divisional heads, these discrepancies will continue to persist [11].

Female hospitalists attribute one of the reasons that male hospitalists earn more than their female counterparts to fewer women going after leadership roles, which may lead to more compensation for increased productivity [6].

Reasons for gap in female advancement to leadership positions:
Some of the traditional reasoning to justify the absence of women in key leadership positions in academic medicine has been:

1. Work–life balance affects career focus and interest in leadership positions.

There is the perception that women are unable to compete for leadership positions because they choose their family instead and therefore are unable to handle the constraints and work hours that may be associated with a leadership position [3].

2. Women may not have requisite skill sets for leadership.

When people think of leaders, unconscious bias still remains that it will be a male figure. Men are still naturally identified to be more suited for leadership

positions [1]. There is a perception that women are unable to be decisive or make linear decisions that are important to the financial bottom line of an institution regardless of who may be affected [8].

3. Women have not been in the field long enough.

There is the perception that women have not attained leadership positions in academic and hospital medicine because they have not been in these disciplines long enough to have the experience to be departmental and division heads [3]. There is a thought that since the greater percentage of female physicians are under the age of 45, the age disparity might explain why they do not have the necessary credentials for top leadership position [12].

Current thinking: Individual Versus External/Institutional Obstacles

More current thinking is that the obstacles that face female physicians in their career growth and development have more to do with individual factors versus external institutional factors imposed upon female physicians and leaders. Individual factors such as negative thoughts about one's talent and skills and ability to lead [13]. Other individual factors include choosing flexible hours which may not lead to higher compensation versus factors imposed by the organization one works for including an unconscious bias that stereotypes male hospitalists as more capable for leadership positions or assuming female members of that organization are not interested in aggressive productivity based compensation and therefore not offering it to them.

Career Planning Choices Specific to Women

Women have historically chosen non-surgical and primary care based specialties, including internal medicine, pediatrics, family practice, and OB-GYN [12]. In 2013–14 the top specialties for women residents were OB-GYN, pediatrics, psychiatry, and family medicine. 43 % of internal medicine residents are women [2]. Women often take into account family and work–life balance issues when deciding on a career. The professional specialties that are traditionally most incongruent with societal expectations for women, such as surgery, show the greatest gender disparities in career advancement [14]. Numerous barriers to advancement exist, including societal and work based issues. Moving toward a leadership position can, therefore, be a difficult proposition.

Women often take into consideration the struggle between caretaking for family members and advancement in their careers, with advancement taking second place [1]. Despite shifts in gender roles, women are often the primary caretakers of children and extended family members [15]. Women are more likely to work part time [5]. As well, women are more likely to put their partner's career first. The career point at which women are likely to be ready for new challenges is often the time that they are starting families [15]. Roles of women as family caretakers and the underdevelopment of women's networking skills can create a cumulative disadvantage to women's salaries and advancement [14].

Women have often been cited as having a negative thought process about one's qualifications and achievements: the so-called "imposter syndrome" [13]. As well, women are more likely to wait to be noticed and rewarded for one's hard work [13]. Women may have a natural reticence to self-promotion, negotiation, or being pro-active about seeking higher positions of influence [1, 13]. However, women also have fear of the "ambition backlash" where women are seen in a negative light for negotiating [8, 13]. Women may be seen as pushy or overly aggressive, where men in a similar situation may be seen as strong or possessing leadership qualities [8, 13]. Women also come up against unconscious biases, such as associating leadership roles with men [1].

Managing Ongoing Challenges

Janet is a new hospitalist who has been out of residency for just over a year. While still single and hoping to pay down some school loans, she schedules a meeting with the hospitalist director to explore other possibilities to earn money via moonlighting, etc. She is told that there are no moonlighting opportunities for her. She then asks about getting a degree such as an MBA and is discouraged by her director who says no one will reimburse her tuition and it may affect her work performance. At the local chapter meeting of her hospitalist association, she meets a hospitalist director who used to be a hospitalist at Janet's hospital. During a lunch meeting she finds out about tuition reimbursement programs at her hospital and moonlighting opportunities.

Organizational/Institutional Factors

1. Outdated work structure

Out dated work environments and culture, which do not encourage work–life balance, do not provide equal access to resources for both male and female physicians and where the leader still prescribes to the archaic inflexible work expectations can make career growth for female physicians very difficult [11].

The work structure has to be flexible to accommodate the different types of physicians in that organization. There may be hospitalists who are able to work relentless hours at a cost to their personal lives while there will be middle of the ground individuals who are comfortable with a basic level of success. Any work environment, which does not accommodate these different levels of employees, male or female, will have difficulty recruiting talented female physician workers [16].

2. Lack of mentorship and role models

The lack of role models and mentoring has been implicated as one of the reasons female physicians in the academic setting in the U.S. have not been as successful in achieving Associate Professorship or the full rank of Professor as their male counterparts [9].

Female hospitalists also attribute lack of role models as a reason why there are fewer women in key leadership positions [6].

3. Lack of sponsorship

Mentorship focuses on more passive ways to help lift younger female physicians up such as sharing one's knowledge and expertise to the mentee, offering some advice on how to navigate through the challenges they may face. A senior woman can also be mentored by younger woman to help them understand new technologies and perhaps more efficient problem solving techniques [8]. Lack of mentorship can affect a female physician's career advancement, especially if the organization does not have a formal mentorship process.

Sponsorship refers to an individual male or female who is ready to go to bat for the woman to ensure that her career advances appropriately and that resources and opportunities are available to her. The sponsor is an active advocate and is willing to make phone calls, have strategic meetings and make things happen for the woman. Some have attributed the slow rise of female leaders to lack of sponsorship [1].

4. Overt and subtle sexism

Sexism still occurs in subtle and overt ways in the workplace including in Medicine. Women are still judged by their looks in addition to their talent and skills they bring to the table [8]. When male counterparts are offered a higher pay than their female hospitalist counterparts with the same experience and productivity based on future potential productivity, one has to wonder whether sexism played a role [6].

The famous old boys' network which is the very well oiled machine that recruits and retains individuals who resemble the group is still the most overt form of sexism in health care [1].

5. Fostering the leadership stereotypes

Women are viewed as having traits that lend themselves more as dependable and nurturing while male leaders in the work place are perceived as strong,

action-oriented and decisive [3]. However, when women go against the grain of dominant culture and are decisive and ambitious, they are not viewed as likeable. These stereotypes may lead to unconscious bias in the selection of physicians for leadership positions and may even affect the ambitious and decisive female as being too overly aggressive [17].

Individual Steps to Improve One's Career Advancement

Amy has been a hospitalist for 6 years. She started her more recent job a year earlier as an Assistant Medical director of a 15-person hospitalist group. She hoped to be made Medical director when her current medical director transitioned out of the position to a new position as an Associate Chief Operations Officer. A few days prior to her conversation with hospital leadership, her autistic son suffers a major setback and she and her husband have to change their schedules to more flexible hours at work. She is distraught over how this may impact her career goal.

1. Request flexible scheduling.

If quality of life to you means achieving work–life balance, then focus on your priorities and ask for the necessary adjustments to accomplish that. Be realistic in how more flexible hours may affect productivity, compensation or a leadership position. Be informed about your organization's policies about flexible work scheduling and how benefits may be affected by part-time employment [6].

2. Ask for help and support at home.

Do not hesitate to ask for help. If you are drowning at work and dropping things at home or vice versa, ask for support on the home front and at work. A spouse or family member may be able to adjust their schedule to allow more flexibility for you. Likewise, a different start and end time for your shift, while putting in the same number of hours, may help to offset another responsibility at home [1].

3. More longitudinal view of career advancement plan.

Women should take a much longer view into their entire career path as opposed to the short term. Start with small steps while being aware of how one's career plan may change depending on what stage of their lives they are in and their ability to avail themselves of current opportunities. Take a look at opportunities that are realistic in terms of time commitment required. Start with joining committees that may not require as much time and start small [1].

4. Take stock of your talents, personality and make an improvement plan.

Start with a 2×2 grid and title each box with strength, weaknesses, opportunities, and threats. The goal of this exercise is to capitalize on your strengths, make

a plan to look at your opportunities, start working on your weaknesses and start making alternate plans to mitigate threats that may be coming. If your weakness is analyzing data or general innumeracy, consider management classes. If threats include significant budget cuts or an adversary now in a leadership position that affects you, start planning accordingly. Also consider a leadership course through Society of Hospital Medicine's leadership academy, American College of Physicians (ACP) or American College of Physician Executives [1].

5. Join projects and committees to enhance leadership qualities and gain visibility.

Be strategic about what committees you should join. They should enhance your general career plan by enhancing your leadership qualities and put you in the right room with stakeholders who may be able to enhance your goals and overall development. Committees that affect a hospital's ability to remain compliant or affect the financial bottom line tend to have the most visibility. Consider being the physician lead on a nursing managed high stakes committee. Make sure the time commitment required is realistic for you.

6. Find a mentor inside or outside your institution.

Mentors do not have to be the same gender and they do not have to be within your institution. Sometimes you have to seek out a mentor formally but by being good at what you do and ensuring that you put yourself out there through projects and initiatives with high visibility, you will develop natural professional relationships with potential mentors who have seen your performance. At your professional meetings such as SHM and ACP, try and network to connect with peers and connect with potential mentors [1]. Do not shy away from contacting a prolific speaker whose topic resonated with your career plan, to begin networking for a potential mentorship relationship. Be consistent and communicate regularly.

7. Talk to your hospital leadership about your aspirations.

Is anyone aware of your career aspirations? Women physicians fall into the same bucket as other women waiting for rewards for their good performance without speaking up. Women do not strategize their career growth as often as they should. Have frank discussions with your boss and hospital leaders about what is required for the position you are interested in. Make sure your CV has all your achievements. Take a realistic view of your performance and talents and do not be afraid to speak up about wanting to be promoted or considered for a leadership position [13] (Fig. 7.1).

The Tiara Syndrome Self-Assessment

1. Have you ever hesitated in pursuing a promotion because you did not think you had the requisite skill sand abilities?
2. Have you been encouraged by friends and professional colleagues to throw your hat in the ring for that promotion but were afraid to do so?
3. Do you have an understanding of the succession plans for your organization and are you part of that plan?
4. Have you told your boss that you would like to be considered for a promotion?
5. Have you discussed the requirements for your desired position and have you asked for the opportunity to be included in activities that will prepare you for that role?
6. In addition to your résumé, do you have a portfolio of accomplishments, including projects you have worked on as well as a description of your unique skills and abilities?
7. Have you ever negotiated your salary; either at the start of a job or during a performance review?
8. Do you have a trusted career mentor (not a preceptor) with the experience, negotiating skill, and expertise to guide you in your career-building process?

Fig. 7.1 The tiara syndrome self-assessment. Adapted from Fitzpatrick TA, Curran CR. Claiming the Corner Office. NURSING ECONOMIC$/May-June 2014/Vol. 32/No. 3

Organizational Opportunities for Growth: Current Issues Faced by Organizations

Organizations have numerous opportunities for growth related to these issues. They need to have policies to allow flexibility with work schedules, without physicians being seen as weak or unambitious [16]. Institutions need to implement structural elements to help women and men manage their careers. These may include tenure extension, extended maternity/family leave, and on-site childcare [3]. They should mandate equal access to resources for growth, such as administrative support. For example, women faculty with children has less administrative support and fewer institutional research dollars [3]. Institutions also have a responsibility to engage in proper oversight to ensure equal pay and advancement opportunities [3]. Selection criteria for advancement should be well-defined. When selection criteria are vague, unconscious bias toward stereotypical gender roles prevail [14]. Women who left early faculty positions cited lack of effective mentorship, role models, and inability to manage competing demands of work and home [14]. Providing a system for effective mentorship and role models is another opportunity for an organization to retention of and leadership opportunities for women faculty.

Departmental leadership has a strong role in creating a climate supportive to women faculty. In an academic environment, studies have shown that the culture of the work environment has a strong impact on women faculty [15]. A recent study at

the University of Pennsylvania Perelman School of Medicine validated that heavy work demands were associated with increased levels of work-to-family conflict [15]. Increased work-to-family conflict was associated with greater turnover intentions and poorer health among women faculty [15]. A culture conducive to women's academic success significantly improved the effects of work-to-family conflict [15]. Studies are ongoing to show improvement in overall career outcomes for women faculty [15]. A supportive climate can be shaped by the administration and have positive impacts on the faculty. These are points to consider for both organizations interested in change and women who are looking to advance their careers.

Important tools to have as a current or aspiring hospitalist leader [1].

- *Be the best hospitalist/clinician you can be*. You have to be respected for good clinical work.
- *Be a transformational leader*. Mentor your younger faculty. Take a personal interest in lifting your teammates as a group.
- *Be a strategist*: You have to understand the bigger picture and align your hospitalist group with where your organization is going.
- *Be a good communicator*. You have to be able to communicate with your peers, subordinates and potentially multiple stakeholders.
- *Be an active listener*
- *Get buy-in*: To be a good leader, you have to be able to get your team to buy into ideas and work together.
- *Be persistent and determined*: You must be able to bounce back even after failures, re-evaluate and stay on course.
- *Be objective*: Stay open minded and consider other points of view when dealing with challenges.
- *Ask for help*. You have to be willing and ready to seek advice from others when faced with challenges.
- *Understand the finances and clinical realities of your practice.* You have to be a good manager. Understand the finances associated with running your hospitalist group and your budgetary constraints.

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Chapter 8
Basics of Billing and Coding: A Primer for the New Hospitalist Attending

Himati P. Patel and Negin J. Ahadi

Dr. Lane recently finished residency and, despite going to several lectures on billing and coding, she never really paid too much attention. After starting her hospitalist job she received a "crash course" on billing and coding by the hospital. However, she still feels uneasy and is worried she may get into trouble for improper documentation or over/underbilling. If only she had paid more attention to those lectures during residency.

When the words "billing and coding" are mentioned in a room full of physicians, a collective groan is often heard. Simply stated, we became doctors to help people. However, demonstrating the care we provide is necessary and supporting that with documentation is necessary in order to be paid for our services. For some, billing and coding has become the bane of a physician's career. It is viewed by some as a set of time-consuming, irrelevant rules and formalities that add extra time and effort to workflow without providing any actual clinical benefit to the patient. The adage, "if it's not documented, it didn't happen," is relevant to professional billing, since justification is required for the level of care that is being submitted and the associated compensation that is being sought [1].

Complicating the matter is the lack of education that trainees receive during residency, rendering them ineffective once they become independent providers and are responsible for billing for their services while providing excellent patient care [1, 2]. The objectives of this chapter are to introduce the new attending hospitalist to the basics of billing and coding. It will help to establish a common language that will aid in understanding the basic elements of a billable service. It will also demonstrate ways to maximize documentation to reflect the thorough clinical care already being provided in order to maximize reimbursement. Generally speaking, Medicare sets the rules and most other insurance companies follow them. Auditing

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of Medicare billing is divided by geographic region into Medicare Audit Contractors (MAC). While the rules are unfortunately sometimes subject to interpretation, and there are geographic regional differences in how CMS auditors and insurers expect documentation, there are common unifying threads that are essential to know for the new attending hospitalist. The goal of this chapter is to attempt to deconstruct billing and coding relevant to a hospitalist in a way that demystifies and makes manageable the billing and coding process.

Types of Inpatient Billable Services

Simply put, a billable service is a term that links the performance and documentation of clinical work and the financial compensation that is expected as a result of that work. These services are divided initially based on the location the physician provides the service—loosely speaking, in the hospital versus out of the hospital. That being said, some services located on the hospital campus are considered "outpatient" from a billing standpoint. For the hospitalist, patients seen in the emergency room, consults done in the same-day surgical center, or patients admitted under "observation" status are considered "outpatient" services and require consideration as such. Confused already? The good news is that regardless of the actual code, the fundamental information required for documentation for any type of service is the same.

Once the geographic location is established, the next step is to determine whether this is the first time the provider is seeing the patient (initial visit), or whether it is a follow-up visit by the provider. After completing these two steps, the information in your documentation of that visit will determine what level code can be billed and the subsequent charge that can be submitted. Current procedural terminology (CPT) codes are five digit codes usually starting with 99—that are assigned to different types of services provided to patients located either in or out of the hospital based on the complexity of the clinical care provided and documented in the medical record. In this chapter, the default example will be based on caring for a patient in the inpatient setting as if you were a solo practitioner.

"E/M service" is the umbrella term under which the various patient encounters fall. It stands for "evaluation and management," and refers to the documentation that describes the steps taken to clinically evaluate a problem and then establish a management plan. As such, it incorporates all the things that physicians already do to evaluate patients, manage their problems, and discharge them from the hospital. The common thread to all E/M billable encounters includes documenting: ***history***, ***physical exam***, ***medical decision-making, time required for care, and/or time required to counsel and coordinate care***. What helps determine the actual code, in addition to things like place of service and initial versus subsequent care, are also elements like the time-stamp of the patient; bills are submitted based on the calendar date that the patient is seen rather than on a rolling 24 h period. For instance, if the patient is seen by the hospitalist at 10 p.m. on day one and again at 2 a.m. the

same night, those count as two separate visits on two separate calendar days even though the patient was seen twice within one 24 h period.

The overriding element that dictates whether a bill will even hold validity is ***medical necessity***. Medical necessity refers to services that are reasonable and necessary for the diagnosis or treatment of a patient. Consider the following case:

Mr. Stevens presents to the emergency department with complaints of left leg pain and is found to have cellulitis requiring IV antibiotics. Dr. Lane orders a chest X-ray and EKG on admission but does not document why in her note. While she may have had a compelling reason, it is not apparent in the documentation that these tests were necessary for the diagnosis or treatment of this patient.

In this example, the patient does not meet medical necessity for these tests. The documentation that is expected for the corresponding bill should reflect the patient's level of illness [1]. The underlying premise is to treat a patient as you normally would according to the severity of his presentation and then document it. Doing more for something that is not supported by medical necessity, even if documented perfectly, will not get paid at a higher level. More importantly, this premise should highlight the fact that clinical care and billing should be in parallel—the physician is being asked to document that which he would have normally done as standard of care commensurate for that problem.

Components of an E/M Service

There are three elements to a typical billable service. They include **history**, **physical exam**, **and medical decision-making**. Each element is graded on its own to determine whether there is enough documentation to support a particular code level. Coders and auditors use a template audit sheet to evaluate the note, quickly check off, and count the various points required within each of these three categories, and ultimately determine the appropriate code. Lack of documentation in any of these three elements can result in a lower level of coding. Terms like "problem-focused," "detailed," "complete," "comprehensive," etc., refer to different levels achievable in each element and are beyond the scope of this chapter. The following will be discussed as if you are coding for a high complexity patient in the inpatient initial visit (i.e., admission H&P). These fundamental points are then just modified for subsequent follow-up visits.

History

The first component that a coder considers is the history. The parts of the history that the coder evaluates are ***chief complaint, history of present illness (HPI), past medical/family/social history (PMFSH), and review of systems (ROS)***. While medications and allergies are critical pieces of the patient history to obtain and

document, they are not considered when determining a level of care. Keeping in mind medical necessity, the more detail documented, the greater likelihood that the bill will reach the threshold for a higher level of care. Each note needs to have a chief complaint or a reason that the patient is being seen again [3]. Even though it may seem counterintuitive to have to specifically write why a patient is being followed-up the next day, as it should seem self-explanatory in the assessment and plan section of the note, even subsequent visits should clearly document the medical necessity for follow-up at the beginning of the note [4]. Notations like "f/u" or "routine visit" should not be used as they do not give import to the level of illness of the patient that is needed to justify their continued hospital stay [5]. For a severely ill patient, a high-level HPI requires four or more HPI elements. These elements are the same ones we are taught to use in medical school when taking a history, including onset, duration, location, timing, and exacerbating/alleviating factors. Modifying and documenting at least four of these descriptors for various complaints in an HPI is the first step to achieve the highest billable level [1]. Alternatively, documenting symptoms and statuses of three chronic medical problems also achieves the same high level bill [6].

You must document ten or more systems in ROS in order to bill for the highest level [6]; anything less automatically downgrades the code [7]. Depending on where you practice, it may be permissible to document the pertinent positive or negative ROS and state "all others reviewed and negative" to equate to greater than ten systems once those systems have been reviewed [3]. Regional practices vary with this and should be verified based on local practice. You must document at least one piece of history in each of the PMFSH sections. Be aware that family history is a commonly omitted component [8]. This simple omission can be the difference between being able to bill for a higher or lower level. Also important is to document if a history was unobtainable and the reason why; you get credit for trying even if unsuccessful [3]. The key is to demonstrate that an effort was made to ask something even if the answer was negative.

To summarize, in order to get the highest level for a documented patient history you must document:

- Chief Complaint
- HPI: four descriptors of the chief complaint or symptoms/ status of three chronic conditions
- PMFSH: at least one piece of information in each category
- ROS: 10 or more.

Physical Exam

The next section a coder considers is the physical exam. There are two sets of guidelines that are used by a coder or auditor to grade the physical exam on a note, the 1995 guidelines and the 1997 guidelines established by CMS. The key

difference is that the 1995 guidelines divide the physical exam into "body areas" while the 1997 guidelines use "organ systems." For the hospitalist, the 1995 guidelines are more reflective of how physical exams are conducted and are a less cumbersome way to document. In order to achieve the highest level physical exam using the 1995 guidelines, you need to document at least one physical exam finding in eight or more organ systems (at the highest level, the 1995 guidelines use organ systems as well). Achieving an equivalent level using the 1997 guidelines requires performing all the exam elements in at least nine systems and then documenting at least two elements in each of the nine or more systems [1]. A single guideline must be used for determining a physical exam level for a patient [6]. As with history-gathering, if you are unable to perform a full physical exam due to a patient-related reason, documenting the attempt and reason for a limited exam is essential.

Medical Decision-Making

Medical decision-making (MDM) is perhaps the most difficult concept to grasp. This is where the complexity and acuity of a patient, coupled with the degree of your thought effort, combine. You must demonstrate that your MDM is at a high level in order to bill as such. Documenting in a way that demonstrates the complexity of a patient and cognitive effort you have put into evaluating that patient is the goal. The three elements that are individually considered for MDM are (1) diagnoses and treatment options, (2) amount and complexity of data, and (3) patient risk. We will examine each of these separately.

Number of Diagnoses or Treatment Options

This part of MDM considers how many medical issues you are addressing, if they are new or established, if they are stable or worsening and if a work-up is planned. A point system is used to account for these factors. You receive the most points for new patient problems with a work-up planned (four points). You received progressively fewer points for new problems without a work-up planned (three points), established problem that is worsening (two points), established problem that is stable/improved (one point), and self-limited or minor problems (one point). The goal is to try to achieve a total of four points for the highest level. Document the actual diagnoses; the auditor will not extrapolate a diagnosis from the separate history and data points for you [8]. Use of "probable" or "rule-out" for unestablished diagnoses is acceptable [9]. Keeping this system in mind will help you to determine whether you need to document more if you are trying to achieve the highest level of billing.

Amount and/or Complexity of Data to Be Reviewed

This section also uses a point system and correlates to some extent on the amount of effort you put into evaluating the patient. Again, four points is needed for the highest level. You receive points if you document that you have reviewed labs, radiology reports, and ECG reports (one point each). Taking the extra step to evaluate the radiographs yourself or actually summarizing the outside records is valued even more [8, 10]. For instance, if you look at and interpret an ECG yourself you get two points. If you discuss test results with the performing physician or decide to obtain records or history from someone other than the patient, you can earn one point for each. For admitted patients, this section is quite easy to obtain four points for most patients.

Patient Risk of Complications and/or Morbidity or Mortality

This section divides patient risk into minimal, low, moderate, and high based on the presenting problem(s), diagnostic procedure(s) ordered, and management options selected. Coders use a table for this. The highest level for presenting problems includes severe exacerbation or progression of a chronic problem, illnesses that put the patient at risk for death or organ injury (e.g., acute renal failure, pulmonary embolism), or acute changes in neurologic status. Essentially, illnesses that if not treated may result in the demise of a patient lend themselves well to the highest level for risk. Diagnostic procedures that carry more risk are considered higher level for coding. For instance, lumbar punctures are moderate risk but cardiac electrophysiology tests are high risk. Finally, management options are also considered for risk. Intravenous fluids with an additive are moderate risk but intravenous narcotics are considered high risk. A decision to change code status to DNR or descalate care also qualifies as high risk.

In order to code for the highest billing level, you need to have achieved the highest level in history, physical exam and medical decision-making.

Consultation

In addition to serving as the primary attending for patients admitted the hospital, hospitalists often serve as medial consultants for various non-medical specialties. Though CMS no longer recognizes consultation codes, private insurers still may. The documentation needed for coding a consult is the same as already described; however, there are some salient documentation features that are specific to consultations. First, the request for the consultation needs to be documented, both on the end of the requesting service as well as the consulting service. Second, a reason

for consultation needs to be documented; this can be stated with phrases like "would like evaluation of _____" or "would like opinion regarding _____." Phrases like "for management of" or "referral for" implies a transfer of care rather than a true consultation. Practically speaking, consultants often help manage the problem on which they are consulting; this means that billing for an initial consultation may not be feasible but your coder may be able to help determine if the documentation meets criteria for a lesser level service like a subsequent follow-up visit code.

Consultations, like admissions, have to demonstrate medical necessity and seem "reasonable" that the problem is beyond the scope of the primary service, requiring expert opinion. For instance, consulting infectious diseases for an uncomplicated cellulitis would not pass that litmus test. As such, standing orders like hospital order sets that trigger automatic consultation are not allowed. Each patient needs to be individually evaluated for the need of a consultant's input. Similarly, having routine consultations for a particular group or subspecialty, or co-managing patients with other services, becomes more complicated in terms of billing. Preoperative consultations also require demonstration of necessity and cannot be for routine screening purposes. The diagnosis code for a preoperative evaluation cannot stand by itself but instead needs to be linked to another medical problem that reasonably justifies the consult by a medical specialist [11]. Also, the history component of the consultation can sometimes seem limited. Consider a preoperative consult for a knee surgery in an otherwise healthy man. In those instances, use the history of the problem leading up to the surgery. For example, in the preoperative knee replacement patient, the history would describe elements of the pain and dysfunction leading up to the decision to do surgery [3]. Bottom line-consultations need to be requested to address a specific problem that requires attention in the hospital that was beyond the reasonable scope of the requesting physician [11].

Time-Based Coding

In certain situations, physicians are able to bill based on the time spent with the patient and/or reviewing the patients' information rather than based on the traditional history and physical format. Each of the initial and subsequent encounter codes have specific "time-spent" requirements associated with them; if more than fifty percent of that time was spent in counseling and coordinating care for that patient, billing at that level may be based on the time spent rather than on the history, physical, and decision-making aspect [1]. This is useful when patient encounters are for the purposes of delivering news and coordinating next steps in care. Details about different types of time-based codes are beyond the scope of this chapter but being aware of their existence may become helpful in certain situations.

Common Billing and Coding Pitfalls

Given all the layers and requirements to billing and coding, avoiding common pitfalls is important. As this chapter has emphasized, documentation is critical. Lack of appropriate documentation is the largest pitfall hospitalists make in terms of billing and coding. Data and decision-making will not be extrapolated from nursing notes, medication orders, or other parts of the medical record by coders. Therefore all important decisions need to be documented. If a patient is started on a dilaudid PCA, a high-risk medication and thus high level MDM, it must be documented in the hospitalist's note. Lack of assessment of problems is another pitfall. You should have a descriptive assessment for each problem you are addressing, whether it is worsening, improving, critical, etc. [6, 8]. Similarly, each problem should have a plan. Avoid the use of shorthand as this can lead to confusion for the coder. Use of the acronym "CP" can be meant to convey chest pain but may be misinterpreted to represent cerebral palsy by the coder. Avoid "none" and empty-set symbols in the history and physical. Instead, write "no history of hypertension" or "no cervical or inguinal lymphadenopathy." Do not use the word "non-contributory." This word is ambiguous and is not acceptable for billing. Using general phrases like "remainder of exam within normal limits" lacks specific medical content and is treated as if no medical care was performed [1]. Be as specific as possible. "Diabetes type II with nephropathy and neuropathy" conveys a much more complex patient than just "Diabetes." [8] Avoid words like "normal" or "abnormal," especially for elements pertaining to the presenting problem. For instance, writing that the cardiovascular and lung exams are "normal" without further description in a patient presenting with chest pain is insufficient [6].

Clinically related diagnoses can also be given individual attention in the documentation. For instance, the hypernatremia and acute kidney injury from dehydration are all valid individual diagnoses even though clinically would seem interrelated [9]. Most importantly, be legible in the documentation and sign all notes including date and time. A missing or illegible signature will render your note unbillable [6, 8]. Good documentation accomplishes both the medico-legal and financial goals simultaneously. The physician note should convey a clear story about the patient, his conditions, and the plan to help his issues. It should be able to convey the medical information unambiguously to anyone reviewing the chart so that the other members of the healthcare team can be accurately informed. Therefore, the information needed to be extrapolated for billing purposes should be a natural extension of that, not add additional workload [1, 6].

Medical billing and coding can be a complicated process to learn. Hopefully, this chapter has helped to highlight some of the key terms and concepts pertinent to the new hospitalist physician. The challenge is to document in a way that allows you to receive credit for all the work that you do.

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Chapter 9
Incorporating Evidence-Based Medicine into Your Daily Life

Negin J. Ahadi and Robert J. Habicht

Dr. Lane has been a practicing hospitalist at a busy community hospital for the past 5 years. While she felt up to date on current medical practices when she graduated residency, she feels her skills in delivering the best care possible in an evidence-based manner have deteriorated. She makes a conscious decision to rededicate herself to incorporating evidence-based medicine into her daily life. She is concerned, however, that it may be too difficult to stay up to date given the rate of medical advances. She decides to explore strategies to see how she can be able to accomplish this new goal. This chapter aims to provide the practicing hospitalist with tools to incorporate evidence-based medicine into daily practice in a way that is both efficient and meaningful.

The practice of medicine has changed significantly over the past century. From the mid 1950s, there has been an explosion of innovations and discoveries that have changed the landscape of medicine. With the development of new medications such as statins, immunosuppressants, and chemotherapeutic drugs, to the invention of everyday medical devices, it is easy to see how the practice of medicine today is rapidly evolving. All these innovations and advances have helped shaped our

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profession and allowed us to provide better care to our patients. However, this comes at a cost. The enormous amount of information that is generated daily makes it difficult for the practicing hospitalist to stay up to date. In 2013 alone, over 700,000 completed references were added to MEDLINE [1]. Today's hospitalists have an ethical duty to remain current with medical evidence that impacts our patient population. However, this can be a daunting task and without a systematic approach this will be unrealistic. Having the skill set to effectively and efficiently use evidence-based medicine to provide the best care to our patients is necessary to be a quality hospitalist.

What Is Evidence-Based Medicine?

Evidence-based medicine (EBM) is a term coined in 1996 by a group of clinicians from the McMaster University in Ontario, Canada. Dr. David Sackett, who was part of the original team and a pioneer of EBM, described it as "the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research." [2] Furthermore, he went on to state that "evidence-based medicine is the integration of best research evidence with clinical expertise and patient values" [3] (Fig. 9.1). Based on his definition, it is clear to see that EBM is not a prescribed approach to medicine, rather it is a means to provide the tools necessary to adequately answer a clinical question.

Fig. 9.1 Components of evidence-based medicine

Why Is Evidence-Based Medicine Important to Every Day Practice?

EBM is a crucial piece to providing appropriate care to patients. It offers a way for hospitalists to overcome inherent biases, maintain knowledge base with relevant medical information, and de-emphasizes the practice of medicine that is purely based on unsystematic clinical experiences. It also promotes consistency of treatment modalities, establishes national standards of patient care, and allows the hospitalist to provide the best care at the lowest cost. Finding a way to incorporate EBM into your daily life may seem daunting at first; however, strategies can be taken to incorporate this process into your daily practice without a great deal of effort.

The Evidence-Based Medicine Search Model

EBM is an analytical process which involves five steps known as the 5 A's: Ask, Acquire, Appraise, Apply, and Assess [4]. Using the following steps, you can use EBM to guide your clinical care and augment your ability to treat your patients more effectively and cost-efficiently. The following steps will guide you on this process.

Step 1: **Ask a Clinically Relevant Question**

The first step of the EBM search is developing an *answerable* question that is *relevant* to your patient [5]. Formulating the right question facilitates the literature search, and narrows down the results. A common tool used to assist clinicians in formulating this question is **PICO**—a mnemonic which stands for **P**opulation, **I**ntervention, **C**omparison, and **O**utcome [6]. With the use of PICO, you can quickly identify the different components of the question and rephrase it in a manner that it is clear and easily searchable.

P I C O [7]

P*opulation*: Refers to the *most important characteristics* of the group of patients being evaluated. Think of it as the terms you use to describe your patients when writing a note or speaking to a colleague. Some of these characteristics include age, sex, comorbidities, and the active condition at hand.
I*ntervention*: Refers to the intervention, prognostic factors, or exposures being considered. Examples include initiation of a new medication, or use of particular test (i.e., colonoscopy).
C*omparison*: Refers to the main alternatives being considered. Examples include comparing the effect of one drug versus another one, comparing the benefit of two different diagnostic tests, or comparing the effect of medical versus surgical

management. This step is considered optional as not all interventions need or have an available alternative.
***O**utcome*: Refers to what you hope to accomplish, measure, or affect. For example, are you looking to cure an illness? Relieve symptoms? Improve function? Remember that your outcome needs to be a specific measure pertinent to your patient.

Here is an example of how to use the PICO model to formulate a question.

Mrs. Brown is a fifty-two-year old woman with a history of hypertension who is admitted to the hospital with newly diagnosed insulin-dependent diabetes and uncontrolled hyperglycemia. During rounds you note that her blood pressure is 185/95 despite being on maximum doses of her home antihypertensive regimen. You wish to start a new medication and want to know if drug X is more effective that drug Y in controlling her blood pressure.

Now, let's identify the PICO components in this scenario.

P Middle-aged woman with insulin-dependent diabetes and hypertension
I Drug X
C Drug Y
O Control of blood pressure

The next step is to frame the question based on the PICO model:

In middle-aged female patients with insulin-dependent diabetes and hypertension, is drug X more effective than drug Y in controlling blood pressure?

Now that the question has been created, the next step of the evidence base search model is to find the answer in the literature.

Step 2: **Acquire the Data**

This step refers to the actual review of the literature. For most clinicians, this is the most intimidating and time-consuming step of EBM due to the sheer volume of literature available. EBM models facilitate the search by providing a framework which quickly guides the user to the best study type available to answer a particular clinical question.

In order to become proficient with this step it is important that you familiarize yourself with the sources of information, types of study designs available and the evidence pyramid, as well as the best study designs for the type of question asked.

Source of Information
The first classification to discuss is the difference between primary and secondary sources of information. Primary sources are the cornerstone of the literature and refer to the original studies. Randomized-controlled trials, cohort studies and case-control studies are examples of primary sources. Secondary sources refer to publications that have already been reviewed by experts and present the information pertinent to a specific question in a synthesized format. Examples of secondary sources include systematic reviews and meta-analysis.

Type of Study Design and the Evidence Pyramid

The second subset to review is the types of studies available. As you review this, it is helpful to use the *pyramid of evidence*—a graphic representation of how information is graded based on their level of quality, with the top of the pyramid representing the highest quality of evidence (Fig. 9.2).

In the evidence pyramid, the top portion is composed of systematic reviews, critically appraised topics (CATs) and critically appraised individual articles (CAIAs). These levels of the pyramid are considered "filtered information" as another party has already reviewed the literature, filtered out poor quality studies, and synthesized the information into more meaningful conclusions or recommendations. Systematic reviews are considered the most refined and sought after reviews of the literature and typically lead to the development of medical guidelines and national standards. Meta-analysis is a part of a systematic review and refers to the statistical technique used to combine the results of multiple studies in order to calculate the combined treatment effect. One of the most well-known databases for systematic reviews is the Cochrane Database of Systematic Review (http://www.cochrane.org/) created in 1993 and published by the International Cochrane Collaboration.

Following the hierarchy of evidence, the other two levels of filtered information are critically appraised topics (CATs) and critically appraised individual articles (CAIAs). CATs are a synthesis of the all published evidence on a specific question, think of it as a mini systematic review. CATs can be found in ACP Journal Club, DynaMed, and PIER. CAIAs on the other hand, are summaries of an individual study and they can be found in programs such as EvidenceUpdates and Bandolier.

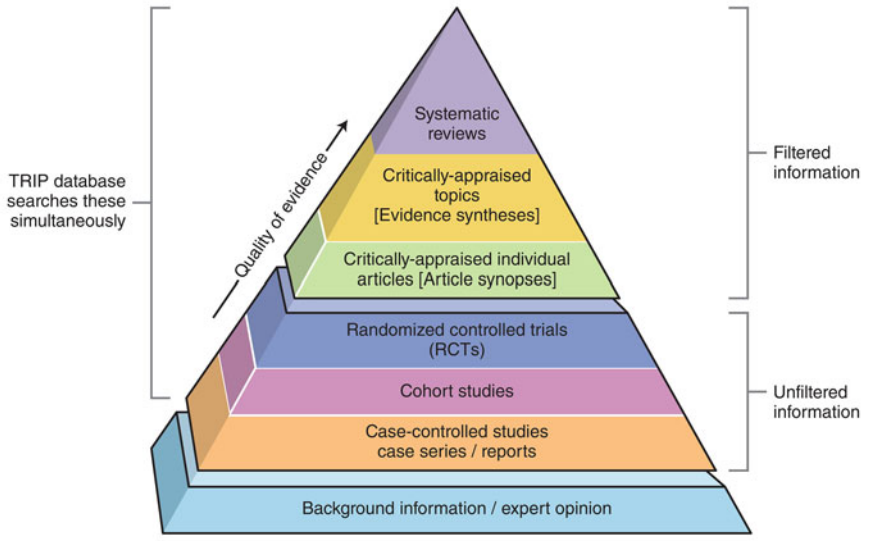

Fig. 9.2 Pyramid of evidence

For the busy hospitalist, using the levels of filtered information (systematic reviews, CATs, CAIAs) is the most time-efficient and effective way to incorporate EBM into your daily practice. These levels of filtered information have already been rigorously evaluated by both experts in the field as well as experts in statistical analysis, and generate sound recommendations based on the best current evidence.

Below filtered information on the evidence pyramid you find unfiltered information. Unfiltered studies include randomized-controlled trials (RCTs), cohort studies, and case-control studies/case series. As mentioned previously, these are the primary sources of all available data and they are particularly useful when systematic reviews and clinically appraised articles are lacking. Unfiltered studies can be found using well-known search engines such as MEDLINE and PubMED.

At the base of the pyramid of evidence, you will find background information and expert opinion. At this level the information is typically factually stated, such as in the case of the pathophysiology or epidemiology of an illness, or based on expert opinions. At this level the quality of the information can be low, and the recommendations are not typically backed up by research.

Systematic reviews represent the most evidence-based information and should be the starting point for your search; however, it is important to note that not all questions will be answered with the top level of the pyramid. Each level of the pyramid holds a particular value and it is important to know when to use it. When searching for the best source of evidence for a particular question, the type of question being asked (diagnosis, therapy, prognosis, or harm) typically dictates the best study design. See Table 9.1 for a summary of the best study designs.

Step 3: **Appraise the Literature**

Now that you have found the literature, the next step is to appraise it. Appraisal refers to assessing the validity of the study. Here you must review the study, analyze it, and decided if it is applicable to your patient [9]. This is a critical step in your evidence-based search as studies can be biased, poorly design, or not relatable to your search.

The type of in-depth appraisal depends on the study design. There are multiple worksheets online that can help you analyze a paper. For a detailed list of questions to ask, you can refer to Critical Appraisal Worksheets at http://www.dartmouth.edu/~library/biomed/guides/research/ebm-resources-materials.html

Table 9.1 Best study design for a particular question [8]

Type of question	Best study design
Diagnosis	Prospective, blind comparison to a gold standard or cross-section
Therapy	RCT
Prognosis	Cohort study > case-control > case series
Harm	Cohort > case-control > case series

Adapted from Dartmouth Biomedical Libraries: Evidence-Based Medicine Worksheets

Step 4: **Apply**

After you have reviewed the literature and analyzed the information, it is imperative that you go back to the patient and determine if the information is applicable. This step ensures that the best evidence obtained is aligned to your patient's preferences. In evidence-based practices, the patient is at the center of the model and is an active participant of the decision-making process.

Step 5: **Assess**

The final step is the assessment of your intervention. Did the intervention affect my patient? Was the effect beneficial to my patient? Was it harmful? Was it aligned to their desires? This is also a time of reflection of the individual steps and a learning opportunity for future searches.

Tips to Incorporate EBM to Everyday Practice

1. ***Commit to the practice of EBM***
   In order to become proficient with EBM, you must invest the time and make it part of your daily work. Initially, it will be challenging and time consuming, but with practice it will become part of your daily routine and dramatically improve your skills as a hospitalist.
2. ***Understand the Language***
   A common limitation hindering physicians from practicing EBM is their discomfort with the research terminology. In order to be comfortable with EBM, it is important that you become familiar with the basic research terminology. Table 9.2 shows a list of the most commonly used research terms.
3. ***Learn how to formulate the right question***
   Remember the mneumonic **PICO** (Population, Intervention, Comparison, and Outcome) and use it with all your searches.
4. ***Understand the levels of evidence and the different study designs***
   Place a copy of the evidence pyramid and the table of best study designs on your work desktop or work table. Keep it as quick reference when searching the literature to save time and significantly limit your search results.
5. ***Actively engage your patient in the decision-making process***
   Knowing what your patient wants before you engage in the search will limit your search results. There is no need to look up a procedure or intervention if your patient is not interested in it.
6. ***Use EBM search engines and have it accessible at work***
   There are multiple online programs created to quickly and accurately answer medical questions, take advantage of them! Download the programs to your work computer so they are readily available. Examples include the TRIP Database (www.tripdatabase.com), Cochrane Library (www.cochrane.org/),

Table 9.2 Common research terminology [10]

Absolute risk reduction	The absolute arithmetic difference in rate of bad outcomes between experimental and control participants in a trial, calculated as Experimental Event Rate (EER)—Control Event Rate (CER) and accompanied by a 95 % CI
Case-control study	A study which involves identifying patients who have the outcome of interest (cases) and patients without the same outcome (controls), and looking back to see if they had the exposure of interest
Case series	A report on a series of patients with an outcome of interest. No control group is involved
Cohort study	Involves identification of two groups (cohorts) of patients, one which received the exposure of interest, and one which did not, and following these cohorts forward for the outcome of interest
Confidence interval	Quantifies the uncertainty in measurement. It is usually reported as a 95 % CI which is the range of values within which we can be 95 % sure that the true value for the whole population lies
Cross-sectional study	The observation of a defined population at a single point in time or time interval. Exposure and outcome are determined simultaneously
Intention-to-treat analysis	A method of analysis for randomized trials in which all patients randomly assigned to one of the treatments are analyzed together, regardless of whether or not they completed or received that treatment, in order to preserve randomization
Likelihood ratio	The likelihood that a given test result would be expected in a patient with the target disorder compared with the likelihood that this same result would be expected in a patient without the target disorder
Meta-analysis	A systematic review that uses quantitative methods to synthesize and summarize the results
Number needed to treat	The inverse of the absolute risk reduction and the number of patients that need to be treated to prevent one bad outcome. Calculated as the inverse of the absolute risk reduction NNT = 1/ARR
Odds ratio	The ratio of the odds of having the target disorder in the experimental group relative to the odds in favor of having the target disorder in the control group (in cohort studies or systematic reviews) or the odds in favor of being exposed in subjects with the target disorder divided by the odds in favor of being exposed in control subjects (without the target disorder)
Negative predictive value	Proportion of people with a negative test who are free of the target disorder
Positive predictive value	Proportion of people with a positive test who have the target disorder
Randomized-control trial	Participants are randomly allocated into an experimental group or a control group and followed over time for the variables/outcomes of interest
Relative risk reduction	The proportional reduction in rates of bad outcomes between experimental and control participants in a trial $\mathrm{RRR} = \frac{\mathrm{EER}-\mathrm{CER}}{\mathrm{CER}}$

(continued)

Table 9.2 (continued)

Sensitivity	Proportion of people with the target disorder who have a positive test result. It is used to assist in assessing and selecting a diagnostic test/sign/symptom
Specificity	Proportion of people without the target disorder who have a negative test. It is used to assist in assessing and selecting a diagnostic test/sign/symptom
Systematic review	A summary of the medical literature that uses explicit methods to perform a comprehensive literature search and critical appraisal of individual studies and that uses appropriate statistical techniques to combine these valid studies

ACP Journal Club (https://acpjc.acponline.org/), and Bandolier (http://www.medicine.ox.ac.uk/bandolier/).

7. ***Download apps to handheld devices***
   We all use our phones to look up medical information. Instead of quickly searching for an answer on non-reputable sources, use EBM smartphone apps. Some examples of useful apps include DynaMED Plus, ABX guide, Uptodate, and Medscape.
8. ***Participate in EBM seminars***
   A good number of medical conferences directed to hospitalists have workshops on EBM. Go to these seminars to refresh your knowledge and learn new skills.
9. ***Participate in local journal clubs***
   Journal clubs are an excellent way to get to know your colleagues, earn continuing medical education (CME) points, and practice your newly learned EBM skills.

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Chapter 10
Interprofessional Collaboration

Abel Joy and Philip C. Dittmar

As hospitalists, we have the opportunity to lead a variety of services with a variety of functions. Intuitively, successful interprofessional collaboration or teamwork in hospital medicine is important. We believe good teamwork leads to excellent patient care, happy team members, and an efficient use of resources. For simplicity, we will define a hospitalist team as a group led by a hospitalist working interdependently towards providing excellent, efficient medical care. Despite the years of training, teamwork has not been an instructional priority. Instead, we train to believe the more information and more patient experience we garner, the better care we provide. Nothing and no one else is needed. The reality is we are dependent on those around us to provide optimal care. Most of our teams consist of some combination of hospitalists, nurses, case managers, pharmacists, social workers, physical therapists, occupational therapists, non-physician providers, and residents. Some are teaching services, some non-teaching. But trying to evaluate how well a hospitalist service works as a team within an organization can be imposing.

The Need for Interprofessional Collaboration

We pursue a career in medicine to help people. But in 1999, the Institute of Medicine estimated between 44,000 and 98,000 patient deaths occur annually due to preventable medical error. Beyond the patient toll, the errors incurred an

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estimated annual cost of $17 billion to $29 billion and contribute to public mistrust of the healthcare system [1]. The report recommended the establishment of interdisciplinary team training programs, based on team management principles, to improve hospital staff coordination and communication. The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) reported ineffective communication resulted in 70% of preventable errors involving death or serious injury from 1995 to 2003. From 2004 to June 2014, communication, leadership, information management, and care planning were among the top root causes of sentinel events. A sentinel event was defined as a self-reported unexpected occurrence involving death or psychological injury. From 1995 to September 2010, roughly 68% of sentinel events occurred in the hospital [2].

Building a Team for Success

Multiple frameworks for successful team structure exist, but none are clearly identified as ideal for hospital medicine. Fortunately for us, they do share similarities that we can use to model our own teams. Good teams are built with: leadership, mutual performance monitoring, backup behavior, adaptability, shared mental models, communication, mutual trust, and team orientation [3–5]. The fundamental aspect of a team is that each member has a set of skills, knowledge base, and attitudes to help promote the team's goal.

For us, every team member's specialized training identifies their knowledge base, roles, and responsibilities. The goal is excellent patient care. In the case of our hospitalist team's day-to-day patient care routine, the physician or non-physician provider evaluates the patient and writes/communicates orders to nurses, pharmacists, laboratory, therapists, and others. The pharmacists provide the ordered medications, nurses dispense the medications to the patients, labs and imaging are reported. The patient is then reevaluated based on feedback from the information, team members, and the patient. Although this oversimplification may seem adequate, it actually is more involved. To work effectively together team members not only need to possess their individual set of knowledge, skills, and attitudes, but also the ability to monitor each other's performance, knowledge of teammates responsibilities, and a positive attitude toward working together. We have all seen situations where poor interprofessional communication or interactions result in impeded work flow or potential harm to a patient.

The ability to create highly effective, interdependent interdisciplinary teams is a highly valuable asset to any hospitalist group. The Salas theory of teamwork defines five core elements and three coordinating mechanisms as necessary to create high performing teams (Fig. 10.1) [4]. Just as the team is interdependent, so are these elements. Backup behavior, adaptability, and mutual performance monitoring work hand in hand. Members not only must understand what each other's roles are to critique and help, but also to know what roles they are capable of assuming during times of high stress or demand. Communication is a skill that allows the interactions to function. Hospitalist teamwork is led by a hospitalist but sustained by a shared

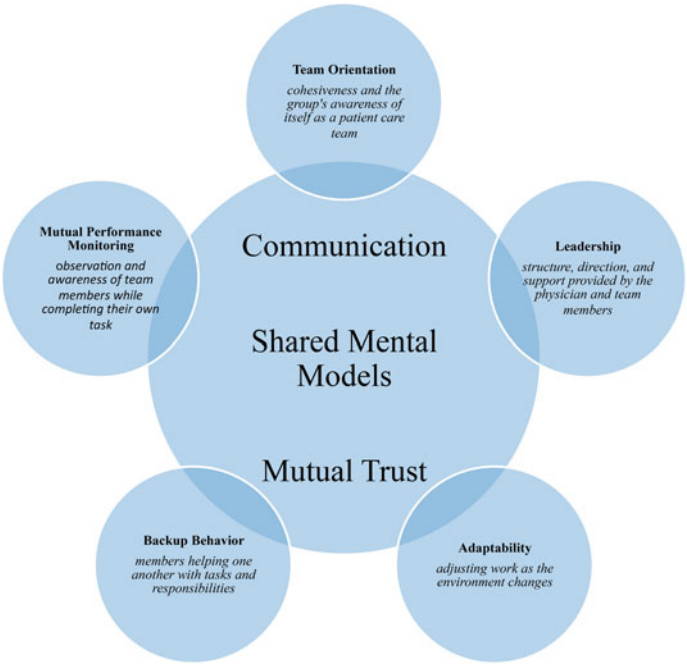

Fig. 10.1 Shared set of knowledge, skills, attitudes, and coordinated by communication

set of knowledge, skills, attitudes, and coordinated by communication, rather than permanent assignments.

The means of creating and demonstrating teamwork can be daunting. Generally, you have three options. Select individuals with specific knowledge, skills, and attitudes to be part of the team. Modify tasks, workflow, and structure to accommodate the team. Lastly, develop individual team member competencies through training. Within the hospitalist team, the members are generally assigned.

The hospitalist team orientation is simple, we are a group committed to providing excellent patient care. Because tasks performed by one member are dependent on tasks performed by other team members, limitations need to be minimized to allow the group to optimally function.

An elderly floor patient is being treated for community acquired pneumonia, when the nurse notices the blood pressure is relatively low and the heart rate is elevated. The vitals and concern are communicated to the hospitalist, Dr. Lane, who must decide what supportive measures to order and whether to monitor the patient or escalate care to a higher level. If a higher level of care is needed, then Dr. Lane will need to communicate with a consultant while reviewing laboratory data, vital signs, and imaging. The non-physician provider, resident, or nurse will need to continue medical care, monitor the patient for deterioration, and write new orders as needed.

For the sequence to run smoothly, communication and a shared understanding of one another's roles must exist.

Interprofessional Education

Interprofessional education (IPE) provides an important opportunity for team members to better understand one another's role through direct education [6]. Monthly lecture series based on common illnesses, physical therapy strategies, case management topics, and speech pathology is a strategic use of IPE to ensure an understanding of the team's plan of care and provide a formal vehicle for members to express their approach and skills. Presentations should be about 30 min, structured to address factors that influence initial decision-making from the presenter and how information from team members affect further patient care evaluation and recommendations. Allowing at least 15 min for questions and comments provides an opportunity for clarification and group dynamic assessment.

Team Hierarchy and Leadership

One aspect of team leadership is hierarchy. Hierarchy is necessary within a team. It provides members with clearly differentiated roles to further patient care. However, hierarchy can also lead to dysfunctional communication within the team [7, 8]. As leaders of the hospitalist team, we have to balance our positions atop the hierarchy with an understanding of our dependence on our team.

A patient with chest pain patient is monitored overnight on telemetry. The patient has no laboratory, imaging, or ECG data suggestive of acute coronary syndrome and is planned for discharge. When talking with the case manager, the patient complains of continued chest pain and now reports a cough productive of green sputum. When discussed with the hospitalist, Dr. Lane, the concerns are ignored and the discharge order is placed.

Such events can lead team members to avoid raising concerns or suggest alternate plans of care to the hospitalist, even when it would be appropriate to do so. This can lead to mismanagement and undermine your role as a team leader. Although the final decision to discharge rests with the physician, engaging team members and addressing concerns to ensure a common plan of care helps limit mistakes. Most medical teams are hierarchal, but fostering an environment in which assertiveness and mutual trust is appreciated will reduce the negative effects. Effective leaders limit the interpersonal constraints of hierarchy and encourage open communication.

Interdisciplinary Rounds

Leadership is built upon communication and decision-making. Limitations of memory, effects of stress and fatigue, distractions, interruptions, and limited

multitasking abilities make physicians prone to mistakes; individuals make more mistakes than a team [8]. Fortunately, most hospital medicine teams consist of multiple members. However, each member has a different perspective on the patient's care and decisions do not always gain consensus. Moreover, each member is trained differently in his/her respective professions and may communicate with varying styles. While each team member may have specific information to share with his/her counterpart at end-of-shift transitions, coordinating all members to participate in interdisciplinary rounds, or briefings, can be highly beneficial to all. This is time set aside to ensure the goals for each patient are addressed by all the team members. Another crucial aspect of the briefing is to establish a common format or language when discussing patients to make efficient use of your limited time.

In a group consisting of a charge nurse, physician, resident or non-physician provider, case manager, and social worker, a reasonable presentation of each patient would be a brief history, plan of care, evaluations, and disposition obstacles preferably at the beginning of the day. The rounds should be led by the hospitalist who communicates the plan, but the coordination and timing of the processes should be addressed by the team members so as to elucidate any obstacles early in the day. The process of briefing is valuable even when all members are not immediately available, instead gathering as much of the team as possible and communicating the plans with other team members as time allows. Ideally, another interdisciplinary round (debriefing) would take place at the end of the day to assess what went according to plan, obstacles, and what needs to be done differently for a particular patient or all patients in the future. This provides an opportunity for team members to monitor one another's performance, provide immediate feedback, and avoid late day adjustments to minimize delays in care.

Barriers to Creating Successful Teams

As mentioned earlier, most hospitalists are not formally trained to be good team members. Not only do we lack training, but cultural, structural, and strategic barriers limit our team building abilities [9]. Culturally, physician autonomy has the potential to limit the creation of good teams. We can blame it on training, silos, or workflow but the crux of the problem is that people work along the path of perceived or immediate least resistance. It is easier for us individually to make a decision and move forward than take time to discuss and confer with others. More broadly, it is easier for team members to defer decisions to the hospitalist and create a bottleneck for patient care limited by the hospitalist's availability, workload, and expertise.

Another impediment lies within the structure of the inpatient service. Hospitals are a collection of departments. Improvements and decisions focused on departmental gain may come at the expense of the team. Incentives for shorter lengths of stay, decreased resource utilization from a hospitalist standpoint may contradict

patient satisfaction and safety outcomes for nursing, case managers, and social workers. Strategically, team members should share outcome goals and measures to improve team dynamics. Unfortunately, the current system still operates independently for each member.

Almost every hospital has a safety program but few have made it a priority within the patient care teams. For example, nurses monitor falls, medication errors, and other negative outcomes separately from the pharmacists and physicians. Physicians could review orders to limit errors and pharmacy safety initiatives could address medication administration difficulties. But pharmacists and physicians, in general, are provided limited access to information regarding errors from their orders or from errors on their floors. A monthly or biannual report of medication errors for each hospitalist can provide an opportunity to improve interactions with pharmacists and nurses while improving patient safety. Even though a standard, hospital sanctioned review of hospitalist led teams does not exist at most institutions, acknowledging the importance of feedback and developing a measurement methodology within our teams can contribute to overall performance.

Formal Team Training

In terms of formal training, few options exist. The Institute of Medicine suggested training in leadership, communication, and team dynamics could reduce medical errors and improve patient safety. The Agency for Healthcare Research and Quality (AHRQ) is the lead federal agency in supporting and implementing the Institute of Medicine recommendations. AHRQ provides comprehensive materials for programs online, including training modules and a set of guides for pretest evaluation, training implementation, and post training evaluation [6, 10]. The program is based on crew resource management (CRM) training. Initially used in commercial aviation in response to a majority of airplane crashes being due to poor communication, leadership, and decision-making, CRM has been adopted by the military, fire departments, and rapid response police units. The program focuses on group dynamics, leadership, communication, and decision-making. Perhaps most important for hospital medicine, CRM enforces that all members of a team are vital and integral pieces to ensuring optimal patient care. An important tenet of this training is that team members can learn from mistakes and prevent their repetition by providing a conducive environment.

MedTeams® and TeamSTEPPS® are two formal CRM training programs applicable to hospital medicine [11, 12]. The MedTeams® program is geared toward emergency department teams but teaches a program based on physician patient prioritization, efficient management of multiple patients, and effective coping with disruptions. The course helps users learn how to maintain a team structure, planning and problem solving, communicating within a team, managing workload, and improving team skills through group review. TeamSTEPPS® is another tool to improve teamwork by enhancing communication and other skills. It uses a

continuous three phase program involving assessment, planning, training, implementation, reinforcement, and sustainment. The curriculum teaches competency in leadership, situation monitoring, mutual support, and communication.

Team Assessment

Following the creation of an appropriately assembled, trained interdisciplinary team, the team must engage in continuous evaluation for improvement. This evaluation involves quantifying the subjective nature of how teammates feel about working with one another. While physicians and nurses have evaluation systems within their professions, there are typically no standards for their interaction. Psychometrics can measure and improve team dynamics. Psychometrics is the science of psychological measurement. It can help evaluate the relationship between individuals within a team. It focuses on areas of perceived responsibilities, expectations, shared learning, decision-making, authority, and autonomy. Several models applicable to medicine exist. The Cognitive–Motivational model, Attitudes Towards Health Care Teams Scale, and the Nursing Teamwork Survey are examples [13–15]. They have been vetted as acceptable, valid, reliable scales. The applicable elements of the scales include a simple scoring system and questions involving assertiveness, decision-making, situation assessment, leadership, and communication. The scales evaluate how team members perceive one another's attitude toward the group based on those elements. Questions steer away from personal likes and dislikes, rather focusing on behaviors that affect the group. *Is an effort made to incorporate the opinions and recommendations of all group members when determining a plan of care? Is there alignment between the team's goal and individual departmental goals? Is the workload distributed fairly*? Questions like these can provide insight into the group's collective attitude. Using a set of questions you feel adequately evaluates your team based on the core elements is important.

Another measure of the team involves identifying outcomes. The ultimate goal of the team is to provide excellent patient care, but identifying metrics important to the team and to the individual member's department provide tangible, measurable endpoints. Hospital and patient metrics are valuable resources to evaluate a team's success. For example, medication safety is driven by the five rights of medication administration: right patient, right drug, right dose, right route, and right time. Error rates are routinely kept by a hospital's medication safety council or patient safety officer and are reflected in quality measures across pharmacy, nursing, and internal medicine. The Joint Commission Core Measures surrounding venous thromboembolism, heart failure, pneumonia, acute myocardial infarction, hospital acquired infections, and tobacco treatment are publicly reported outcomes that can also be valuable endpoints for multiple members. Although work relative value units can be difficult to calculate during real time adjustments for team dynamics, other measures may prove more useful. Patient encounters per day, length of stay,

discharges per total encounters per day, new admissions per day, and patient satisfaction surveys are tangible numbers for every member of the team.

Hospital medicine is complex. Hospitalists work in multiple settings but lack an established standard for communication, developing mutual trust, and team training. Instead, we depend on our innate interpersonal skills to function within a team. No hospitalist should expect to care for a patient independently, rather embrace the interaction with other disciplines to optimize care. As team leaders, hospitalists are responsible for creating a constructive, non-punitive environment for team success. Successful collaboration fosters the sense every member is appreciated, opinions are heard and incorporated, and improvements are based on member contributions. Measuring team success involves assessing both the team interaction and the group outcomes. Criteria need to be established to measure, confirm, and monitor effectiveness. Trying to incorporate these goals in the limited time available is challenging. However, periodic self-assessment of processes and outcomes improve team dynamics. The Institute of Medicine mandated healthcare develops a means of incorporating a team-based approach to reduce patient harm and cost. Fifteen years later, we are still examining the best approach to such an endeavor.

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Chapter 11
Transitions of Care

Danielle Y. Baek and Nidhi Goel

Dr. Lane is attending on a busy inpatient service. She is preparing to discharge a patient who presented with decompensated systolic heart failure. He is now improved after aggressive diuresis. The patient was admitted to her service just two weeks ago for the same condition and discharged with what she thought was a safe discharge plan. She dutifully completed medication reconciliation and did a discharge summary that was cc'ed to the primary care provider on the day of discharge. She instructed the patient to follow-up with her PCP the following week but did not personally talk to the PCP. The patient did not follow-up, as he was feeling well. Dr. Lane ponders how she can ensure a safer transition to outpatient care and, hopefully, prevent the morbidity associated with recurrence of the condition as well as readmission.

"Transitions of Care" refers to the coordinated and continuous movement of patients between healthcare locations, providers, or different levels of care as their medical condition and care needs change [1]. This can occur at multiple points during a patient's hospitalization, but one critical transition of care is at the point of hospital discharge. Acute inpatient hospitalization has evolved and navigating this transition has become more complex. Hospitalists are now the principal inpatient providers and are caring for patients who are sicker. Despite higher acuity, length of hospital stay has decreased due to advancements in medical practice [2]. Patients are faced with the daunting task of understanding the change in their medical conditions, directing new self-care responsibilities, and potentially learning a whole new set of medications in a shorter timeframe then ever before.

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With all these moving parts, it is unfortunately common for errors to occur, especially during the transition from inpatient to outpatient. A prospective cohort study in 2003 found that nearly 20% of patients discharged from a tertiary medical center had an adverse event within a few weeks of discharge. Of these, about one-third were preventable [3]. As healthcare costs continue to rise, hospital readmission has become viewed as the key quantitative measure of poor transitions of care. From 2007–2013, nearly 1 in 5 of all hospitalized Medicare patients were readmitted within 30 days of discharge [4, 5]. Hospitals now face financial penalties of up to 3% of Medicare reimbursements because of high readmission rates [6].

Why are transitions of care so complex? There are many factors that contribute to ineffective transitions of care. As hospitalists take the lead on inpatient management, the primary care physician is less involved. There is no longer one provider that is coordinating care across all healthcare settings for a single patient. Communication across medical settings and providers is vital for effective transfer of care. However, there is no standard method of effective and timely communication. This chapter will provide you with background on some of the common barriers to effective transitions of care, highlight ways to improve the transition process and review programs and strategies you and your hospitalist group should consider to improve care transition if such programs are not already in place.

Barriers to Effective Transitions of Care

The discharge summary is the primary method used to communicate vital patient information and progress from one provider to another. While standards of basic required elements have been defined by the Joint Commission [7], content, quality, and timeliness vary across institutions and services. Direct communication between hospitalists and primary care providers (PCPs) has been shown to be poor, occurring less than 20% of the time [8]. Discharge summaries often miss important information including diagnostic test results, treatment course, discharge medications, and follow-up plan. In a systematic review, pending test results were omitted 65% of the time and descriptions of how the patient/family was counseled were almost universally missing. The availability of these discharge summaries was also very low at first post-discharge visit, and continued to be poor with up to 50% not completed at four weeks. The lack of availability and sufficient content of discharge summaries affected the quality of care in about 25% of follow-up visits [8]. Obstacles to poor communication include time constraints, work pressure and routines, excessive but unprioritized information in the discharge summary, fragmented communication between hospitals and PCPs, differing expectations, and the lack of prioritization and commitment to the discharge process [2].

Ineffective patient and family/caregiver education is another root cause of poor transitions of care. The transition from hospital to home is very difficult for patients and their families, many of whom are not prepared for the self-management responsibilities. Patients and their families/caregivers will commonly receive information on discharge in a fragmented fashion from several different members of

a healthcare team. Sometimes, this information can be conflicting. As a result, patients are confused over new medication regimens, plans of care, and follow-up. As healthcare advancements soar, more patients are discharged with pending diagnostic workups. Patients are usually not included in the planning related to transitions of care, and often fail to see the importance of these vital aspects of their outpatient management [9].

Ultimately, providers and patients need to be accountable for promoting safe transitions. Our current culture often does not promote successful hand-offs, whether it be due to lack of time, teamwork, or respect, and in many cases there is no single provider or "hub" that will take responsibility to ensure coordinated transitional care. As shift work becomes more predominant, patients will often come in contact with several providers within a single hospitalization. As a result, providers with little knowledge of the patient can become the primary purveyor of information. Multiple specialists are often involved and there is minimal coordination amongst them, confusing the patient as well as those providers responsible for transitioning the care. Outpatient providers also have competing priorities and are unable to focus on a transferred patient. Even something as simple as the inability to identify the PCP by name can result in barriers to effective transitions of care [9]. With all of these variables, it is understandable for a provider to shy away from taking on the sole responsibility of navigating a patient through this process.

Strategies and Programs to Improve Transitions of Care

To address this problem, several policy initiatives have been developed to identify, measure, and improve transitions of care. Starting in October 2012, the Centers for Medicare and Medicaid Services (CMS) instituted penalties to facilities with high readmissions rates within 30 days of discharge for three conditions: myocardial infarction, heart failure, and pneumonia. Two-thousand hospitals were penalized up to 1% of Medicare reimbursements in 2012. This reduction has increased by one percent each year with a cap at 3% in 2014 [6]. The Joint Commission enterprise joined an initiative to define methods to achieve effective transitions of care and created a Transitions of Care Portal to provide transitions of care resources [10, 11]. The CMS Community-based Care Transitions Program (CCTP) was created by the Affordable Care Act to test models for improving care transitions from the hospital and reducing readmissions for Medicare beneficiaries [12].

In 2007, the American College of Physicians, Society of Hospital Medicine, and Society of General Internal Medicine convened in a consensus conference to address the quality gaps in transitions of care. The Transitions of Care Consensus Conference (TOCCC), which had over 30 participating organizations including the Agency for Healthcare Research and Quality and the Centers for Medicare and Medicaid Services, developed consensus standards for these transitions for future implementation (Table 11.1) [13].

Table 11.1 Principles and standards for managing transitions of care

Principles	Standards
Accountability	Coordinating clinicians
Communication	Care plans/transition record
Timely feedback and feed-forward communications	Communication infrastructure
Involvement of patient and family/caregiver	Standard communication formats
Respect of the hub of coordination of care	Transition responsibility
Identify coordinating clinician	Timeliness
Establishment of national standards	Community standards
Standardized metrics to monitor and improve transitions	Measurement

The goal of these recommendations was to create a framework of guiding principles from which a set of standards were developed. These standards could then aid in identifying and developing performance measures [13].

Several evidence-based transitions of care models have been developed to reduce readmissions and improve patient outcomes. Most successful programs have focused on transitions from hospital to home. Here we will review three validated transitions of care programs (Care Transitions Intervention, Transitional Care Model, and Project Re-Engineered Discharge) that not only reduce readmissions, but also lower costs. Table 11.2 shows the details of these models, and also includes Project BOOST (Better Outcomes by Optimizing Safe Transitions), which complements the other mentioned models [14–18].

The Care Transitions Intervention (CTI) aims to identify and address potential threats to safe and effective care transitions by providing patients and caregivers with tools and support to learn self-management skills. The intervention is built on four pillars that were established from patient and caregiver feedback on what is most important to them during care transitions [14]. These four pillars include, (1) medication self-management, (2) a patient-centered health record owned and continuously updated by the patient to facilitate information transfer between sites, (3) timely follow-up with providers, and (4) a list of "red flags" suggestive of health deterioration and instructions on how to follow them. These interventions are enacted through the personal health record and patients are supported by a "Transition Coach" through a series of visits and phone calls. CTI has been successfully implemented and evaluated in multiple patient populations. In a randomized controlled study, incorporating CTI reduced rates of rehospitalization at 30 days (8.3% vs. 11.9%) and 90 days (16.7% vs. 22.5%) compared to control subjects that received usual care [15].

In the Transitional Care Model (TCM), a Transitional Care Nurse facilitates transition of care by providing pre- and post-discharge support for chronically ill, high-risk older patients. Core components include in-hospital assessment and post-discharge follow-up, with the goal of engaging patients and their caregivers, assessing patient goals and needs, and multidisciplinary communication across all transitions of care. A randomized study evaluating TCM showed that the interventions group were significantly less likely than controls to be rehospitalized at least once within six months (20.3% vs. 37.1%; $p < 0.001$) [16].

Table 11.2 Transitions of care models

Model	Care transitions intervention (CTI)	Transitional care model	Project re-engineered discharge (RED)	Better outcomes by optimizing safe transitions (project BOOST)
Goals	*Facilitated by*: 1. Transition coach 2. Personal health record	*Facilitated by*: Transitional care nurse	*Facilitated by*: Discharge educator	*Facilitated by*: Wed-based modules
	4 pillars 1. Medication self-management 2. Patient-centered health record 3. Timely follow-up 4. "Red flags" *Follow-up* Predischarge 1. Hospital visit Post-discharge 1. Home visit 2. 3 phone calls	*Core Components*: 1. In-hospital assessment —evaluation of functional status, collaboration with hospital team members to reduce adverse events, and develop streamlined plan of care 2. Regular home visits with online phone support post-discharge 3. Accompany patients to first post-discharge visit 4. Comprehensive assessment of patient's goals and needs 5. Active engagement of patients and family caregivers with a focus on meeting their goals 6. Emphasis on patients' early identification and response to health care risks and symptoms	*Core Components*: 1. Ascertain need for and obtain language assistance 2. Make follow-up appointments and post-discharge tests/labs 3. Make a plan for follow-up labs/tests that are pending at discharge 4. Organize post-discharge services 5. Reconcile medications and make a plan for the patient to obtain and take them 6. Reconcile discharge plan with national guidelines 7. Teach/review a written discharge plan the patient can understand 8. Educate the patient about their diagnosis throughout hospital stay 9. Assess the degree of understanding by the patient 10. Review action plan on what to do if a problem arises 11. Expedite transmission of the discharge summary to the outpatient providers 12. Provide telephone reinforcement and support within 3 days of discharge	*Core Components*: 1. Tool for addressing risk: a geriatric evaluation for transitions (TARGET): • 8p assessment tool—problem medications, psychological, principal diagnosis, polypharmacy, poor health literacy, patient support, prior hospitalizations in the last six months, palliative care • Risk specific intervention plan linked to 8P risk score • Universal checklist of expectations for all patients being discharged • General Assessment of Preparedness (GAP)—list of issues important to providers, patients, and their caregivers that focuses on readiness to transition out of the hospital 2. Patient PASS: Preparation to Address Situations (after discharge) Successfully

(continued)

Table 11.2 (continued)

Model	Care transitions intervention (CTI)	Transitional care model	Project re-engineered discharge (RED)	Better outcomes by optimizing safe transitions (project BOOST)
		7. Multidisciplinary approach that includes the patient, family caregivers and healthcare providers 8. Facilitates collaboration and communication between patients, caregivers and health care team members across episodes of acute care and in planning for future transitions		• Transition record with key aspects of their aftercare given to patients at discharge 3. Teach-Back process—Confirm patient/caregiver understanding 4. Written Discharge Instructions
Target	Community-dwelling patients 65 years or older	Patients 65 years or older with risk factors that include: 1. Poor self-health ratings 2. Multiple chronic conditions 3. History of recent hospitalizations	English speaking hospitalized patients	High-risk patients, particularly older patients
Duration	During hospitalization and up to four weeks	During hospitalization and then one to three months post-discharge	During hospitalization and up to 4 days post-discharge	During hospital stay with outpatient follow-up visit and/or a 72-hour follow-up call
Training	One-day training (check this)	Web-based training modules—one month	Online toolkit One-day training possible	2 day training session Web-based participation Teach-back training.
Website	caretransitions.org	http://www.transitionalcare.info/	http://www.bu.edu/fammed/projectred/	http://www.hospitalmedicine.org/BOOST/

Project Re-Engineered Discharge (RED) develops and tests strategies to improve hospital discharge. The interventions are founded on 12 discrete, mutually reinforcing components, which are facilitated by a Discharge Educator/Advocate. The Agency for Healthcare Research and Quality was contracted with Boston University Medical Center to develop a toolkit that can be distributed to hospitals to replicate the intervention. A randomized control trial showed that patients in the intervention group had a 30% lower rate of hospital utilization (ED or hospitalization) at 30 days post-discharge [17].

Better Outcomes by Optimizing Safe Transitions (Project BOOST) was created by the Society of Hospital Medicine and is supported by a grant from the John A. Hartford Foundation. The Project BOOST Implementation Toolkit provides training and coaching support to hospitals across the United States to analyze and optimize transitions of care systems from hospital to home. Project BOOST encourages the use of its platform with other interventions (such as CTI and TCM). Currently, more than 180 hospitals participate in Project BOOST [18].

There are many models in the literature with a range of different mechanisms to improve transitions of care and to potentially reduce readmissions and other potentially adverse events. These models share many of the same principles to promote effective care transitions and may be helpful to you as you consider ways to improve transitions of care for your patients.

Multidisciplinary Coordination

A care team is necessary for effective communication and coordination. The team includes, but is not limited to, physicians, nurses, case managers, social workers, and pharmacists. The coordination begins at admission, continues through the hospital stay, and follows the patient after discharge. The team also includes the patient and family/caregiver, as they are the one constant across care transitions.

Shared Accountability and Transition Responsibility

There should be an accountable provider or team during all points of transition. The responsible physician should be identified to the patient at every point during the transition. Physicians should engage in a two-way transfer of information between the hospitalist and PCP. PCPs should be encouraged to contact hospitalists during the course of a patient's hospitalization. Hospitalists should also attempt to contact the PCP at time of admission and including the PCP in the discharge planning process, in order to help develop a seamless transition upon discharge [8].

Medication Reconciliation

Medication errors are the predominant adverse events seen after discharge, but it is important to remember that these errors can occur as early as during admission. Health literacy, health status, and lack of time can often affect obtaining an accurate medication list on admission. During the course of a hospitalization, a medication regimen will be altered over and over in response to an acute illness. Finally, at discharge, medications must be reconciled. There is no optimal standardized strategy for obtaining a complete and accurate medication history. The process should include gathering information from multiple sources, including the patient, family/caregiver, prescription bottles, pharmacy records, and from the PCP. Medications must be reconciled at all care transitions, including admission, intrahospital transfer, and discharge. Multiple people gathering a medication regimen independently is redundant work and should be replaced by interdisciplinary communication [8]. Clinicians should constantly be assessing barriers to filling and taking medications upon discharge. Finally, an accurate, comprehensive medication list should be reported to the next provider that is taking responsibility of the transfer of care.

Discharge Risk Assessment

All care transitions interventions highlight the need for early planning. Discharge risk assessment should be completed during the hospital stay, ideally within the first few days of admission. Patients should be assessed for factors that will limit their ability to enact necessary aspects of self-care. This includes an assessment of prior hospitalizations and emergency room visits, obtaining records from other providers, and functional status. Providers should ask about psychosocial needs (support network, financial concerns, coping mechanisms) as these can greatly affect a patient's ability to provide self-care upon discharge.

Patient Education and Promoting Self-Management

With the advancement of healthcare, length of stay has decreased and patients are going home earlier and sicker than before. Their care shifts from one of continuous evaluation by a multidisciplinary team of providers to intermittent follow-up with their PCP in a few days to weeks. As a result, patients become responsible for their own care, becoming responsible for managing a new medication regimen, making it to follow-up appointments, and monitoring their own symptoms. Not all patients have adequate family and social support to help them navigate these

responsibilities. These transitions of care models all focus on effectively engaging patients and family/caregivers on self-management.

The Teach-Back method is commonly used education in these models. During discharge counseling, physicians should concentrate on a few key points. Patients are then asked to restate information/instructions to the provider in their own words. This method provides the opportunity for clarification and anticipatory guidance. These salient points can be reinforced by other members of the transitional care team, and can be supplemented with diagrams, written materials, and videos. Education should focus on major diagnoses, medications, time of follow-up appointments, self-care, warning signs, and how to deal with any problems that arise.

Most interventions use a dedicated transition coordinator or center to guide a patient through transitions of care. The goal of this coordinator is not to perform care activities, but to facilitate and actively educate the patient and family/caregiver to learn and practice self-care and to follow the care plan. The education must be individualized for each patient/caregiver.

Standardized Transition Plans—Discharge Summaries and Plan

Transfers of information must be complete, accurate, and timely. As previously mentioned, discharge summaries are now the main tools for concise transfer of information. Clinicians in the hospital should send discharge summaries to outpatient providers soon after discharge, using standardized formats as defined by their healthcare organization and the Joint Commission. Ideally, these summaries should be provided to the outpatient provider within 24 hours of discharge. The receiver should also be accountable for acknowledging receipt [19]. Ideally, the PCP has already been included in the discharge assessment so is aware of the patient's state of health and plan of care.

A standardized discharge plan should also be provided to the patient and should include: reason for hospitalization, active issues, diagnosis, medications (including how to take, timing of administration, reason for taking, and side effects), pending services, warning signs, and who to contact in case of emergency. All follow-up appointments should be scheduled prior to discharge if possible. Hospital providers should address patients' barriers to receiving appropriate and planned post-discharge care. Many models also suggest the use of a transitional care checklist that is completed along all points of transition by both providers and patients.

Timely Follow-up

Highlighted in these models is the absolute importance of developing a process for timely post-discharge follow-up with patients. These can be done through phone calls, home visits, coordination with case managers, social workers, or nurses, and office visits within 24–48 h of discharge. A 24/7 call center is used in some models. This early support allows the patient to ask questions, assess symptoms, review medications, and reinforce patient and caregiver education.

The question of "who should receive these interventions" is commonly asked. As multiple factors contribute to poor transitions of care, being able to accurately predict the risk of poor outcomes after discharge would allow providers to focus transitional care interventions on those who are at a "greater risk" of adverse events. There are several risk prediction tools that stratify patients by severity of risk in an attempt to prioritize them for interventions prior to discharge in hopes to reduce readmission risk. Examples include the LACE Index [20]: Length of stay, Acuity of admission, Comorbidity, and Emergency department use and the 8Ps Risk Assessment Tool, previously mentioned in Project BOOST [18]. The LACE Index is used to predict patients at high risk for readmission. 8Ps Risk Assessment Tool is aimed to be used as a method of identifying factors than can be targeted for intervention, rather than stratification or score. Unfortunately, a recent systematic review concluded that most models have poor predictive ability and perform poorly [21].

Transitions of Care Metrics

Another barrier to understanding the efficacy of these models is what performance measurements should be evaluated. While 30-day readmission rates have been the benchmark, there is controversy as to whether it reflects quality of care [2]. Shorter-term readmission rates have been proposed as more helpful way of addressing transitional care issues [22]. Some believe that there should be a focus on identifying outcomes that are important to patients and their families [19]. Patient satisfaction scores can be considered a marker of effective and safe transitions of care. This can be gathered by the 3-questions Care Transitions Measure, which measures patient perception of discharge safety [23]. Other outcomes measurements suggested relate to specific components of an implemented transitional care model including: timeliness and completeness of transferred information, follow-up phone calls and home visits, medication reconciliation, adverse drug events, and failure to follow-up pending test results. In the end, there is likely no single metric that can sufficiently measure the quality of transitions of care. A combination of outcomes measures would be the most helpful.

As hospitals urgently restructure their systems for effective transitions of care, it is important to discuss the cost of these validated models, as a main goal is to

reduce healthcare spending in this country. In the study assessing Care Transitions Intervention, lower hospital costs were found ($2058 vs. $2546) at 180 days compared to controls. The annual cost of hiring a Transitions Coach was estimated to be about $74,000, but extrapolated annual cost savings from reducing readmissions was estimated to be close to $300,000 [15]. In one study that tested the Transitional Care Model, total healthcare savings for intervention vs. control patients at 24 weeks were $3000 per patient ($3630 vs. $6661) [16]. In a second study targeting older adults hospitalized with heart failure, the mean savings at 52 weeks for intervention versus control patients was $5000 per patient ($7636 vs. $12,481) [16]. Patients who received intervention through Project RED had a 33.9% lower cost than controls, translating into a savings of $412 per person ($150,000 for 738 participants). Unfortunately, most other studies do not discuss healthcare utilization and associated costs for the intervention strategies [17].

Effective transitions of care requires a series of steps taken by responsible providers as a patient moves through the healthcare system. Poorly managed transitions will result in post-discharge adverse events, unplanned readmission, increased healthcare costs, and poor quality of life. Transitions of care interventions have been designed to be organized, comprehensive, and low-cost methods of delivering safe and consistent transfers of care. Common themes in these models include interdisciplinary collaboration, accountability, discharge risk assessments, medication reconciliation, and enhanced follow-up. These interventions are ultimately aimed that promoting a more active self-management role of the patient and their family/caregiver. Ideally, these skills will be used for not only for the impending transition, but for all future transitions of care for each patient. Standardized training and engaging staff with real-time feedback is necessary to complete successful transitional care. Healthcare systems must define what constitutes a successful transition and these goals should be a priority and performance standard.

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Chapter 12
The Patient Experience

Brian E. Edwards and Christopher Jason

What Is the Patient Experience?

The Patient Experience has been variably defined [1] but basically amounts to how the patient perceives their illness and the treatment of it. For the hospitalist, it is generally how the inpatient experiences their acute illness or acute exacerbation of a chronic illness. How a patient experiences their disease process is infinitely variable as it is influenced by innate characteristics of the patient, the physical manifestations of the disease process itself and their external environment. Managing the patient experience is a difficult but important and rewarding aspect of what we do as hospitalists. While correcting specific medical problems is a laudable goal, the role of a good hospitalist is to address medical issues in a way that validates a patient as a person rather than a mere collection of illnesses. We do this by managing both the patient's illness as well as their experience of their illness in such a way that improves both their physiologic and emotional well-being. The goal of this chapter is to begin to understand how illness affects a patient, not so much physiologically, but rather emotionally and how the emotional aspect of care can be managed and assessed.

Acute and chronic disease has both physical and emotional components. The somatic aspects of disease are to some extent quantifiable and objective. Some examples include pain, dyspnea, nausea, and vomiting. Pain itself is a complex entity and can be further subdivided into visceral, somatic, episodic, and

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unremitting. What is less objective, though no less important, is the patient's response to these symptoms. The differences between how patients manage these physical manifestations are in a large part due to social and cultural factors that influence how they perceive their symptoms. Illness, especially illness requiring hospitalization, brings with it numerous emotions like fear, sadness, and anger. Each of these emotions often results in a behavioral response apparent to the treating team. This response can be beneficial (e.g., motivation to work with physical therapy) or it can be maladaptive as is the case when anger and defiance predominate. Hospitalization, to varying extents, is fairly efficient at stripping people of their independence. People respond to this differently. Their response is determined by a host of factors including age and the degree and chronicity of disability. No two patients are alike physiologically in how they cope with illness. Likewise, the psychology of illness varies patient to patient. A clinical vignette may serve to illustrate this:

> Mrs. Schunke, a seventy eight year old patient presents to the emergency department with profound dyspnea after a Thanksgiving celebration and dinner. She is found to have flash pulmonary edema in the setting of her known non-ischemic cardiomyopathy. She requires non-invasive positive pressure ventilation to maintain adequate oxygenation. She is uncomfortable, anxious appearing and tearful.

In this case, the somatic aspects of her acute decompensated heart failure are clear. She is dyspneic and hypoxic and the application of necessary therapeutic adjuncts is causing her discomfort. The emotional components that are impacting the patient experience in this example are fear and frustration. Improving her oxygenation and dyspnea is, to some extent, formulaic but does not necessarily address her fear and frustration. Need we focus solely on the quantifiable measures of physiologic improvement or should we seek to understand her fears and frustrations? The simple answer is that we should strive to do both. We should seek to heal the person, not the pneumonia. As Sir William Osler poignantly taught us, "The good physician treats the disease; the great physician treats the patient who has the disease." Patients are more than the sum of their diseases. It is well documented that delving into the emotional landscape of patients can offer a physiologically synergistic effect and help maintain lasting improvement in their overall health and well-being. Hospitalization, for most and especially for our elderly, represents a loss of independence and with that comes the fear that it may be forever lost. To some extent, a loss of independence is necessary as the hospitalized patient needs help; the extent to which they need help determines the degree of independence lost. Prolonged hospitalization can take an emotional toll with some patients expressing the frustration as anger and others as sadness.

> After application of nitroglycerin, enalapril and lasix, Mrs. Schunke's oxygenation has improved to such a degree that she is no longer in respiratory distress and is maintaining adequate oxygenation on 2 L nasal cannula. She still appears fearful and at times tearful. She states that she is scared that she may die and that this Thanksgiving dinner was the first time she's felt happiness since her husband passed away two months prior. She is frustrated that her heart failure is preventing her from enjoying even small parts of life. She is now living alone and is having trouble finding the motivation to manage her medications and

diet. She is concerned that she may not be able to live alone anymore but does not want to be a burden on her family.

In this case, the patient's acute medical condition is treated but she remains fearful and apprehensive. We have improved her somatic symptoms but she is still not well. Our job is not yet complete.

Impacting the Patient Experience

Understanding the patient experience requires us to recognize the somatic symptoms and the emotional response to those symptoms in the context of her illness. This leads us to reflect on how we may effect change in her experience of her disease. In order for us to do this we must first understand the pieces we control that can impact the patient experience. History taking can be both informative and therapeutic. Through an unrushed history and physical, a hospitalist is able to glean much more than simply a list of symptoms. We can learn how a patient fits in with the world and how that effects their perception of their current state of illness. In other words, we can come to understand the context through which the patient is experiencing their illness. While accurate data gathering is of utmost importance, the act of listening is therapeutic. Making an intentional personal commitment to invest your focus on what the patient has to say can validate a patient's feelings and build a stronger therapeutic relationship with the patient.

Hospitalists as team leaders are uniquely positioned to improve the patient experience in a variety of additional ways. Patient-centered care, like the patient experience, has been variably defined but generally incorporates an informed patient and intimate involvement of that patient in their own medical decision-making [2]. Fortunately, patient-centered care has received quite a bit of attention in recent years and is starting to become less of a philosophy and more of a norm. The hospitalist, in their role as physician and care coordinator, can act as a conduit for medical information and work with families to create a plan that will be both clinically effective and validating of patient autonomy.

How the inpatient experiences disease is to some degree influenced by the environment of care. Hospitals are complex environments with many moving parts, all of which can impact how a patient perceives their care. The patient needs to feel cared for and safe while maintaining personal dignity. Depending on the severity of illness, the care team can be large and includes, among others, nurses, patient care technicians, multiple physicians, phlebotomists, therapists, and radiology technicians.

Care needs to be carefully coordinated and communicated to avoid medical errors and confusing messages to patients and family. The hospitalist, as leader of the care team, is in an excellent position to do this. Communication between the hospitalist and care team is of utmost importance and can be facilitated by family-centered interdisciplinary rounds involving physicians, nurses, therapists,

and case management [3]. Family-centered rounds is a concept that can be applied to both adult and pediatric patients and their families. Sisterhen et al. defined family-centered rounds as, "interdisciplinary work rounds at the bedside in which the patient and family share in the control of the management plan as well as in the evaluation of the process itself" [4]. There is great value in adopting this model of care. Family-centered rounds contribute to improved team work, staff, and family satisfaction, improved discharge times and improved student and resident education in academic centers [5]. In addition, patient communication using such a model results in less diagnostic testing, better recovery from discomfort and concern, and better overall emotional health [6]. Many models of family-centered rounds have been tried. One barrier frequently encountered is organizing all the involved parties to meet at a patient's bedside at a single time. As you can imagine, this is not always the easiest tasks to complete as nurses and other healthcare providers are very active with patient care throughout their shifts. One intervention that has had success in coordinating family-centered rounds is use of a hands-free communication tool to alert nurses that the team will be rounding at their patient's bedside 10 min prior to doing so. Use of this tool increased nursing presence in family-centered rounds from 47 to 80 % in one study [7]. Family-centered rounds can be a powerful tool to improve the patient experience.

While family-centered rounds may require additional time and planning, this can be attenuated by considering more efficient ways to round. One route by which communication can be fostered and efficiency improved is by promoting localization of care or unit-based staffing by the formation of geographic teams. Geographic care teams improve teamwork, efficiency, and the ability to assess patients in a timely fashion [8]. Unit-based staffing models are fairly difficult to execute and do require a significant buy in from the hospital.

The patient experience may also be negatively affected by physician burnout. Many factors play into patient burnout and were discussed previously in Chapter, "Work-Life Balance and Preventing Burnout." Physician burnout has been linked to lower patient satisfaction and longer post-discharge recovery times [9]. Alternative hospitalist scheduling is being increasingly evaluated in an attempt to improve both provider and patient satisfaction [10] as well as to promote improved provider continuity. Preventing hospitalist burnout brings benefits to the hospitalist and improves the patient experience in the hospital.

The daily life of a patient can be exhausting and taxing on the patient both physically and mentally. Depending on the severity of illness, patients can have vital sign checks at intervals ranging from one to eight hours. Alternating these checks with medication timing, blood glucose testing, therapeutic and diagnostic procedures results in decreased ability for patients to maintain any semblance a normal sleep schedule. Additionally, ambient noise in a hospital setting contributes to inpatient sleep deprivation, thus promoting development of delirium and even relative immune suppression. Many strategies have been investigated to reduce sleep disturbances in inpatients [11]. High ambient noise settings like intensive care units have implemented "quiet hours" and have sought to reduce ambient noise at night. The hospitalist may also help to coordinate services and medication delivery

to promote better sleep hygiene in inpatients. Particularly in elderly patients, better sleep promotes decreased rates of delirium which, in turn, improves the patient experience and length of stay.

Many hospitals offer alternative services to promote patient well-being. Often these services fall under complementary and alternative medicine and can include such things as reiki, music therapy, healing massage, acupuncture, and pet therapy. While there is not an overwhelming amount of evidence regarding its utility, anecdotally it is well received. Interestingly, there are a large proportion of patients who are initially very hesitant to engage in complementary adjunct therapies. These additional opportunities to better an inpatient's experience are often overlooked and interdisciplinary rounds offer a good way to engage staff in promoting its use.

The transition of the patient out of the hospital offers a very important opportunity to provide a patient with a positive experience. Discharge after a prolonged hospitalization is complicated and fraught with the potential for medication errors, poor follow-up, and readmission. Discharge planning should proceed in a predictable and logical fashion and should be incorporated into your initial plan of care. Discharge should never be a surprise to the patient or family. The patient should feel comfortable that their need for hospitalization is over and that they would be best served by discharge home or the appropriate level of rehabilitative care. Abrupt or unexpected discharges give a patient and family the perception that they are unwanted and lack worth to help. Clearly, the hospitalist should avoid this incorrect perception that will certainly result in a poor patient experience. While discharge planning, the hospitalist team should ensure proper discharge medications, provision of home services and timely, seamless follow-up with outpatient providers. By working with physical and occupational therapy, we can ensure that our patients are being discharged to a safe home environment. Through the proper education of patients and family and use of visiting nurses, we can help to improve compliance with medications and reduce rates of readmission.

Tracking Satisfaction

While the patient experience can be a subjective phenomenon, it can be tracked and measured quantitatively and objectively. Physician groups and hospitals survey patients to assess their level of satisfaction. Institution-based surveys are common but limited in terms of comparing patient satisfaction between institutions and to national trends. CMS has developed the Hospital Consumer Assessment of Health Care Providers and Systems (HCAHPS) as a way to standardize patient satisfaction scoring. CMS developed this survey and implemented it in 2006 in an attempt to track data important to consumers and as an incentive for hospitals to improve quality of care. Information about the survey can be found at http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HospitalQualityInits/HospitalHCAHPS.html [12]. If you are not familiar with the survey, we encourage you to review it and become familiar with the various parts. The survey consists of

32 questions about a discharged patient's recent hospital stay. The random survey is disseminated by the discharging hospital either by direct mail, telephone, mail with telephone follow-up or a computerized call. The questions explore different aspects important to the overall patient experience. These questions include different measure like whether or not the patient felt respected and listened to, whether the environment was clean, whether discharge planning was clear and whether the patient was given information in a way they understand. The results are uploaded quarterly to CMS and hospitals can be compared conveniently at www.hospitalcompare.hhs.gov. We encourage you to explore this website and examine how your hospitalist compares to other hospitals in your area. In addition to the baseline questionnaire, hospitals can add additional questions to further investigate the patient experience at their particular hospital.

While the patient experience is important in and of itself, some hospitals utilize information gathered by HCAHPS as well as other third parties, like Press-Ganey, in process improvement projects [13]. At some institutions, physician compensation can be tied to quality measures and, therefore, it is in the hospitalist's moral, professional, and financial interests to strive to improve the experience of our inpatients.

Summary

Hospitalists are playing a bigger role in the lives of patients admitted to the hospital for acute disease or exacerbations of chronic disease. Our role as physicians and coordinators of care give us a responsibility and opportunity to impact both the physiologic and psychological aspects of disease. While considering your role as a hospitalist, recognize that much can be done to improve an inpatient's experience of their disease in a way that it both satisfies our professional ethic as well as our bottom line. Hospitals are in a uniquely qualified position to change the care of inpatients for the better.

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Chapter 13
Consultative Medicine and Co-management

Lee-Ann Wagner and Saverio Mirarchi

History of Medical Consultation

Art and literature pieces at least as far back as the eighteenth century reference the concept of physician collaboration in patient care. In his 1958 *AMA Archives of Internal Medicine* editorial "The Art of Consultation", Dr. Arthur Bloomfield describes that consultation "is not a haphazard affair but serious business" that relies on "rigid manners" among physicians. The expected etiquette of the time, according to Dr. Bloomfield, included in-person, joint evaluation of the patient by both the primary and consulting attendings wherein the primary physician was expected to tout the consultant's credentials to the patient "in such a way as to impress the patient." He further directs that a private meeting occur between the doctors to discuss opinions before they jointly propose the care plan to the patient. Finally, Bloomfield advises, the consultant "must never give the impression of being in a hurry" [1].

Although one may reflect on these bygone rituals with interest and amusement, modern day healthcare providers are keenly aware that the culture and practices of consultative medicine have evolved greatly since then. Unlike during Dr. Bloomfield's practice era, consultant evaluations done in concert with the primary physician's are the exception, not the rule. Patients are more mobile than

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ever, cases more medically complex, and gathering of previous evaluation data from multiple healthcare sites can be overwhelming and time consuming. Consulting physicians hurry throughout their day to manage a burgeoning patient list. Large care teams with rotating primary providers further convolute the task of providing verbal recommendations. The landscape of consultative medicine has clearly changed over the last half century.

In 1983 Goldman et al. offered the Ten Commandments of effective consultation, many of which are still valid today [2]. One glaring change in practice since Goldman's commandments is the pressure on surgeons from payers, administrators, and the federal government via resident duty hour restrictions to remain in the operating room. This leaves less time for surgeons to tend to medical floor work and has led to heavier reliance on medical consultations for pre- and postsurgical care. Goldman's commandments emphasize that the consultant accept a subsidiary role to the primary attending. Today's surgeons, however, more commonly seek a partner in patient care who can manage medical issues while they tend to the surgical ones, a practice known as co-management.

An amended version of Goldman's commandments, published in 2006 by Salerno and colleagues, provides updates on the theme to include strategies for co-management between surgeons and medical providers. The authors' multicenter survey of physician preferences revealed that surgeons, particularly orthopedic specialists, prefer that the medical consultant assume an active role in the patient's care, including writing orders for desired tests and medications [3].

As the relationship between requesting and consulting physicians continues to evolve, certain strategies exist to enhance communication so that patients receive the best care in today's hectic healthcare environment. In this chapter, we aim to offer practical guidance on optimizing your performance and practice as a medical consultant.

The Role of the Hospitalist in Consultation and Co-management

Since the mid-1990s, the hospitalist movement has increasingly provided hospitals with round-the-clock, in-house generalists to care for patients. Given their constant presence, hospitalists are well suited to provide preoperative inpatient evaluations and medical co-management. Hospitalists, in addition to their broad diagnostic and management skills, bring expertise in systems-based practice and quality improvement issues such as patient safety, hospital throughput, and cost-containment.

Traditionally, hospitalists as consultants may be invited to provide an opinion on a particular case by the primary inpatient physician. In this situation, the hospitalist advises on a specific question while the primary team or physician acts on the

advice by writing lab, imaging, and therapy orders. The primary team is responsible for discharge documentation and orchestrating follow-up, with guidance from the hospitalist as necessary.

Hospitalists are commonly engaged by surgeons to evaluate preoperative risk for patients. Wijeysundera and colleagues found that approximately one-third of surgical patients receive an inpatient preoperative medical evaluation, particularly older patients with multiple medical conditions [4]. Significant differences in percentage of preoperative consult requests existed between hospitals, however, which likely reflects variation in surgeon practice style.

Studies assessing the benefit of preoperative consultation show inconsistent results. Retrospective review of outcomes in a large, multicenter Canadian study showed that among elective, noncardiac, medium-to-high risk surgeries, patients who received medical preoperative evaluation had an increased length of stay in addition to an increased 30 day and one year mortality. The consult cohort received more new beta blockers and statins as well as more cardiovascular testing and intervention preoperatively. Postoperatively, they were more likely to require mechanical ventilation and intensive care [5]. Similar associations between perioperative medical consultation and increased length of stay and cost have been seen elsewhere [6]. Notably, those patients who received consults in both studies were more likely to be older and have more comorbid conditions. Multiple other authors, however, have shown that collaborative care between hospitalists and surgeons reduces hospital length of stay and time to surgery without increasing mortality, particularly when a co-management model is used [7–9].

Co-management arrangements are somewhat different in that the hospitalist is expected to manage all medical issues. They provide daily assessments on patients, even if no specific question is posed by the surgical team. The hospitalist orders any indicated medical work-up, follow-ups on these tests and prescribes therapies, alongside the surgeon who manages only the surgical issues. In essence, the patient will have multiple doctors writing orders during the admission. Excellent communication between providers is therefore critical to patient safety and will be discussed in detail later. Although surgeons may favor heavy-handed involvement from hospitalists [2], payers do not consider co-management care as consultative [10]. Generally, the referral can be deemed a consult if the requesting service asks for an "opinion or advice regarding the evaluation and/or management of a specific problem" [11]. In these situations, it would be appropriate to bill a Consultation Code (99251–99255). Under a co-management scenario, however, it would be more appropriate to bill a Subsequent Hospital Care Code (99231–99233). In either case, subsequent visits are billed using Subsequent Hospital Care Codes. The hospitalist group that embarks on such a relationship with a surgical group should counsel hospitalists to carefully document, code bills, and seek guidance from coding experts when necessary.

Tenets of High Quality Consultative Care

Receiving the Consult Request

Clear communication between providers is required for sound patient care and must begin with the consultation request. In this era where co-management is common, it is important to clarify your role with the requesting physician. Would they prefer that you address a particular question or concern (like preoperative risk or diabetes) or are they asking that you co-manage? One group found that the consultant misunderstood the intended question 14 % of the time [12]. Although Boulware et al. found that most consultants expect a specific question from the requesting physician, it is important to note that a co-managing hospitalist does not advise on just one issue [13]. Further, surgeons may prefer that the consulting generalist view the case broadly and offer help where appropriate [3]. Be sure to elucidate the requestor's expectations for your involvement beyond providing a medical assessment, including order writing. Clarify the urgency level of the consult so that you can prioritize your work appropriately. Finally, ensure that you receive reliable contact information for the physician or team who will be assuming primary care of the patient, so that you may relay your recommendations verbally once your assessment is complete.

Gathering Data

As you embark on your assessment of the patient, certain actions will ensure that your evaluation is thorough and that the requesting provider understands how to proceed with your recommendations. Goldman suggests you should "look for yourself," meaning that you should own the responsibility of gathering relevant data needed to properly assess the patient [2]. Calling outside physicians and tracking down previous visit documentation may seem time-consuming. This practice, however, ultimately may improve patient care as it reduces ambiguity regarding past medical history and may prompt providers to expedite testing or skip it altogether.

Offering Recommendations

After evaluating the patient, the hospitalist will proceed with relaying their impression and suggestions. Recommendations must be concise and clear, including full drug names, dose, route, frequency, and duration. The survey by Boulware et al. revealed that requesting services favor a bulleted format over paragraphs as well as separate impression and plan sections, as opposed to

Table 13.1 Tips on providing consult recommendations

– Be clear: Include full drug names, dose, route, frequency, duration
– Use bullets instead of paragraphs
– Separate your impression from the bulleted recommendations
– Be concise: Provide only those recommendations that are absolutely necessary
– Highlight recommendations of most importance
– Clearly document how you can be reached
– Communicate your opinion verbally as well as in the chart

recommendations provided with each problem [13] Limit your recommendations where appropriate and highlight those of most importance to ensure compliance [2, 3, 14]. Clearly document how you may be reached should questions arise. Traditionally, consultants would seek to teach primary services by presenting a primary reference article along with their consult note. Although modern physicians seem to find this custom less valuable [12], it may be appropriate at times to provide a new or particularly pertinent article.

Verbal communication of recommendations, in addition to the formal consult note, is favored over such options as texting, electronic medical record notifications, and alpha numeric paging [13]. In co-management relationships, this conversation can be used to confirm who will be placing the suggested orders as well as to coordinate planning should you recommend delaying a surgical case or to adopt a patient to a primary medical service. Additionally, this allows the opportunity for clarification regarding recommendations (Table 13.1).

Follow-up and Signing Off

Subsequent follow-up during the hospitalization after the initial consultation can increase compliance with consult recommendations [14]. Once concerns relating to the initial question have abated, the hospitalist may sign off of the case. The majority of surveyed physicians prefer guidance regarding outpatient follow-up time frame at the time of signoff [13]. Those in a co-management role generally do not sign off; rather, they continue to provide care throughout the hospital stay.

Curbside Consults

Occasionally, a requesting service may seek what is commonly termed a “curbside” consult, or informal, “off the record” advice. In this scenario, the consultant typically does not examine the patient nor review the chart, providing an opinion based

solely on the case details provided by the requestor. Generally, the well-intended requesting physician is attempting to spare a colleague the burden of an extra, official consultation. Caution must be used, however, when providing such casual professional advice, as the patient data presented by the requesting team may be incomplete or inaccurate and result in inappropriate recommendations [15]. A reasonable response to curbside questions is to offer a formal medical consult wherein you can review the data and examine the patient yourself prior to rendering an opinion or providing advice.

Professionalism in Consult Medicine

Professional behavior is an expectation of any physician and an ACGME core competency for residency programs [16]. Conducting yourself in a professional manner during consult encounters will not only reflect well on you and your hospitalist group but also will solidify relationships with colleagues from other specialties. Courteous dialogue with requesting providers and swift responses to consult requests are important to starting out on the right foot.

Documentation should remain respectful of the primary physician's role. Use care to choose suggestive, instead of dogmatic, phraseology. Use words like "consider," "perhaps," "it may be worthwhile," and "in my experience." Remember that the requesting physician is entitled to consider a consultant's advice and reject it. Disagreements on case assessments and care plans are common. Should you have a difference of opinion regarding how to proceed with a patient's care, it is critical to avoid "chart wars." If you feel strongly that you must advocate for your plan, do so over the phone or in person with the primary team. The chart is a medical and legal document. Persistent, aggressive disagreement with another physician's care can jeopardize him or her legally.

Along these lines, controversial recommendations should be discussed with the primary team prior to placing them in the chart. If, ultimately, the consultant and the primary provider cannot concur on the care plan, it is best for the consultant to sign off of the case. Because the primary doctor makes the final decision regarding whether or not to implement a consultant's recommendations, the care plan is best discussed with the patient by the primary team unless the consultant has confirmed the plan with them beforehand.

In conclusion, in today's hospital environment, patients with multiple medical problems are being seen and evaluated by more than one physician. Often times, this will include a hospitalist. Excellent communication before, during, and after the consultation will help to ensure that the patient receives the best care in the most efficient and cost-effective manner.

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Chapter 14
Introduction to Patient Safety and Quality

Mangla S. Gulati and Kathryn Novello Silva

To Err is human, the landmark publication by the institute of Medicine (IOM) in 1999, [1] estimated between 44,000 and 98,000 people died in US hospitals annually as a consequence of a medical error. For many years, this number was the most quoted and the estimate did not change.

In an article in the Journal of Patient Safety in 2013 [2]—a review article places this number somewhere between 220, 000 and 400,000 per year. This is the third leading cause of death following heart disease and cancer. In aviation terms is the equivalent of three jumbo jet crashing per day. This is equivalent to the number of graves at the Arlington Cemetery in Washington DC, founded in 1866.

In 1999, the IOM described the "nation's healthcare system as fractured, prone to errors, and detrimental to safe patient care." It defined patient safety as "freedom from accidental injury and further stated that ensuring patient safety involves the establishment of operational systems and processes that minimize the likelihood of errors and maximize the likelihood of intercepting them when they occur" [3].

Healthcare is complicated. It is people working in a complex environment often with limited resources. The environment is complex as it involves the patient, the people, the technology, the policies—the system factors and the latent factors—the place the work occurs and the workload. Unlike the airline pilot whose sole focus is to fly the plane, the healthcare provider is often performing multiple tasks simultaneously. Unlike the pilot, who has a co-pilot-aa a second set of eyes, the

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healthcare provider is often alone in the moment of decision-making. The majority of errors that occur in healthcare are not due to the performance of an individual. Rather, the errors are a consequence of systemic issues.

Case Scenario

Nurse Betty, a nurse on the medical floor gets a call from her child's daycare informing her child has a high grade fever, vomiting, and diarrhea and it would be best if Betty collected her child from the daycare as soon as possible. It is 1:30 pm, a busy day on the wards, with complex patients. Betty, following discussion with her charge nurse, divides her patient assignment and signs out her patients to two of her colleagues and rushes to collect her unwell young daughter. Nurse Mary, a nurse with 26 years of experience, has a complicated patient who is requiring much of her attention. Mary has not yet eaten lunch. She decides to administer the 2 pm medications before taking her lunch break. She refers to the sign out Betty provided. Patient AB is due for her dose of hydroxine. Mary goes to the medication room where the medication bins are stored, goes to the medications beginning with the letter H, and is about to pick up the hydroxine when she hears her name being called. She steps out for a second, answers and then returns to pick up the medication. She administers the medication to patient AB, completes her charting and goes for her lunch break. Ninety minutes, patient AB is found to be diaphoretic, confused with a blood pressure of 70/40. Mary realizes she gave Hydralazine 50 mg instead of the hydroxine. Mary was devastated by this error.

Swiss Cheese Model

James Reason's analysis of errors showed medical errors is seldom a consequence of an isolated individual error. Usually, errors are the consequence of multiple, "smaller errors in environments with serious underlying system flaws." Reason developed and introduced the Swiss cheese model (Fig. 14.1).

In this model, there are multiple layers of defense. However, when the holes are aligned, the defense is lost and errors occur (Fig. 14.2).

Process Mapping

Before the answer to what actually occurred can be established, it is essential to review each step of the actual sequence of events.

There are three possibilities;

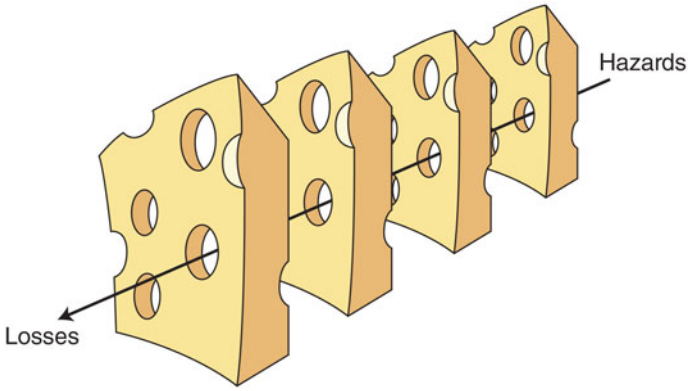

Fig. 14.1 Swiss cheese model

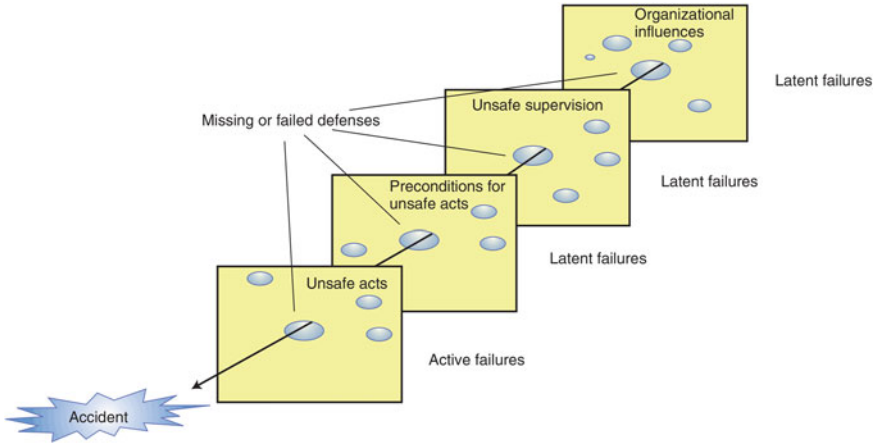

Fig. 14.2 Multiple layers of defense of Swiss cheese model

- The Perceived process (what we think is happening)
- Reality process (what actually is happening)
- Ideal process (what the process could be).

A process map (Fig. 14.3) of the actual events is mapped out—the reality process. The multidisciplinary team meets reviews and finds several issues, gaps, and possible causes that led to this medication error. The process mapping should be done promptly to allow for accuracy.

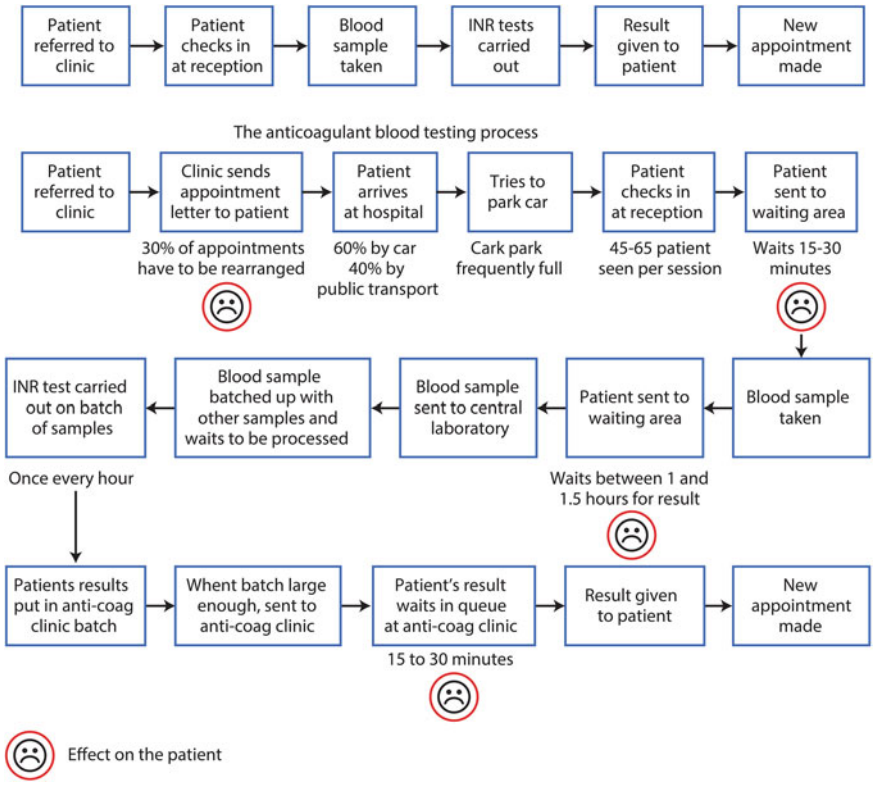

Fig. 14.3 Reality process map

Root Cause Analysis

A root cause analysis (RCA) is a retrospective tool utilized to identify possible opportunities to prevent the error occurring again. It has been used in industrial accidents and has now found its way into healthcare. An RCA involves a multidisciplinary team and the participants of the event reviewing the events, to try and establish how and why the error occurred. It is a nonpunitive, nonjudgmental 'fact finding' analysis.

During the RCA, it is essential to keeping asking why until a cause of the error is revealed—the concept of the 5-whys (Fig. 14.4).

This often allows the group to drill down to the likely root causes of the event and hence offer feasible actions. Possible causes are assigned to one of the categories on the skeleton of the Ishikawa Fishbone Diagram (Fig. 14.5) equipment, process, people, management, environment, and materials.

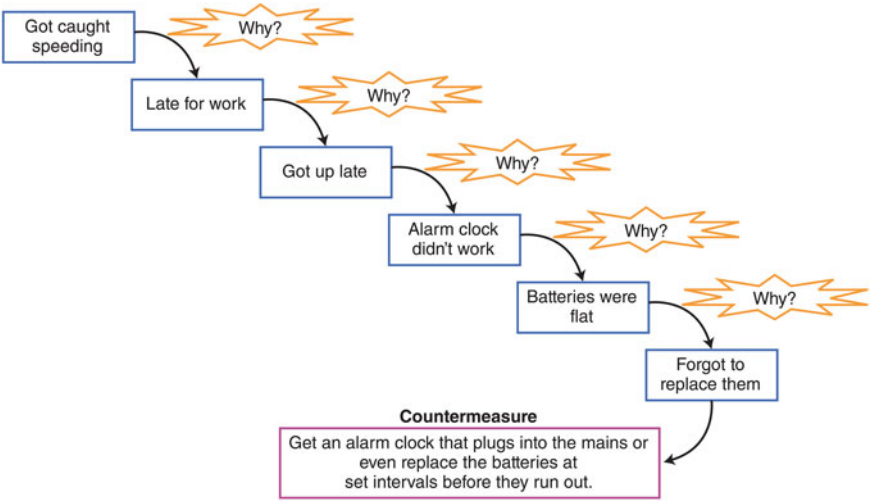

Fig. 14.4 The concept of the 5-whys

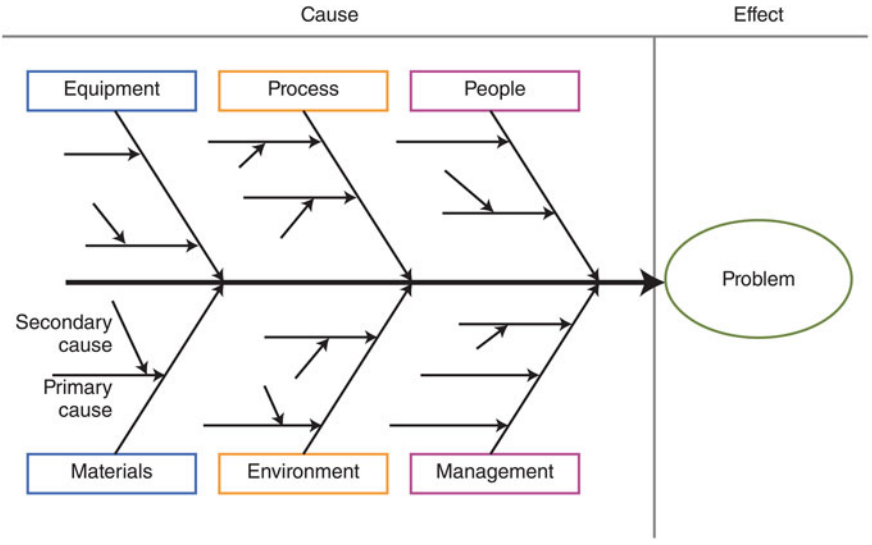

Fig. 14.5 Ishikawa fishbone diagram

Back to the Case Scenario—What Happened to the Patient in Room 15—Findings During the RCA

Why is Mary so busy?

- Betty had to leave urgently
- Mary was already had full patient assignment
- No time to find extra coverage

Why did Mary pick the wrong medication?

- She was interrupted
- The two medications were in adjacent bins (stored alphabetically)
- Look Alike—Sound Alike medications (Fig. 14.6)

Through the RCA, many possible gaps and areas for improvement are identified. Often, many possible errors and opportunities are identified.

Using the look-alike, sound-alike medications, we can ask the five whys.

Plan, Do, Study, Act Cycle (PDSA)

Once you ask the question, identify an opportunity, usually a possible solution presents itself. This then allows the group to perform a test of change or Plan, Do, Study, Act (PDSA) cycle. A P Define the aim of the PDSA. This should be specific.

Fig. 14.6 Look alike—sound alike medications

Plan Plan the change to be made, what and how will the change be measured.
Who is going to the work—define the team.
By when will the work be done?
Do Test the change.
Study analyze the data.
Act Refine the change PDSA allows a small change to be implemented, measured and refined (Fig. 14.7).

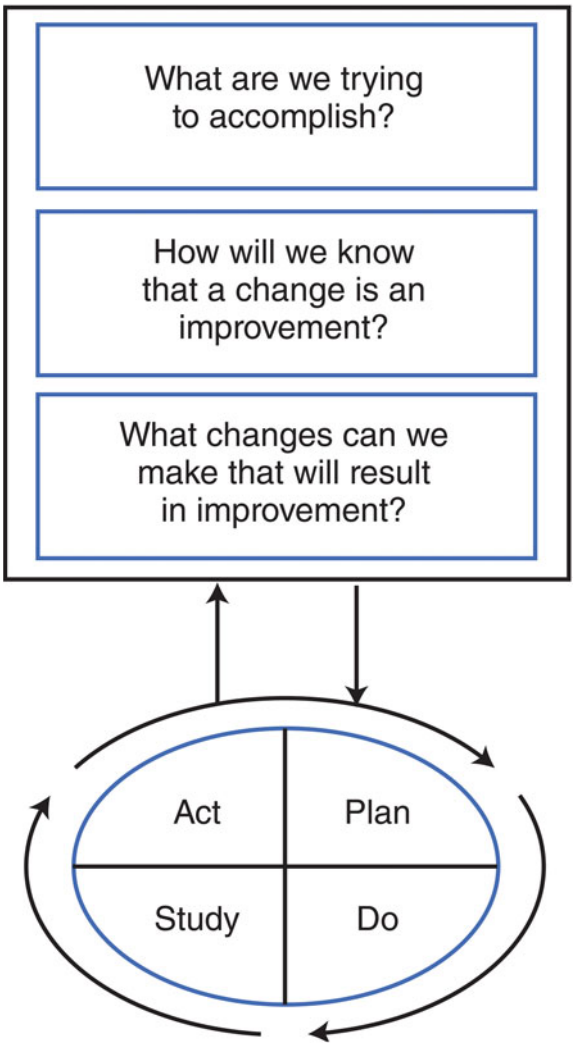

Fig. 14.7 Plan, do, study, act cycle

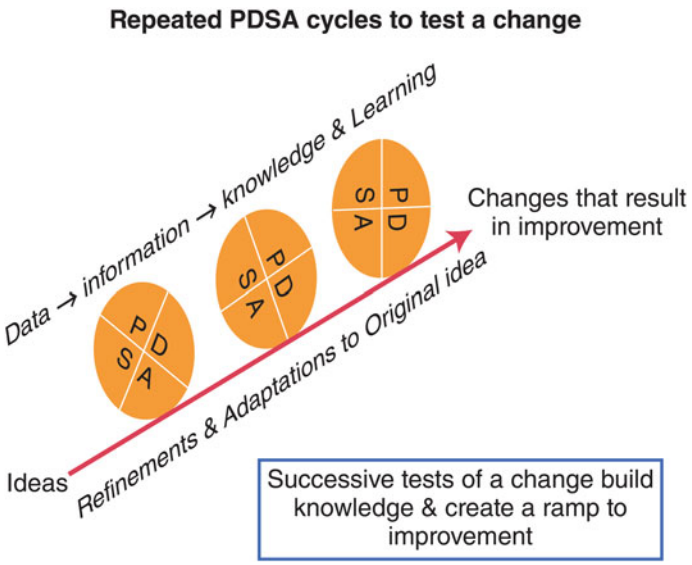

Fig. 14.8 Continuous improvement of plan, do, study, act cycle

This process of continuous improvement may take several cycles. It is best to start with a very small change, and refine the process to ensure the gap is addressed. Once that occurs, the change can be spread for continuous improvement (Fig. 14.8).

Lets Go Back to Our Case Scenario

The patient recovers quickly; the error is disclosed to the patient and the family.

Nurse Mary is devastated by this event. She is unable to finish her shift, and her manager sends her home. She asked to take a few days off work to "recover". Over these few days, Mary has difficulty sleeping, very little appetite and frequently relives the event. Every time she relives it, she questions why and how she could have made such an error. She is unable to talk with her husband as she feels guilty as it was her fault.

Often, we think of the patient as the "victim" of a medical error. In reality, patient is the first victim, the caregiver and sometimes other members of the healthcare team are the second victims. [7] Too often, they live with this in silence, often traumatized by the fear of causing another error, doubting their skills and face personal anguish. Often, and they go back into the workplace and live in anguish about they will fail the next patient [8].

The implementation of support systems is critically important to provide constructive support.

LEAN

The concept of LEAN has been used in many manufacturing areas. The roots of LEAN lie in the Toyota car manufacturing industry. It has now found its way into healthcare. The premise of applying LEAN is to remove the waste (Japanese mudra) or the non-value added work in a process leaving the only the value added work.

Areas of waste that occur every day in healthcare include;

- *Motion*—nurses are looking for IV poles, transporters looking for stretchers, pharmacists looking for missing medication doses, physicians going to different floors to care for patient when the units are not geographically cohorted
- *Transportation*—it is necessary to transport a patient to the CT scanner, but if the scanner is at the opposite end of the hospital, the time to get there, while necessary is actually wasted
- *Inadequately used intellect*—people doing work that is not utilizing the intellect. If the nurse is always "looking for something," whilst necessary to provide care, is not a good use of intellect
- *Excess inventory*—ordering a large amount of a new medication with a short shelf life that expires. In addition to the lost medication, the medication needs to be stocked and space is needed to store
- *Nonstandard work*—people doing things in different ways with different outcomes
- *Waiting*—a patient waiting for 20 min on a stretcher for an procedure
- *Overproduction*—multiple forms asking the same question, repetitive testing, preparing "extra meds" just in case
- *Defects*—medical errors, hospitals acquired infections

Process mapping is an important step in LEAN. This allows the actual way of performing a task is done to be mapped thus allowing the waste to be easily visualized.

For example, a resident is sitting down and completing five discharge paperwork packets at one time—this is called batching. The resident does this because the printer is at the other end of the unit and time would be wasted if he completed, printed, walked to the printer, walked back to his computer and then completed the next one. Whilst the resident may feel he is improving efficiency, in reality, patients who are clinically ready to be discharged are waiting. Additionally, now the nurse will have five patients ready for discharge at the same time.

An A3 is a tool used in LEAN. A3 refers to the size of the paper which allows for a structured approach to problem solving. The PDSA process is rooted in the A3 process.

The steps in developing an A3 are:

1. Problem/Aim Statement
2. Current State—where are we today
3. Future State—where do we want to be and by when

4. Gaps—what is preventing us from getting from 2 to 3
5. How are we going to get there, what tests of change are we going to do
6. Doing the tests of change
7. Completion plan—who will do what and by when
8. Confirmed that the change worked or not and next steps

The Science of Measurement

There is a difference in measuring data for research purposes and measuring data for Quality Improvement (Table 14.1).

Measures

There are three types of metrics used in quality improvement.

Outcome Measures—examples include the percentage of patients with a hemoglobin A1C in an acceptable range, all patient with heart failure are prescribed an angiotensin receptor blocker.

Process Measures—examples include how many diabetic patients had an annual eye examination, adherence to hand hygiene, the frequency of use of a ventilator bundle.

Balancing Measures—are the changes designed to improve outcomes causing a problem in other areas. An example is, in order to reduce length of hospital stay, readmissions rates increase.

Table 14.1 Measurement for research versus measurement for improvement

	Measurement for research	Measurement for learning and process improvement
Purpose	To discover new knowledge	To bring new knowledge into daily practice
Tests	One large "blind" test	Many sequential, observable tests
Biases	Control for as many biases as possible	Stabilize the biases from test to test
Data	Gather as much data as possible, "just in case"	Gather "just enough" data to learn and complete another cycle
Duration	Can take long periods of time to obtain results	"Small tests of significant changes" accelerates the rate of improvement

http://www.ihi.org/resources/Pages/HowtoImprove/ScienceofImprovementEstablishingMeasures.aspx

The Role of the Hospitalist in Quality

The hospitalist is well positioned to be a part of quality improvement across the continuum of care from the inpatient setting to transitions of care to the post-acute setting. The hospitalist role, daily work, and understanding of what an efficient process could look like offer many opportunities.

Take a day in the life of the hospitalist.

Hospitalist Mike comes into work at 7 am, meets the nocturnist, takes sign out (hands-off communication). Mike then rounds on his four potential discharges for the day with the bedside nurse, clinical pharmacist and case manager. He completes the discharge paperwork, reviews the discharge planning with the patients and places the discharge order. He then sees his other patients one of whom he anticipates will be a discharge the following day. He begins the discharge paperwork for this patient aiming for an early discharge the following day. The ER calls with three new patients. The first patient is an elderly lady who was just discharged 12 days prior, forgot to fill her medications and is now presenting with symptoms of heart failure. The second is an uninsured patient without a primary care provider and a COPD exacerbation. The third patient is a patient with metastatic cancer requiring pain management.

At every juncture in the day, there are endless possible ways to improve efficiency, cost, and quality.

- Interdisciplinary Communication
- Hand Off communication
- Ensuring appropriate resource utilization through cost conscious care
- Identifying and anticipating early discharges
- Engaging the patient and patient family
- Ensuring appropriate transitions of care
- Managing length of stay
- Managing throughput
- Reducing readmissions
- Core Measures—implementing evidence-based practice
- Reducing Hospital-Acquired Conditions (HAC)
- Medication Errors
- Improving Patient Satisfaction
- End of Life Care

The American Board of Internal Medicine in collaboration with many professional societies has published the Choosing Wisely lists that are

- Supported by evidence
- Not duplicative of other tests or procedures already received
- Free from harm
- Truly necessary

These lists offer many opportunities to identify a quality improvement process to identify and minimize waste, improve efficiency, improve quality of care and reduce healthcare costs.

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Chapter 15
Financial and Regulatory Drivers in Health Care

Mangla S. Gulati and Shiva K. Ganji

The Institute of Medicine (IOM) defines high-quality care as care that is safe, effective, patient-centered, timely, efficient and equitable. It recommends addressing quality improvements at four levels; that of the patient, health care delivery microsystems (unit, team), organizational (hospital, clinic), and the regulatory and financial environment [1].

In recent years, while the rate of growth of healthcare spending has slowed, the US spends significantly more than other developed countries (Figs. 15.1, 15.2, 15.3) [1].

Despite leading the world in healthcare costs, the United States ranks 26th in the world for life expectancy and ranks poorly on other indicators of quality [2, 3] (Figs. 15.4 and 15.5).

This has prompted many to evaluate, identify and improve wasteful healthcare spending with the intent of improving the quality of care by providing the right care at the right time in the right setting.

Dr. Lane has been practicing for 3 years. She is beginning to notice that the "number" of admissions is not as important as it was before. Now, focus has shifted to whether the patient should be cared for under observation status, length of stay, how many VTE risk assessments are being done and documentation.

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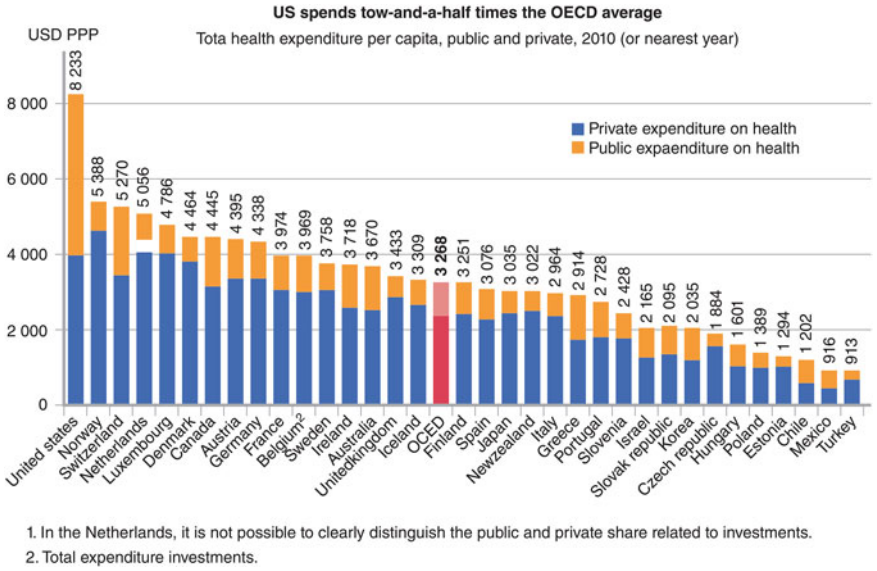

Fig. 15.1 Total health expenditure per capita. *Adapted from* OECD health data 2012

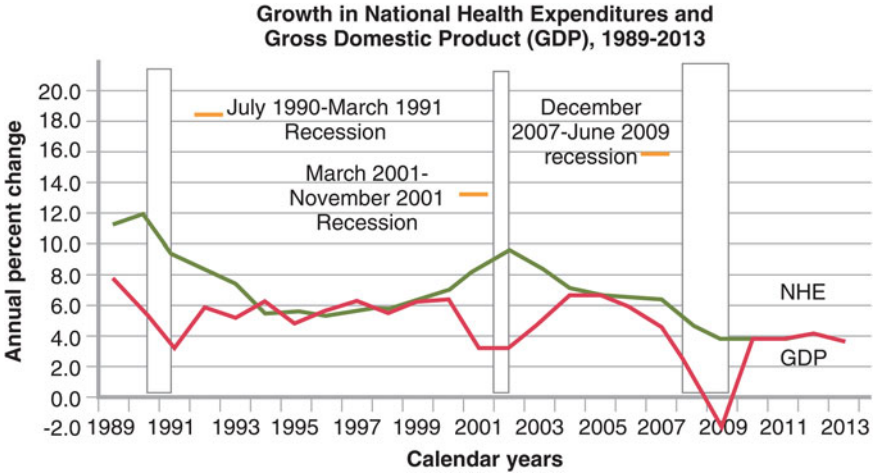

Fig. 15.2 Growth in National Health Expenditures (NHE) and Gross Domestic Product (GDP). *Adapted from* Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group; U.S. Department of Commerce, Bureau of Economic Analysis; National Bureau of Economic Research

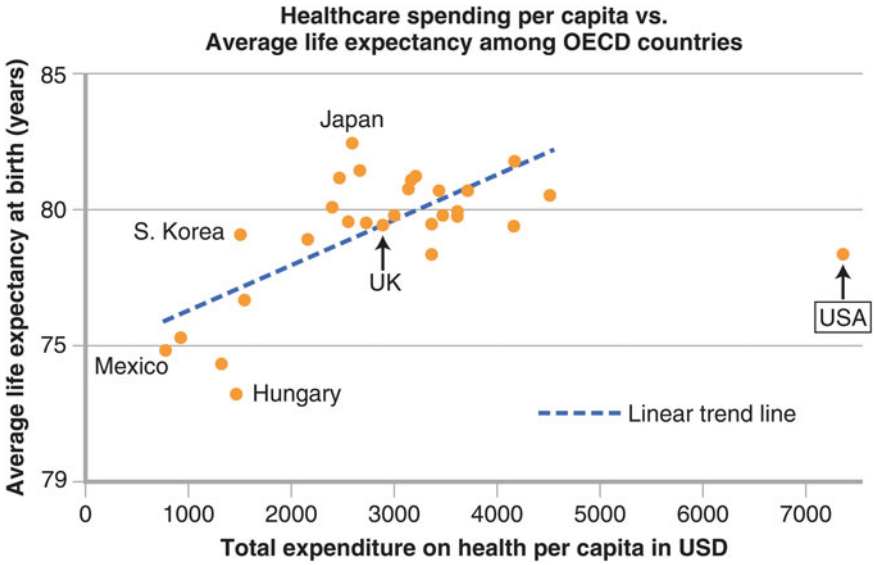

Fig. 15.3 Healthcare spending per capita and average life expectancy

Country rankings
Middle
Bottom 2

EXHIBIT ES-1. OVERALL RANKING

	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
OVERALL RANKING (2013)	4	10	9	5	5	7	7	3			11
Quality care		9	8	7	5	4	11	10	3		5
Effective care	4	7	9	6	5		11	10	8		3
Safe care	3	10		6	7	9	11	5	4		7
Coordinated care	4	8	9	10	5		7	11	3		6
Patient-Centered care	5	8	10	7	3	6	11	9			4
Access	8	9	11		4	7	6	4			9
Cost-related problem	9	5	10	4	8	6	3		7		11
Timeliness of care	6	11	10	4		7	8	9		3	5
Efficiency	4	10	8	9	7	3	4		6		11
Equity	5	9	7	4	8	10	6				11
Health Lives	4	8		7	5	9	6		3	10	11
Health Expenditures/Capita, 2011**	$3,800	$4,522	$4,118	$4,495	$5,099	$3,182	$5,669	$3,925	$5,643	$3,405	$8,508

Fig. 15.4 Indicators of quality rankings. *Notes* *Includes ties. ** Expenditures shown in $US PPP (purchasing power parity); Australian $ data are from 2010. *Adapted from* Calculated by The Commonwealth Fund based on 2011 International Health Policy Survey of Sicker Adults; 2012 International Health Policy Survey of Primary Care Physicians; 2013 International Health Policy Survey; Commonwealth Fund *National Scorecard 2011*; World Health Organization; and Organization for Economic Cooperation and Development, OECD Health Data, 2013 (Paris: OECD, Nov. 2013)

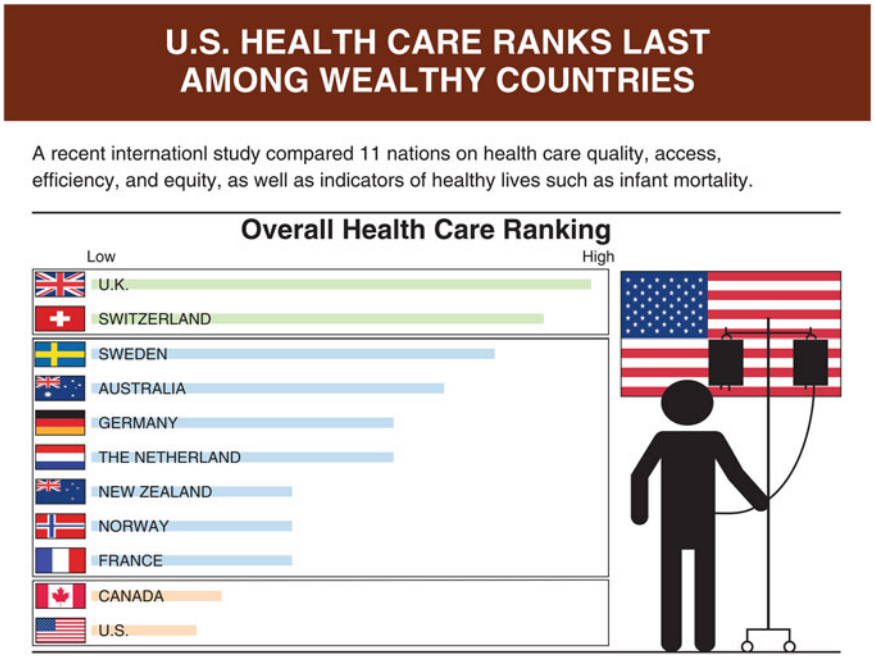

Fig. 15.5 Overall health care rankings. *Adapted from* Ref. [3]

What Keeps Hospital Leadership up at Night?

Chief Financial Officers, Chief Operating and Chief Executive Officers have encountered a paradigm shift from volume to value. Many are stepping into a new and innovative, somewhat unexplored landscape to ensure that value equals cost and quality—the shifting of the cost curve. In 2015, there are a myriad of challenges from payment reforms, pay for performance measures, consolidation of healthcare systems and reduction in reimbursement (Fig. 15.6).

Meaningful Use

Dr. Lane works in a hybrid paper and computerized order entry medical record. Recently, she noticed the electronic health record (EHR) has more alerts, is asking for more information and is requiring more documentation. She now has to document whether a patient smokes in the EMR even though she already documents this on her paper H&P, put a problem on the problem list and record the patient's primary language—she is finds all this is slowing down her workflow.

Under the Inpatient Prospective Services proposed by The Center for Medicare and Medicaid Services, hospitals adopting the Meaningful Use Program will

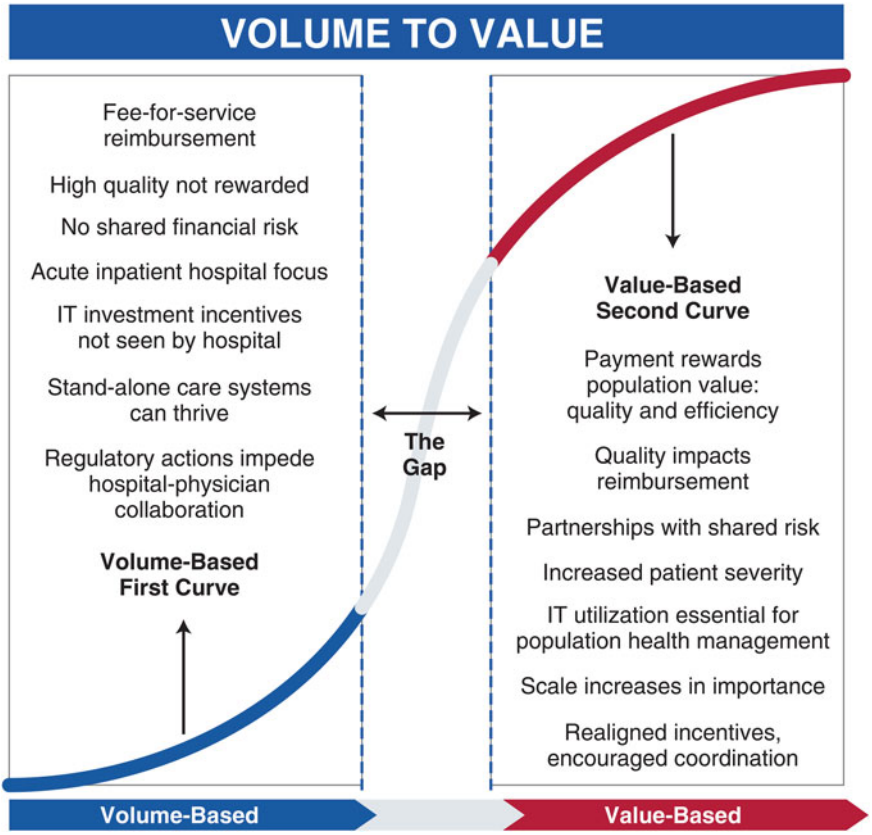

Fig. 15.6 American hospital association

receive 1.3% increase in Medicare operating rates. Through this program, financial incentives are provided to encourage the use of a certified EHR in a meaningful manner. For those who do not adopt the EHR and report meaningful use measures, they will face a penalty of 1% in 2015, with an additional 1% every year thereafter.

Clinical quality measures (CQMs) must be abstracted from the EHR and submitted. These CQMs are measures of:

- health outcomes
- patient safety
- efficient use of health care resources
- care coordination
- population and public health
- adherence to clinical guidelines

Measuring and reporting CQMs helps to ensure that our health care system is delivering effective, safe, efficient, patient-centered, equitable, and timely care [4].

Stages of Meaningful Use

Attestation occurs in three sequential stages.

Stage 1 measure the basic functionalities for EHRs and is focused on capturing and sharing data either with the patient or with other healthcare professionals. The elements include the of use of computerized provider order entry (CPOE) for medication orders, drug–drug and drug–allergy interaction checks, maintaining an up-to-date problem list of current and active diagnoses, maintain active medication and allergy lists, patient demographics, vital signs, smoking status, clinical decision support, providing patients the ability to view online, download, and transmit information about a hospital admission. Provide patients with an electronic copy of their health information upon request and protect electronic health information.

Stage 2 measures advanced clinical processes with a focus on care coordination and exchange of information.

Stage 3 is not yet finalized but will measure health care outcomes.

Value Based Purchasing

Value-based purchasing (VBP) is part of the quality incentive program established through the Patient Protection and Affordable Care Act (PPACA). It was designed to reduce costs while promoting high-quality care [5]. Is care "safe, timely, efficient, effective, equitable, and patient-centered?" is the essence of VBP measurement.

In 2015, 26 measures will be evaluated. These include clinical process-of-care measures, patient experience dimensions, outcome measures and one efficiency measure on spending per beneficiary. There are two broad dimensions to addressing the high cost of healthcare, disease prevention and improving population health and reducing inefficiencies, removing waste, addressing the wide variation in cost and including the patient.

To Implement VBP, Performance Measurement Is Necessary

Measurement requires the ability to access and aggregate data from multiple sources, including administrative, claims, clinical and survey data. The measures are then converted into accessible and useful information for all parties, patients, payers, and suppliers. This allows for informed decision-making. The consumer-the patient has many choices to about where to obtain their healthcare a core notion in VBP. And several public internet sites such as hospitalcompare.gov offer the consumer-the patient to evaluate and compare medical care at different hospitals.

Is the Care Timely and Effective?-Examples

- Fibrinolytic therapy received within 30 min of emergency department arrival in suspected Acute Myocardial Infarction (AMI), Aspirin on presentation with chest pain or possible AMI received aspirin within 24 h of presentation
- ACE Inhibitor or Angiotensin receptor blocker prescribed in left ventricular dysfunction
- The time the decision to admit a patient (DTA) from an emergency department to the time of departure from the ER to an inpatient bed is a marker of throughput
- Preventive Care- Patients assessed and administered influenza vaccination
- Venous thrombus embolism prevention.

The Patient Experience—Hospital Consumer Assessment of Healthcare Providers and Systems Survey (HCAHPS)

HCAHPS is a survey intended to provide a standardized survey instrument and data collection methodology for measuring patients' perspectives on hospital care. It is designed to create incentives for hospitals to improve their quality of care. It provides comparable data, which allows objective and meaningful comparisons, thus allowing public reporting of results that are important to consumers. Public reporting will serve to enhance public accountability in health care by increasing the transparency of the quality of hospital care provided in return for the public investment [6].

The survey consists of 27 patient perspectives on care and rating items that encompasses;

- Communication with doctors
- Communication with nurses
- Communication about medicines
- Responsiveness of hospital staff
- Pain management
- Discharge information
- Cleanliness of the hospital environment
- Quietness of the hospital environment
- Transitions of care.

The survey can be administrated through several modes; mail, telephonically, mail followed by a telephone call or interactive voice response (IVR). CMS publishes the results on the Hospital Compare website www.hospitalcompare.hhs.gov. four times a year.

Hospital Readmissions

Dr. Lane is called by the emergency department to evaluate Mr. SB, a 76 year old, with a history of left ventricular systolic heart failure and an ejection fraction of 25%. Dr. Lane knows Mr. SB well since she has taken care of him for 4 of his 5 recent admissions at the hospital in the last 4 months. Mr. SB is accompanied by his wife, who shares that due to the bad weather, her husband has missed his appointment with his primary care physician and she was unable to fill his diuretic prescription. Additionally, she relays she was unable to go grocery shopping due to the weather, so they have been eating a lot of canned soup. Dr. Lane admits Mr. SB with a CHF exacerbation.

The Federal Government estimates the cost of readmission for Medicare patients to be $26 billion annually. Of this $17 million is considered avoidable readmissions —the revolving door syndrome—that is one in five patients [7]. National data show that about one in twelve adults with Medicaid discharged from a hospital were readmitted within 30 days, adding an additional $16 billion annually to health care costs in the United States [8].

Often, these are not planned readmissions but a result of a fragmented care system. This has led to the Hospital Readmission Reduction Program. This federal government program places penalties on hospitals for readmissions within 30 days of discharge of the index admission. This program and the penalties it places are intended to increase attention to what happens to patients after they leave the hospital. Hospitals can lose as much as 3% of their Medicare payments under the program. High rates of readmission within 30-days of discharge maybe a consequence of:

- Complications from treatments received during a hospital stay
- Inadequate treatment
- Inadequate care coordination and follow up care in the community
- Unexpected worsening of disease after discharge from the hospital.

There are a multitude of reasons that lead to a readmission. Patients may not understand the discharge instructions either as a consequence of poor delivery by the inpatient provider or limited understanding by the patient. Not including family members or caregivers in the discharge planning, limited access to timely outpatient follow up, inability to fill a medication and inadequate medication reconciliation have all been cited as possibly contributing to readmissions [9]. While some readmissions are not preventable, many are.

CMS 30-Day Unplanned Readmissions

- Heart attack (AMI) patients
- Heart failure (HF) patients

- Pneumonia patients
- Hip/knee replacement patients
- Stroke patients
- Chronic obstructive pulmonary disease (COPD) patients.

Many hospitals are developing and applying more active programs to address unplanned readmissions in high-risk populations and diseases. Improving care coordination with outpatient physicians, ensuring patients who may not be able to afford medications have a supply before they leave the hospital, using teach back methods when reviewing discharge instructions, including the family/caregiver in the discharge discussions are just some strategies employed to attempt to avoid readmission. Some programs engage pharmacists who communicate telephonically, use a visiting home nurse and home visits by a healthcare provider.

Hospital-Acquired Conditions (HAC's)

Providers and patients find themselves in complex healthcare systems. In 2010, a Health and Human Services Office of the Inspector General (OIG) team identified the rate of harm—that is, injuries to patients associated with their care—among hospitalized Medicare patients as high as 27%. Half of these inpatients experienced one or more adverse events that resulted in a prolonged hospital stay, permanent harm, a life-sustaining intervention, or death. Almost half of all events identified in the OIG report were considered preventable [10, 11].

CMS identified HACs conditions as:

(a) High cost or high volume or both,
(b) Result in the assignment of a case to a Diagnosis Related Group that has a higher payment when present as a secondary diagnosis,
(c) Could reasonably have been prevented through the application of evidence-based guidelines.

Hospital-Acquired Conditions Include

- Foreign Object Retained After Surgery
- Air Embolism
- Blood Incompatibility
- Stage III and IV Pressure Ulcers
- Falls and Trauma
- Foreign Object Retained After Surgery

- Air Embolism
- Blood Incompatibility
- Stage III and IV Pressure Ulcers
- Manifestations of Poor Glycemic Control
- Catheter-Associated Urinary Tract Infection (CAUTI)
- Vascular Catheter-Associated Infection (CLABSI)
- Surgical Site Infection,
- Iatrogenic Pneumothorax with Venous Catheterization.

Several organizations—including the U.S. Department of Health and Human Services' (DHHS), Agency for Healthcare Research and Quality (AHRQ), Centers for Disease Control and Prevention (CDC), and Centers for Medicare & Medicaid Services (CMS), along with public–private collaborative such as the Partnership for Patients (PfP)—have made significant progress to reduce certain HACs (Figs. 15.7 and 15.8)

From 2010 to 2013 an estimated 1.3 million fewer harms were experienced by patients. This equates to an estimated reduction of $12 billion in health care costs from 2011 to 2013. Even with the 17% decline in HACs, the rate is still too high [12]. The potential cost savings are compelling to continue the work to decrease the high rate of HACs and ensure the healthcare system is as safe as can be.

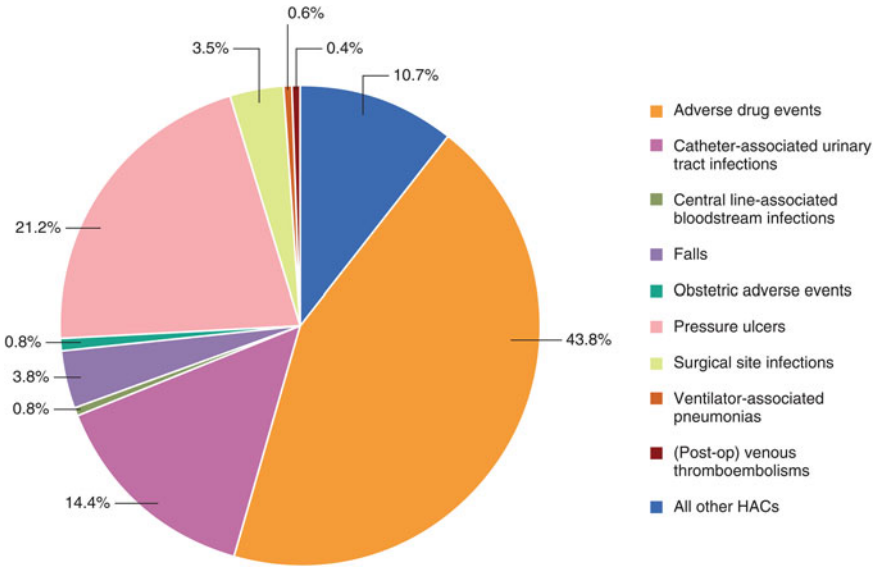

Fig. 15.7 Change in HACs, 2011–2013 (Total = 1,317,800)

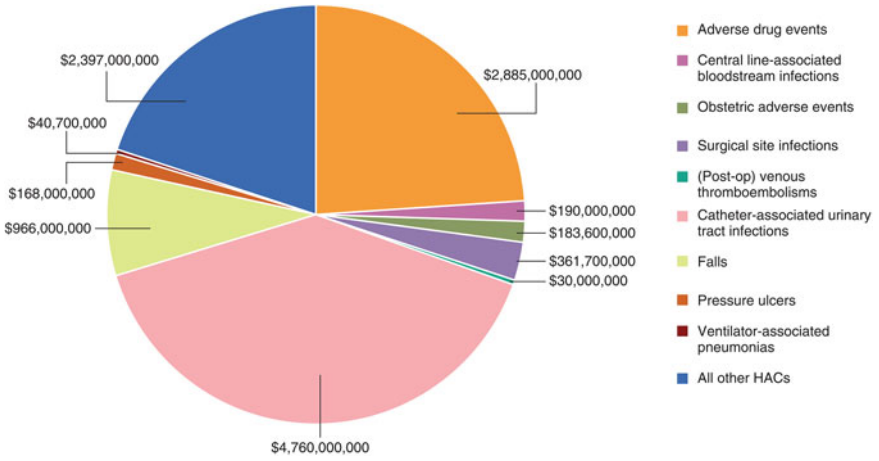

Fig. 15.8 Estimated cost savings, by hospital-acquired condition (HAC), 2010–2013

International Statistical Classification of Diseases and Related Health Problems (ICD)

Interestingly, the first model of systemic collection of hospital data was in the seventeenth century. This went through various reiterations, coming to be ICD6 first published in 1949. It is anticipated ICD 11 will be ready for endorsement by the World Health Organization (WHO) in 2017. The ICD classification is an international WHO classification for epidemiology, health management and clinical purposes. The United Sates is expected to move from ICD 9 to ICD 10 in 2015. ICD 10 has about 68,000 diagnostic codes, compared to the 13,000 found in ICD-9.

Why go to ICD-10?—Much of the world is already using ICD10. ICD 10 is more robust, allowing for more detailed reporting to increase data and reporting for public health purpose and research.

Unless claims are submitted with ICD-10 codes, they will be rejected and hence no payment for services provided.

Efforts to Reduce Waste and Improve Value in Care

Multiple efforts are in place to increase value by reducing unwarranted variation in medical services. The Choosing Wisely campaign is an initiative of the American Board of Internal Medicine (ABIM) that encourages physicians, specialty societies, patients, and health care stakeholders to make decisions about the appropriateness of medical care based on a patient's individual situation rather than automatically

following guidelines. This encourages avoidance of unnecessary tests and procedures that yield no benefit and could actually do harm.

Finding Ways to Shift the Cost Curve

Dr. Lane's husband is offered a fellowship in Maryland. After they discuss and review this wonderful opportunity he decides to accept the offer. Dr. Lane is successful in finding a great hospitalist position. They move, settle in and before long, Dr. Lane is confused—a lot of the regulatory requirements in her previous job are not applicable in Maryland—she sets about learning why Maryland is different.

Maryland is the only state in the US, which has an all-payer rate setting system. What this means is, all facilities are paid the same by all payers including Medicare and Medicaid. This was instituted by the state legislature in 1971 in response to rapidly rising hospital costs and serious financial losses by hospitals that were treating large numbers of uninsured patients. Consequently, the Health Services Cost Review Commission (HSCRC), a government agency, was formed. The HSCRC believed that hospitals should operate under consistent payment incentives (Fig. 15.9).

In 1977, the HSCRC negotiated a waiver to require Medicare and Medicaid to pay Maryland hospitals on the basis of rates it approved. As a result, the HSCRC exercises full rate setting authority for all payers and all general acute hospitals in Maryland. This Medicare waiver is the linchpin for the system and a galvanizing

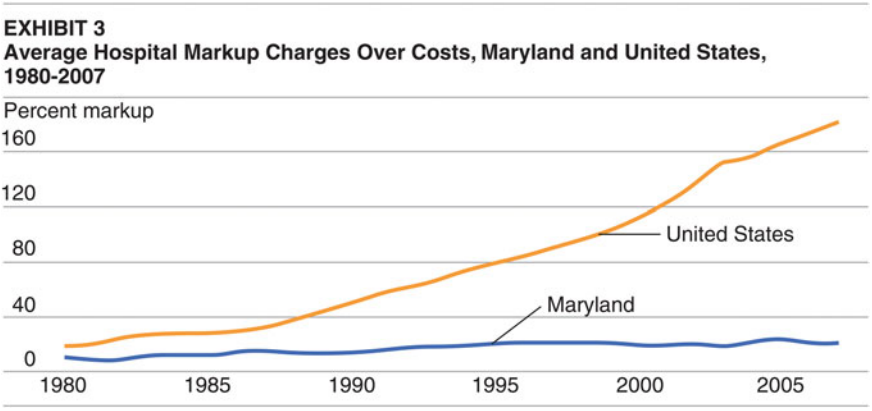

Fig. 15.9 Average hospital markup charges over costs, Maryland and United States, 1980–2007. *Adapted from* American hospital association statistics, 1980–2007. *Note* Maryland's markup includes the provision for the financing of uncompensated care (which accounts for about 8% of hospital revenue or approximately 40% of Maryland's 21.5% markup of charges over costs)

force for all stakeholders [13]. The HSCRC collects data and audits costs, patient volume, financial condition of the hospitals, as well as patient-level inpatient and outpatient data. Through this, Maryland has been able to [1] Constrain hospital costs; [2] ensure access to hospital care for all citizens; [3] improve the equity and fairness of hospital financing; [4] provide for financial stability; and [5] make all parties accountable to the public [14].

In 2008 the HSCRC implemented a "value-based purchasing" initiative similar to the CMS planned VBP initiative. Quality Based Reimbursement (QBR) uses nineteen evidence-based process measures. Maryland Hospital-Acquired Conditions (MHACs) introduced in 2009, the analogous to the CMS HACs, comprises of 64 potentially preventable conditions (PPCs).

In January 2015, CMS and Maryland introduced an initiative promoting value rather than volume under the new Maryland Waiver. This promotes population health and global budget revenue. Hospitals in Maryland will receive a certain amount of revenue each year regardless of the number of people they treat and the amount of services they deliver, as long as they provide efficient, high-quality care to their communities. If successful, this could provide a road map to improve quality of care and contain costs in other states.

The key financial drivers in medicine are cost of care, quality of care and access to care. There is increasing pressure on hospital leaders to provide quality care in a cost effective manner with less resources by eliminating waste and improving efficiency. Hospitalists are well positioned to provide support the changing landscape of healthcare.

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Chapter 16
Demonstrating Value and Gaining Visibility: 13 Key Questions to Success

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In today's complex healthcare system, organizations and hospitals are structured with many complex layers of personnel, both clinical and nonclinical. Demonstrating your value as well as your hospitalist group's value in these systems is highly intertwined with visibility in your organization. With the constant supply of residents entering hospital medicine, there is a steady stream of talented individuals looking for job opportunities. For this reason, the newly hired or veteran hospitalist must ensure their employer sees them as valuable assets to their hospitalist group [1]. Regardless of your assessment of your value to your hospital or healthcare system, you are dispensable if key stakeholders do not recognize your value [2]. Demonstrating your value should occur at multiple levels including direct supervisors and key stakeholders with institutional influence. The 13 questions posed in this chapter will prompt you to consider ways to assess yourself and strategies to demonstrate your value in a meaningful, effective manner.

Who Are You?

As we discussed in the "Knowing Yourself and Your Style" chapter, self-assessment is a critical part of becoming a successful hospitalist. Once you understand your inherent characteristics such as personality, communication and emotional intelligence, it is time make an honest assessment of your abilities. Are you well-suited to be an effective hospitalist clinician, educator, or administrator

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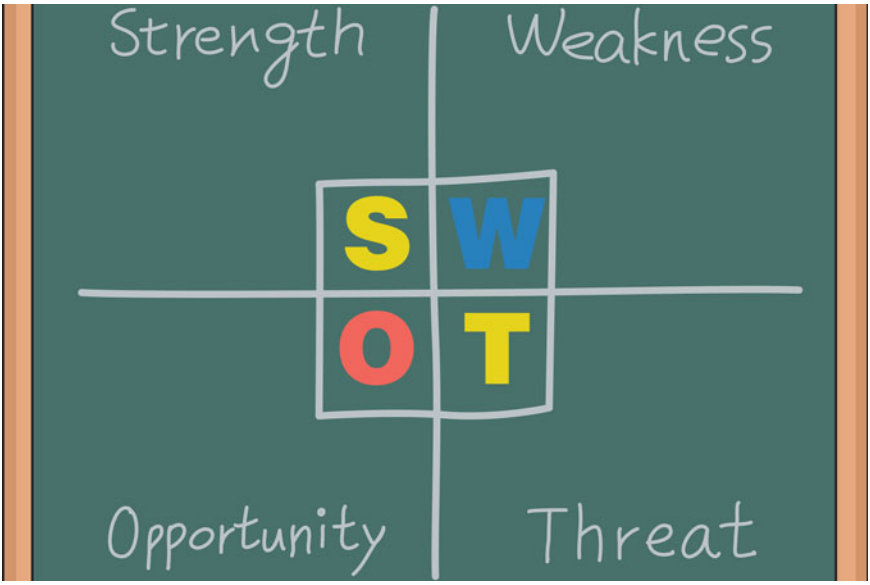

Fig. 16.1 SWOT analysis. Adapted from http://www.businessnewsdaily.com/4245-swot-analysis.html

[3]? In order to explore this question, a "SWOT" analysis on you and your career path can be used [4] (Fig. 16.1).

This well-known model uses a basic two-by-two table to perform a self-analysis. You should fill in the top two quadrants with lists that describe your strengths and weaknesses and bottom two boxes with opportunities and threats. Strengths are the positive attributes that you bring to the table. Some examples may include a cheerful disposition, a can-do attitude, significant previous experience as a hospitalist, or procedural skills. **In contrast,** weaknesses are the internal negative attributes that may detract from your performance. You may have insight into these attributes or can glean it from previous evaluations. You still have the ability to exert some control over these attributes. On a personal level, they may include being easily frustrated, being confrontational, and not being a good team player. Weaknesses may also include subpar career skills, like performing poorly on certification exams, or even lacking a good support network.

Opportunities are external factors out of your control that can be used to your advantage. Opportunities may include a move toward an EMR at your institution where your IT skills can now be leveraged, an opening on an important committee, or increased patient volumes leading to expansion of your group. Threats are external factors that have the potential to impact your career path negatively. Often, these require development of a protective plan to prevent potential damage to your career plans. Examples include organizational restructuring where your hospital

merges with a larger hospital system, reduced patient volumes as a result of the new regulatory landscape, or new physician requirements at your organization.

Performing a SWOT analysis provides you with a structure to consider opportunities to demonstrate value and gain visibility. It can help you to understand and affirm your present position and gain a better understanding of the skills and attributes that you should highlight or avoid advertising. The SWOT analysis also helps to generate specific actionable steps that you can take to demonstrate value and gain visibility. For instance, you may decide to improve your skill set or add a new skill that is advantageous to your career growth, focus on minimizing your weaknesses, pursue new opportunities or develop a protective plan against threats. With meaningful insights gained from your SWOT analysis, you can move on to other aspects of gaining visibility and demonstrating value.

What Sparks Your Interest in Your Daily Practice?

Identifying personal strengths is not always easy. Considering your passions and what makes you happy in your daily work life may serve as a starting point to identify your strengths [5]. Does providing care to patients make you the most happy? If so, your strength likely lies in being a good clinician. Do you get most excited about teaching house staff? If so, that is probably because you are a gifted educator. If you are a hospitalist leader, perhaps you find passion in negotiating better salaries and compensation packages for your hospitalists or mentoring more junior faculty through difficult transitions. These are the attributes you will emphasize on a larger scale as you take steps toward gaining visibility in your organization. A curriculum vitae cannot convey your passions, enthusiasm for being a hospitalist or hospitalist leader, or the entirety of your personal strengths, so you must be keenly aware of them and be prepared to showcase them to stake holders [6].

Are You Keeping Track of Your Performance and the Praise/Feedback You Have Received?

Tracking your formal and informal evaluations offers an opportunity to gather more objective data on your performance as well as insight into how your organization may perceive you. Formally tracking of the praise you receive may become important for leverage when seeking out high profile projects to increase your visibility. Tactfully reminding your supervisor, possibly during semiannual performance evaluations, about the positive feedback you have received from involvement in committees will help identify you as a strong candidate to join or

chair another committee. This, in turn, leads to more face time with senior hospital leadership [7].

In order to advance your reputation, you must first understand how you are perceived in your organization. It is important to seek out feedback on how others perceive you, as positive impressions are easily discussed but negative opinions are infrequently shared. As we discussed in the Common Career Pitfalls chapter, you are always on stage. Each word and action you say and do leaves an impression on those around you [8]. Reviewing comments or evaluations that have been made about you, formally or informally, is one way to get a sense of how you are perceived. Eliciting feedback from your colleagues and supervisors may be awkward and possibly intimidating at first, but may be essential to your career development [9]. It is also important to try to elicit some feedback in real time [9]. Ask the nurses immediately after a patient flow meeting whether you incorporated the input of nonphysicians adequately. Ask the CMO at a utilization review meeting whether you presented the data well. Ask your chairman after a difficult meeting on negotiating administrative time for your hospitalists whether you should have approached things differently.

Eliciting feedback demonstrates maturity and makes those approached feel as though their opinions are meaningful. Receiving feedback that you are perceived negatively offers a valuable opportunity to either change behavior or explore why that perception exists. While this process may seem arduous at first, being conscious of the way you are perceived will help you ensure that all your interactions with fellow hospitalists, ancillary staff, and supervisors are viewed positively.

Who Do You Know and Who Knows You?

The process of self-promotion starts with developing good relationships across your organization, including with patients, colleagues, nursing and ancillary staff, supervisors, and senior leadership. Developing similar relationships with other health professionals outside your organization, like through a local hospitalist chapter, is equally important [5]. In addition to your work ethic, your likeability and development of strong relationships will greatly increase your consideration by others for leadership roles, high profile projects, or other desirable opportunities [1]. According to Joel Garfinkle [9], a top leadership coach in the United States, "Visibility is not about who you know—it's about who knows you."

If people are impressed by you and your skills they will naturally want to advocate for you. If that is not the case, then you will need to seek out at least three people who will willingly serve as advocates to champion you, promote your success, and work to improve the perception others have of you. These individuals can be your direct boss, nurse managers, or even fellow hospitalists with whom you have a favorable relationship [9]. You may need to work toward developing a strong relationship with these potential advocates before approaching them. You

will also need to become comfortable in sharing your achievements and wins with those advocates [5].

Who Are the Stakeholders Who Have Direct Influence Over Your Career Growth?

As a hospitalist, you interact with many individuals who may influence your career growth and development. It is imperative to identify the key stake holders in your organization and the influence they can have on your career. Most hospitalists are aware of the influence their hospitalist director has on scheduling and other aspects that can impact review of their performance. However, it is equally important to know who makes decisions regarding promotion and salary of your hospitalist group or team. Is it your Departmental Chair, the CMO of your hospital, the CEO of your regional medical system? Knowledge of this provides you with an opportunity to target advertisement of your strengths and successful performance. Implicit in this, is an opportunity to prepare for a good first impression so that you are perceived in a positive way in your hospital or health care system [9]. You may discover that the CMO of your larger hospital system meets regularly with your hospital's CMO to review performance metrics and hospitalist productivity. A chance meeting in an elevator, hallway, or at a committee meeting may present a good opportunity to make a lasting impression of your "hard and soft skills" [2]. Hard skills are the technical or clinical skills you need to perform your job well while soft skills are the interpersonal skills like team spirit, enthusiasm and likeability.

Do You Have a Mentor or Sponsor Within the Organization Who Is Your Advocate and Will Promote Your Talent to Key Stakeholders?

Identifying the right mentor is a very important step toward strategically building the right relationship to demonstrate your value and gain visibility [2]. The right mentor can share wisdom, guide you on which committees to join and which pitfalls to avoid. They can also be ideal advocates for you and promote your talent to others. Studies examining mentorship, productivity, and promotion among academic hospitalists have shown that hospitalists without mentors are negatively impacted by having a lower rate of scholarly activities. However, academic hospitalists associated mentorship programs with promotion, job satisfaction, publications, and grant funding [10].

Finding a mentor does not have to be an arduous task depending on where you work. Some hospitalist programs have formal mentorship programs that pair you

with a mentor while others do not. Remember that if you have impressed others already and built good relationships within and outside of your hierarchy structure, it will be less difficult to find a willing mentor. Mentors do not have to originate from your specific department or hospitalist leadership structure. You may have a good relationship with a senior surgeon who worked on an initiative with you or a senior hospitalist at another institution with whom you collaborated on a project for an annual meeting. These individuals are also important to consider for mentorship. Mentoring others, in turn, can be very rewarding and may also help you gain visibility if that is valuable to your organization.

Who Is Aware of Your Career Aspirations?

Being vocal is an invaluable skill in gaining visibility. How will anyone know of your career aspirations if you do not vocalize them? Though some of your talents will speak for themselves, it is important for you to inform all the necessary stakeholders of your career goals [3]. In doing so, stakeholders have an opportunity to identify high visibility opportunities that are in alignment with your career goals. In addition, your hospitalist director will need to know your career goals in order to pair you with an appropriate mentor. While sharing your career aspirations with others, share qualities about yourself that you believe make you well-suited for that position. Promoting aspects of clinical or administrative work at which you excel can be done tactfully and not in a boastful or narcissistic manner [11].

What Is Considered Valuable to Your Stakeholders?

Knowing the qualities and abilities that are important to leadership when looking to approach someone for opportunities, is critical [2]. It will help you in career planning to take an insightful look into your skills and to start to work on the areas in which you have deficiencies. Every institution is different and the setting in which you practice hospital medicine may dictate factors that lead to promotion. Hospitalists in academic medical centers may have their promotion criteria weighted toward grants, peer reviewed publications, clinical research, and scholarly achievements. In the nonacademic setting, RVUs, patient volume, and involvement in key committees that affect the hospital's financial bottom-line may be considered valuable. It is important to note that in addition to these "hard skills," which are technical abilities or skills specifically related to your clinical duties, your softer skills are just as valuable for the stakeholders to notice you. Good communication skills, positive attitude, and good organizational skills may be equally valuable to your physician leaders [2]. A hospitalist who is very efficient and can manage a large patient volume might lose value to stakeholders if he/she has poor interpersonal interactions with other service lines and staff. Likewise, if top hospital leaders

are looking for motivated and passionate individuals, they may seek out those individuals who do not necessarily display the best clinical acumen but have the passion to motivate others and lead [6].

Are You Aware of Others' Expectations of You?

It is important for you to know what is expected of you so that you can meet and, at times, exceed those expectations [5]. Your hospitalist program may have their pillars of success clearly stated in your contract, especially if incentive bonuses are tied to performance. If your institution is not transparent in your contract about expectations, you will need to seek them out. You may need to arrange meetings with leadership in order to do this. You should inquire about the performance benchmarks by which you will be evaluated [12]. These may include quality measures (e.g., core measures, CMS benchmarks, patient safety indictors), efficiency indicators (e.g., length of stay, discharge time), patient satisfaction scores, or financial goals achievable by generating revenue and reducing cost. Likewise, if you are a hospitalist leader it is imperative that you are clear on senior management or hospital leadership expectations of your group. Demonstrating a positive return on investment in your group is of paramount importance. Meeting with hospital leaders to understand what performance benchmarks are valuable to them, will help streamline your data collection. Define which metrics will be used to judge your group. These may include aggregate measures for length of stay, readmissions at 7 and 30 days, Press Ganey scores for patient satisfaction and national external quality and safety benchmarks [12]. Learn efficient and reliable methods to acquire and analyze data and present it in a way that concretely demonstrates the value of your hospitalist group to senior leadership. Without understanding what is expected of you or your hospitalist group, you cannot create strategies to effectively achieve or exceed expectations.

How Can You Develop and Redefine Quality Relationships?

Developing quality relationships and redefining those that are dysfunctional are important processes to advance your career. This may be difficult and time-consuming but can be accomplished through in-built trust and establishing credibility with individuals one at a time [13]. You will have to examine current relationships that exist within your network and determine if they are productive. If not, consider what can be done to ensure they are positive influences on your daily activities and career goals [5]. If unable to redefine those relationships, it is best to seek out more advantageous ones. Avoid aligning yourself with colleagues who do not aim to advance the goals of your hospitalist group, are not invested in growing in the organization, or are looking to leave [14].

Work to build cross-generational relationships within your organization [2]. Strategic relationship building entails building relationships with other generations as those individuals may share skills and wisdom that can greatly advance your career. For instance, more seasoned physicians may impart wisdom on ways to successfully navigate the promotion structure while younger physicians may share knowledge on ways to leverage social media to expand your professional network.

How Can You Increase Visibility?

Identifying tangible ways to increase visibility does not have to be difficult. Volunteering for new projects and initiatives is an easy way to accomplish this. As a hospitalist with a busy schedule, volunteering to do additional work is not always appealing. However, seeking out projects even when you are not asked may reap many benefits [7]. First, volunteering demonstrates initiative, one of the personal qualities that are important when considering an individual for promotion. Inform the key stakeholders in your career, including your direct boss, that you are interested and available to join committees or be the physician lead on projects. While initial opportunities may be on less desirable committees or initiatives, demonstrating a commitment to the hospitalist group or organization will lead to recognition and consideration for more desirable endeavors. Generally speaking, projects that affect the hospital's financial bottom-line or reportable quality metrics will be of high value to the C-suite (hospital's executive leadership team) and lead to positions of high visibility. If you are seen as a solution-driven hospitalist with initiative, it will open the door for more opportunities [3]. Even projects that may not appear to be high visibility may still provide an opportunity to network with other colleagues that are involved in more high-impact initiatives. Be sure that those in your circle of influence are aware of your efforts and accomplishments. Take advantage of opportunities outside of your department if they provide an opportunity to network, build productive relationships, and impart new skill sets as they can make you a better hospitalist and enhance your professional portfolio [7]. For example, volunteer to be a physician liaison between social work and case management. This may lead to a better understanding of the barriers to reduce length of stay and timely, safe discharge. This knowledge may become vital on future hospital initiatives.

Look for opportunities that arise when there is a vacant senior level position. If your hospitalist leader position is vacant, volunteer to adopt aspects of that position that may be within your expertise until a replacement is hired [1]. If you are a hospitalist leader and the CMO position is vacant, suggest to the CEO or other hospital leadership that you can assume some of the responsibilities within your scope.

Finally, advertise your accomplishments. This can be done by informing key stakeholders of your successes. Consider advertising your successes in organizational newsletters or hospital-based communications.

How Can You Demonstrate Value?

Demonstrating value at advanced level sometimes requires you to become an expert in a high-value area. This may require additional education or training but can reap big dividends. Choose a focus that interests you and will make you essential to the success of your organization; your new skill set will be self-promoting [2]. For instance, physicians with advanced skills in informatics are invaluable for organizations looking to roll out new EMR systems. Also consider the advantages of investing in a new degree such as an Masters in Business Administration (MBA), Masters in Public Health (MPH) or Masters in Medical Management (MMM).

Have You Considered the Impact of Making Others Look Good?

When you promote the accomplishment of others, they find ways to promote your accomplishments in turn. This is true for your boss as well. Praising your hospitalist leader, departmental chair or CMO is effective for many reasons. It instills trust and loyalty. Your boss will praise you whenever they can. They will volunteer you for more opportunities and projects because they know you will be loyal to them and will not usurp them when you go in their stead, as the hospitalist representative. In addition, if your hospitalist leader gets promoted, they will most likely want to staff their new team with individuals who will continue to make them look good [2]. As a hospitalist leader, giving your fellow hospitalists the tools they need to excel will reflect positively on you. By mentoring them, paying attention to their career goals and trying to steer them in the right direction, the accomplishment of your team will show your strong leadership and motivational skills. Publicly recognizing others will show that you value collaboration and those with whom you work will respect you for your ability to acknowledge the efforts of others [3].

There are many ways to gain visibility and demonstrate value. However, doing so takes concerted effort and planning. Ultimately, though, your efforts will result in a highly satisfying and productive career.

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Chapter 17
Cost-Conscious Care

Philip C. Dittmar and Brian E. Edwards

Dr. Lane is called to see a 66-year-old woman with history of myocardial infarction who presents with shortness of breath and bilateral leg swelling. The patient had recently returned from a trip to visit family and noted a significant increase in her weight, which she felt was in excess of what her diet could explain. She noted worsening swelling in her legs limiting her ability to wear her shoes. She contacted her cardiologist who suggested she double her furosemide dose to 80 mg. The patient adhered to these recommendations, however she developed progressive shortness of breath which prompted her presentation to the hospital. The Emergency Department provider initiates the hospital's standard acute congestive heart failure order set given suspicion of an acute exacerbation of congestive heart failure. Dr. Lane assumes care of the patient and ponders ways in which to provide cost-conscious care.

The hospitalist is the chief manager of cost-conscious care within the confines the hospital. The hospitalist develops the differential diagnosis, guides the diagnostic evaluation, and determines the length of stay for the patient. Each of these areas can be a focus for improving value. In addition, the ability to recognize areas of waste, whether it be low yield testing, unnecessary routine orders, or preventable complications, can help the hospitalist to limit costs and provide high value care.

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Awareness of Costs

Although cost is only a component of value, it is important for the hospitalist to realize the actual costs of testing. A 2010 study of hospitalists revealed low awareness of the charges associated with inpatient care [1]. Hospitalists should make an effort to identify the actual costs and charges that their patients may encounter during a hospitalization. The hospitalist can review this information by obtaining a list of the charge schedule for the hospital; however, this information could be difficult to extract as hospitals frequently avoid the release or publication of this information. An alternative would be to review an individual patient bill summary which can allow the identification of realized charges for the patient. The bill summary for an uninsured patient would provide the clearest data of hospital charges (as this avoids confusion related to charges negotiated by insurance companies). Both of these examples may require labor intensive efforts, whereas a general idea of the cost of testing may be adequate and online cost calculators provide a solution.

In the absence of direct charge information, online cost calculators can be utilized to estimate geographically adjusted costs. These tools can be utilized to identify the charges associated with a particular code for a hospital day or through an estimation of a suggested cost of a test by location. One such tool is HealthcareBluebook.com [2]. This site offers geographic estimations of cost for testing and links specific testing to Choosing Wisely recommendations in order to promote a discussion between patients and providers. This information can greatly improve the hospitalist's awareness of direct costs that a patient may encounter.

In addition to the direct costs of testing, there are indirect costs of testing which can be much more difficult to quantify. Indirect costs may be reflected in a loss of productivity or time for the patient. In addition, indirect costs can be caused by false positive or false negative test results, which can lead to an inaccurate plan of care. The awareness of direct and indirect costs can help the hospitalist to identify ways to provide cost-conscious care.

True value, as opposed to cost, is difficult to truly assess and cost is only one factor. It is simplistic and inaccurate to state that all expensive tests provide little value and all inexpensive tests provide great value. An expensive test or therapy may be considered high value despite a high cost, if the test or therapy allows you to achieve a proper diagnosis or initiate a proper therapy; for example, the placement of an implantable cardioverter defibrillator (ICD) in patients with a low ejection fraction. The placement of an ICD is a relatively expensive procedure; however, this device significantly reduces mortality from sudden cardiac death and can be considered high value in relation to the benefit from the prevention of mortality [3]. Whereas an inexpensive test might not have a great cost, but the lack

of benefit to the patient reduces the value to the test. An example of this is the use of carotid ultrasound in the evaluation of syncope. In one study, carotid ultrasounds only revealed an etiology for syncope in 0.8 % of patients [4]. It is important to consider cost as a factor of value, but not the only factor. Awareness of costs and value of testing is an important initial step in providing cost-conscious care.

Likelihood Ratios to Improve Diagnostic Yield

In addition to the awareness of cost and value related to testing and therapies, the hospitalist must find ways to cost effectively investigate a differential diagnosis. The veteran clinician relies on experience gained from prior patient experiences to significantly impact their clinical reasoning. The seasoned clinician distils pertinent clues in the history, examination, and initial testing to achieve a working diagnosis. The ability to achieve an accurate working diagnosis can reduce unnecessary testing and reduce time to any further necessary testing or therapies which may result in a reduction in length of stay. There is no true substitute for experience in clinical reasoning; however, the novice provider can be greatly aided by refining clues from the patient presentation to a concise illness script. In the above case, one may distil the case to: a patient with a risk factor for congestive heart failure with dyspnea and bilateral lower extremity edema. This may be considered as an illness script for an acute congestive heart failure exacerbation. However, another provider may note: a patient with recent travel, leg swelling, and dyspnea. This illness script might be more concerning for an acute pulmonary embolism. Both illness scripts are plausible based on the initial information provided and an expert clinician would look to gain additional information to support a hypothesis and ensure that a "can't miss" diagnosis is not overlooked. The ability to discern an important clue from background noise is the hallmark of a veteran clinician. The novice clinician can improve clinical reasoning by using high-yield signs or symptoms to support their hypothesis, but how can one do this without experience?

The simplest way to determine which sign or symptom will truly support your clinical reasoning is to utilize likelihood ratios (LR). In the simplest terms, a likelihood ratio is the probability of a finding being abnormal in a patient with the disease divided by the probability of the same finding being abnormal in a patient without the disease. In the sample case, dyspnea and lower extremity edema are noted symptoms which providers may identify as suspicious for congestive heart failure; however, these findings might be nonspecific as they could be similarly identified in other disease processes. The LR for a patient with these symptoms to have congestive heart failure are 1.2 for dyspnea and 1.4 for lower extremity edema [5]. A likelihood ratio close to 1 means there is no change in the likelihood of disease. However, a significantly positive likelihood ratio is associated with a significant increase in likelihood of disease and a likelihood ratio near zero is associated with a significant decrease in likelihood of disease. In regards to our sample case, let's review additional findings:

Dr. Lane's examination of the patient reveals basilar rales, 3+ pitting edema in bilateral lower extremities, and jugular venous distention to the angle of the mandible. A focused cardiovascular exam reveals a laterally displaced point of maximal impulse, a holosystolic murmur, and S3 gallop. Review of a chest film reveals vascular congestion and an enlarged mediastinal silhouette. Dr. Lane feels certain this is consistent with an acute exacerbation of congestive heart failure.

In reviewing our sample case, additional findings that include a gallop on cardiac examination, jugular venous distention, or pulmonary congestion on chest imaging, greatly increase the suspicion of congestive heart failure as the primary diagnosis for many clinicians. It should be of no surprise, that these findings have high likelihood ratios which would support the clinician's assessment: jugular venous distention (LR 9.3), gallop (LR 11), and pulmonary congestion on imaging (LR 12.0) [5]. Quickly navigating through a differential using LR can support the hospitalist in minimizing costs by reducing unnecessary testing and reducing length of stay due to delayed treatment of the primary condition.

Tools for the Hospitalist

Dr. Lane determines this is an acute exacerbation of congestive heart failure. Review of outpatient records identifies a recent transthoracic echo with a left ventricular ejection fraction of 35 %. Dr. Lane continues diuresis of the patient and reviews the standard hospital order set which includes telemetry, daily labs, and stress ulcer prophylaxis. On interview, the patient requests a urinary catheter so she does not have to ambulate to the bathroom and a peripherally inserted central catheter so she is not stuck repeatedly for blood draws. The patient also states that she suspects she needs a blood transfusion due to her dyspnea; however her current hemoglobin is 10.4 g/dL. Dr. Lane sees an opening to discuss cost-conscious care, but it unsure of how to initiate the conversation.

Beyond the initial stages of the hospitalization and determination of the differential diagnosis, the next task for the hospitalist is to provide cost-conscious care throughout the in-hospital management of the patient. The hospitalist must bypass unnecessary procedures, avoid preventable complications of therapies, and promptly discharge patients when appropriate. Tools to support the hospitalist are needed to identify these potential missteps in order to provide cost-conscious care.

In 2012, the American Board of Internal Medicine (ABIM) foundation partnered with numerous specialty societies to develop an initiative to promote conversations between providers and patients about what is necessary and appropriate testing, this was termed the Choosing Wisely® campaign. The Society of Hospital Medicine contributed to this initiative to help formulate recommendations specific to the hospitalized patient and the hospitalist [6]. These recommendations can serve as areas of focus for hospitalists to refine their day-to-day practice, reduce potential waste, and avoid hospitalization-related complications. The recommendations include

(1) **Don't place, or leave in place, urinary catheters or incontinence or convenience or monitoring of output for noncritically ill patients (acceptable indications: critical illness, obstruction, hospice, perioperatively for <2 days for urologic procedures; use weights instead to monitor diuresis)**. Strict monitoring of indications for the use of urinary catheters should be provided by the hospitalist. The use of urinary catheters for convenience puts the patient at risk for catheter-associated urinary tract infections (CAUTI). This is a clearly preventable complication of a potentially unnecessary procedure.

(2) **Don't prescribe medications for stress ulcer prophylaxis to medical inpatients unless at high risk for GI complications**. Admission order sets frequently include proton pump inhibitors and Histamine (H2) receptor blocking agents for stress ulcer prophylaxis. For nonintensive care unit patients, there is limited data to support their use for stress ulcer prophylaxis and studies have shown an increase in prevalence of pneumonia and *Clostridium difficile* infections [7, 8]. Further, these medications are frequently continued upon discharge from the hospital leading to ongoing waste.

(3) **Avoid transfusions of red blood cells for arbitrary hemoglobin or hematocrit thresholds and in the absence of symptoms of active coronary artery disease, heart failure, or stroke**. A patient should be assessed for need of transfusion by symptomatology and current clinical condition. A conservative transfusion strategy has been associated with an improvement in morbidity and mortality. The excessive use of transfusions can lead to increased antibody formation, risk of allergy, and greater risk of death. The conservative transfusion strategy can improve value through directly reducing cost in the limitation of transfusions and indirectly through a reduction in complications associated with transfusions.

(4) **Don't order continuous telemetry monitoring outside of the ICU without using a protocol that governs continuation**. Telemetry orders are frequently included with admission order sets for specific diagnoses. The true need for telemetry is typically limited to an initial monitoring period. For example, a patient under observation for chest pain may only need limited monitoring on telemetry until a myocardial infarction is ruled out; however, a patient with congestive heart failure undergoing aggressive diuresis with electrolyte disturbances may require ongoing telemetry monitoring. The hospitalist should frequently reassess the necessity for ongoing telemetry monitoring.

(5) **Don't perform repetitive CBC and chemistry testing in the face of clinical and lab stability**. Admission order sets may schedule daily laboratory draw without direct attention paid by the hospitalist. Additionally, as a patient's status begins to stabilize less frequent laboratory draws are necessary for ongoing care. The reduction in unnecessary routine testing provides an opportunity for the hospitalist to reduce waste.

Dr. Lane reviews the admission order set and determines that daily basic metabolic panels for electrolyte monitoring is appropriate but discontinues complete blood count monitoring after it is noted to be stable. Telemetry is continued given concern for dysrhythmia in the setting of aggressive diuresis, however stress ulcer prophylaxis is discontinued. Dr. Lane sits down with the patient to fully explain the risks of unnecessary urinary catheters, central lines, and transfusions. The patient is disappointed with the result of the discussion but appreciates Dr. Lane taking the time to explain the reasoning.

Beyond the Choosing Wisely® campaign, the hospitalist should utilize evidence-based medicine in order to identify ways to reduce cost and improve value during the hospitalization. Three areas that will be explored here include: ways to prevent in-hospital complications from central line use, avoiding low value testing in syncope, and utilizing a cost effective means for bronchodilator delivery in asthma/COPD.

Central Venous Catheters

Central venous catheters (CVCs) are indicated for use in therapies that cannot be accomplished by peripheral venous access or when peripheral venous access cannot be obtained. CVCs may be used in all the same functions as peripherally inserted intravenous lines (administration of intravenous fluids, blood products, or medications); however, CVCs also allow for the administration of vasopressors, chemotherapy, parenteral nutrition, and hemodialysis. Additionally, central catheters can be utilized for frequent blood draws or patient comfort. The presence of a central catheter may be a necessity in the intensive care setting; however, it can become more of a convenience outside of the intensive care unit. It is important to recall that the presence of a CVC is the major risk factor for the development of central line associated bloodstream infections (CLABSIs). Hospital core measures related to healthcare associated infections specifically focus on the reduction of CLABSI. The greatest area of focus related to central lines pertains to the placement of the lines. Providers should utilize proper hand-washing techniques, use of chlorhexidine scrubs, properly gown and glove for the procedure, and avoid placing central access into the femoral vein [9]. Adherence to these standards has been associated with decreased risks of central line associated bloodstream infections. Beyond proper placement techniques, the simplest manner to reduce the risk of infection is to minimize the use of central lines. If the central line cannot be avoided, the hospitalist should focus on the prompt removal of central lines when not essential to provide care. The prompt removal of central lines can help to minimize the morbidity and mortality associated with CVCs.

Carotid Dopplers in Simple Syncope

The evaluation of syncope frequently provides a diagnostic dilemma for hospitalists. The differential diagnosis for syncope can be quite broad and, as a result, diagnostic testing can be low yield. The hospitalist should look to limit unnecessary testing that does not provide help in solidifying a diagnosis or ruling out a component of the differential. A 2014 study performed at the Brigham and Women's Hospital specifically targeted the use of carotid dopplers in simple syncope [10]. The study reviewed 313 patients with simple syncope, excluding patients with any focal neurological signs or the presence of a carotid bruit in the absence of focal neurological signs. A carotid stenosis of >50 % was identified in 48 of the 313 patients (15.4 %); however, carotid ultrasound did not reveal a causal diagnosis in any of these patients. Asymptomatic carotid stenosis is not an uncommon finding, especially in the elderly population. Careful attention should be paid to the appropriate testing and the applicability of results to the specific patient.

Nebulizer Treatment Versus Metered-Dosed Inhaler Treatment

The evaluation of a patient with an acute exacerbation of asthma or COPD is a frequent occurrence for the hospitalist. Standard asthma/COPD order sets frequently include options for intravenous or oral steroids and nebulized or meter-dosed inhaler bronchodilators. In the non-intensive care unit setting, the need for intravenous steroids should be questioned. Intravenous steroids and oral steroids provide similar outcomes in the non-critically ill patient [11]. Additionally, the use of nebulizers versus meter-dosed inhalers is objectively similar in the pediatric asthma population; however the cost is much less in meter-dosed inhaler bronchodilators [12].

Length of Stay and Discharge Readiness

Following aggressive diuresis, the patient notes an improvement in dyspnea, a reduction in leg swelling, and a measured improvement in weight. Dr. Lane senses the patient is approaching readiness for discharge and begins discharge planning. Dr. Lane contacts the patient's outpatient cardiologist, who plans for placement of an ICD in the outpatient setting, and primary care provider to set up a follow-up appointment. The discharge medication list is verified to include an angiotensin converting enzyme inhibitor and a beta blocker. Dr. Lane and the patient discuss the use of diuretics and monitoring of weights in the outpatient setting.

The hospitalist is the chief controller of hospital discharge; however, the patient should be included in discharge planning to avoid potential surprises at time of

discharge. Careful attention to the patient's ability to transition the care plan to the outpatient setting and accurate medication reconciliation are paramount to a successful discharge. Failure to do this may lead to readmissions or poor patient outcomes. In addition to discussions with the patient, the hospitalist should make every effort to communicate with the primary care provider or specialist who will see the patient in follow-up. The discharge summary is an essential element and should complement the conversation. The hospitalist is directly responsible for the success of a patient in the transition to the outpatient setting.

Broadening the Scope

Cost-conscious care in the hospital setting falls mainly on the shoulders of the hospitalist along with the patient, however, consultants, primary care providers, and Emergency Department providers should be included in the discussion. The ability to broach this subject with other clinicians is an important way to limit unnecessary testing and to build rapport with colleagues. Clinicians typically have reasoning for their ordering habits whether it be their standard operating procedure, a recent review of an underdiagnosed disease, or fear of malpractice. The hospitalist should engage in open discussions with colleagues to identify areas where ordering practices can be modified to reduce waste and improve value.

Conclusion

The hospitalist is the chief manager of the hospitalized patient and therefore the chief manager of value within the hospital. Interventions to clinical decision-making, avoidance of inpatient management pitfalls, and successful discharges can reduce costs and improve value provided by the hospitalist. Engaging colleagues in a discussion of cost-conscious care can broaden the impact of the hospitalist.

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Chapter 18
Managing from the Middle

Ada Ibe Offurum

Organizational Structure

Healthcare organizations have evolved significantly since the 1990's to a model which exemplifies larger systems with fewer layers. The norm of this era has been mergers and acquisitions with larger regional healthcare systems replacing smaller individual providers, leading to significant organizational changes within these systems [1]. The emphasis on continuous improvement, quality management, reengineering, elimination of redundancy and standardization of operations is a consequence of healthcare systems having to operate on a more competitive basis [2]. The impact of the organizational restructuring highlights the distinct hierarchy in healthcare organizations. In every organization including hospitals and healthcare systems, there are top influencers, workers, and 'middles' [3].

The Role of Stakeholders and Top Executives

Top executives in a system are responsible for the overall shaping of the system. They create the vision and roadmap to ensure the organization is always poised strategically to be ahead of external market factors [3]. Top managers are often easy to identify in the organization's hierarchical structure. Their status has clear visibility within the hospital/healthcare system. They occupy the top tier of the organization's hierarchy with other senior managers and hospital executives [4]. The emphasis on efficiency and cost effectiveness in the new healthcare corporate

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structure has influenced the shaping of healthcare organizations significantly in recent years [4].

They are the catalyst for strategic change in the organization. In the traditional organizational structure, the flow of information and power goes from senior managers to middle managers to individual employees.

The Role of Workers/Employees as Front-Line Staff

Workers or employees such as salaried physicians, nurses, and technicians are responsible for 'doing the work' or rendering the services for the system [3]. They enhance their systems' bottom line due to their intimate front-line knowledge requirements of the work that needs to be done daily. Unlike times past, in our current healthcare environment, physicians often do not have the final say in organizational decisions. Their main contribution is towards issues involving diagnostic decisions, care and treatment of patients [4]. Managers have become the main decision makers within healthcare organizations and hospital environments.

The Odds/Push and Pull Between Top Managers and Employees

In most organizations, senior leadership, and employees are often in conflict over many fundamental issues [3]. Workers may not share the vision or performance pillars defined by leadership. They may not agree with the allocation of resources across the system and may react negatively to calls for change even when mandated by overarching regulatory bodies such as Joint Commission and the Center of Medicare and Medicaid Services (CMS).

Definition of the Middle Manager

A middle manager is an employee, supervised by top managers and senior executives but directly in charge of frontline employees [5]. These front-line employees could be hospitalists, mid-level providers, house staff and administrative assistants.

The term comes from the fact that they are wedged in the 'middle' of top managers and employees who do the work. In addition to being directly in charge of implementing innovation and change, middle managers are essential for integrating the executive organization leaders and frontline employees and synchronizing various system functions for the two [5].

Role of the Middle Manager

In healthcare organizations, the responsibility of middle managers has grown significantly over the years as the concept of teams has become more common. Clinicians and administrators often have to work together in the hospital setting to effect change [6].

A. *Disseminate information from the top to frontline employees and vice versa*

Middle managers are responsible for disseminating necessary information to the front-line staff that may need an action plan [7]. In large organizations and healthcare systems, communication is typically generated from top leadership as well as from other middle managers. These may be merely informational or may actually impact workflow and the quality/quantity of work for front-line staff. The middle manager is responsible for ensuring that the information relevant to the employees/groups/teams is received.

For any innovation or change to be implemented, the middle manager has to be able to communicate to be able to affect change [8]. The forums to communicate may be varied to include social networks, long-term relationships built from associations with other middle managers and even front-line staff outside of their own direct influence [9]. Likewise the middle manager is also responsible for ensuring that top managers and senior leaders receive necessary information that affects the shaping of the organization. This bi-directional communication often involves direct feedback from the hospitalists to develop realistic performance metrics.

Dr L is a hospitalist director at a community hospital and has been charged with ensuring that all patients on her floor are discharged with a discharge order and completed discharge checklist. Feedback from hospitalists and nurses on her unit, as well as feedback other middle managers, showed that a fix in the Electronic Medical Record is necessary to achieve 100 % compliance set by hospital senior leadership. This feedback has to be communicated to top managers who will be responsible for approving resources to allow IT perform the necessary solution.

B. *Synthesize and integrate information*

Middle managers are responsible for integrating and interpreting facts and packaging information in a relevant fashion for the recipients [7]. They have the arduous task of breaking down the big picture painted by the upper level management and delivering the same message in a clear and concrete version for employees who are on the frontline [10]. A medical director may be responsible for heterogeneous teams, consisting of teaching and nonteaching physicians or they may be in charge of a geographical unit in a hospital made up of physicians, mid-level providers, ancillary staff and front desk staff. Given this potentially mixed group of recipients, the message from the top managers must come in a form that is relevant and easy to understand and this falls to the middle manager [11].

Dr L., who supervises different individuals on a medical floor, will have to communicate differently with every member of the team to implement changes

necessary to reduce Cather Associated Urinary Tract Infections (CA-UTI's) on her floor. The message from the top may have to do with outcome measures and reducing rates of CA-UTI's however Dr M will need to have one type of message for the hospitalists who place orders for Foley catheters and another for the nurses those who place the catheters in patients.

C. *Act as liaisons between strategy and practical activities*

Organizations often fail in their mission to perform at high standards due to the lack of a common culture across their hospital system [12]. Organizations who strategize without factoring the internal culture may not meet their innovation goals because of lack of trust and morale among front-line staff [13].

Middle managers can bridge the gap and be more successful at implementing change because they understand internal culture and they are able to translate the information they receive, into actionable tasks that must be carried out [14].

D. *Encourage and justify changes to employees*

The middle manager has the ability to convey and justify change to their employees because of their familiarity with day-to-day operations, patients and employees. They understand the culture of the organization from both sides and their interaction with front-line staff renders them more approachable. They know the issues and frustrations facing employee performance with regards to change implementation [1].

In recent years, many hospitals have adopted a change/innovation system such as LEAN Methodology or Six Sigma to improve productivity while reducing waste and redundancy. The role of the middle manager in the hospital setting is even more profound in implementing any system focused on changing workflow to boost productivity. The buy-in from the employees doing the work is absolutely essential to creating targets, evaluating process measures and establishing outcome metrics. This is a clear example of the role of the middle managers such as medical directors and nurse managers in 'selling innovation' to the front-line staff to get their support and buy-in.

E. *Integrate front-line staff and direct supervisors across floors, units, and departments*

A role unfamiliar to many middle managers is the one of 'connector and integrator' across their system. In this model, the middle manager integrates with other front-line supervising peers, outside their own organizational ladder structure [3]. In the hospital setting, this may include connecting with nurse managers, division chiefs in other departments and hospitalist directors of other hospitals within the system's regional network. Through such collaboration, frontline employees as well as the organization as a whole, benefits from the combined knowledge and information sharing. Creating these informal and horizontal networks enables middle managers to turn to each other for advice and support. Additionally, these networks

can also help to put the reality litmus test into context before attempting to implement a new change [15].

Dr L has increased her network of middle managers across the hospital. When she has questions or needs feedback on an approach to a hospital innovation, her list of individuals includes the hospitalist director in the VA system of her hospital, the Nurse Manager in-charge of Perioperative testing and a new hospitalist director on the Orthopedics unit.

Challenges Faced by Middle Managers as a Result of Their 'middleness'

Hectic Pace of the Job When Answering to Top and Bottom

The sheer nature of a middle manager's job is prone to a very hectic pace. Representing both upper managers and front-line staff often leads to endless meetings, never completed to-do lists and many errands to run [3]. In addition to being responsible for the day-to-day operations of their units, they are also often called upon by senior leadership to answer questions, give accounts and report of various initiatives while still performing their daily direct work.

A. *Confusing role, having to answer to top and bottom demands*

The balancing act of advocating for both leadership and workers leaves middle management truly in the middle and not necessarily belonging to any particular group for gratitude and support [3]. Middle managers are often required to take different bits of information to find solutions even when they themselves may not be sold on the idea. The confusion is further compounded by behaviors the middle manager has to take on to perform the various roles as 'change leader' versus 'change implementer' [16].

For example: When Dr M tried to get buy-in from her fellow hospitalists for a geographically cohorted unit, she had to focus on the message of convenience and less running around even though the geographical unit had a larger census than her team would have been used to.

B. *Neither a strategic planner nor an implementer*

Middle managers find themselves wedged between operationalizing the vision of those who get credit for shaping the organization, and then creating actionable tasks for those who do the work and are credited for rendering the service to fulfill the vision. This can lead to a feeling of insignificance [3]. Some of the middleness dilemma is perpetuated with senior management expecting middle managers to be act as leaders of change while they are also expected to be the unwavering implementers, which can lead to frustration [17].

C. *Often unable to act independently*

Forced to be in reactive mode constantly, middle managers often work in an environment where they can not initiate a plan or act independently. They are either implementing or getting feedback from workers. For some, this can affect their morale long term. They often find themselves in a situation where they have to take corporate ideas and vision and interpret it in a way that makes sense within the realm they operate. Senior managers are often absent to help middle managers with the role of making sense of larger corporate ideas, leading to frustration and anxiety [15].

D. *Taking failures personally*

Some have added the role of therapists to the role the middle manager plays. Middle managers especially in their role as change implementers leverage their relationships with employees to help them cope with change, similar to the role of a therapist. These relationships allows them understand the needs of the front-liners [8]. However with the amount of effort exerted by middle managers to understand and cater to the emotional needs of employees and even senior managers, middle managers themselves often do not have a specific niche for emotional support, to prevent them from taking their failures personally [3].

During a pilot to change discharge times to earlier in the day, it was suggested that attending physicians on the academic service come in 2 hours earlier than their usual time, to round on patients and identify early discharges before morning teaching didactics. Many of the teaching attendings had chosen the teaching path for stable hours in lieu of a lower salary. Dr M had to explain this to hospital leadership, while trying to find a solution.

Unique Challenges of Hospitalist Middle Managers

A. *Expectations of significant administrative work and clinical duties combined* [16]

Different hospitalist models have varied nonclinical time designated for their hospitalist directors. Therefore hospitalist middle managers may be carrying out their duties as administrative leaders in addition to full clinical duties. Depending on one's schedule, i.e.: day shifts, night shifts; this may prove to be quite frustrating and difficult to sustain long term.

B. *Shifting middle. The issue of multiple stakeholders*

In health care, stakeholders include patients, employers, payers as well as the executive leadership team for providers. As has been described earlier in this chapter, managing from the middle is fraught with dilemmas associated with the very variable nature of the middle manager's job and this is especially true in the healthcare environment [17].

A hospitalist middle manager such as a hospitalist program director may have multiple stakeholders they report to. In the academic setting, the Dean, Residency program directors as well as Departmental heads may be among the individuals a middle manager may have to interface regularly with. In other settings, a hospitalist director may report to third party payer executives, regional hospital system senior leadership as well as their own CMO and CEO's. As the number of stakeholders increase, the demands on the middle manager for meetings, creating reports, translating ideas from leadership to the hospitalists they supervise can be overwhelming and lead to a high burn-out rate, especially if the middle manager has significant clinical requirements.

C. *Difficulty with relevance/significance*

Hospitalist middle managers may have difficulty demonstrating their value as a result of their middleness. When strategic ideas lead to wins downstream, senior leadership and top managers are given credit for their strategic planning. Likewise front-liners are congratulated for their hard work in carrying out any innovation that led to improvement. The hospitalist middle manager who is often the individual responsible for creating the actionable plans may not be celebrated for wins but blamed instead, if there are any problems with implementing change.

D. *Changing regulatory landscape*

The dynamic regulatory climate affects strategic planning and information passed from top managers via Hospitalist middle management. CMS mandates can have both compliance and financial implications for hospitals. Hospitalist middle manager must ensure that front-liners are equipped operationally and emotionally to handle these changes.

In recent years, hospitals nationwide had to invest significant resources to ensure patients were designated as 'observation status' as compared to 'inpatient status'. Hospitalist directors and team leaders played a major role in working with case managers, billing and financial partners to ensure inappropriate patient designations did not lead to CMS audits or denial of payment of services. In the middle of this workflow overhaul came the new CMS Two Midnight rule, which was a modification of criteria for observation or inpatient [18]. Hospitalist team leaders once again had to ensure that the new changes were carried out without instability among front-liners, which can be overwhelming.

E. *The culture difference between clinical practice and financial* drivers

The philosophical difference between standards for 'clinical best practice' versus 'the financial bottom line' may lead to mis-alignment of pillars of success between physicians and hospital leadership. Non-physician executive leaders usually rely on hospitalist middle managers to explain the feasibility of a strategic plan in the clinical setting to them [16]. The financial impact of reducing length of stay while discharging patients earlier in the day may have lead to many corporate innovation ideas. Hospitalist middle managers have had to ensure that the implementation of

these plans did not affect patient safety, and the lack of clinical orientation of some senior hospital executives could have made this an uphill task without them.

F. *Physicians as front-line employees can be difficult to manage*

Physicians are trained to be independent, autonomous thinkers. The physician as a front-line employee can be difficult to manage for various reasons [19].

Direct care providers are almost middle managers in their own right because they often have to interact and supervise house staff, house officers, billing representatives, case managers, ancillary staff and even students, with regards to the care of their patients. This can put the hospitalist team leader's authority on shaky ground. In addition, if the hospitalist director lacks the natural ability to delegate responsibility or confront their physician staff for inappropriate behavior, their role as middle manager will be threatened [22].

G. *Avoiding negative attitude pitfalls among middle managers*

While the role of the middle manager can be frustrating, overwhelming and thankless, it is important to avoid the following:

- Avoid passive-aggressive ways of showing discontent about an innovation to front-liners or top management.
- Speaking negatively about a new process or change to front-line employees.
- Speaking against front-line employees to top managers and vice versa.
- Exerting influence by threatening front-line staff with reporting everything to top managers.
- Resentment of high performing employees being favored by top executives, leading to unprofessionalism.

Invaluable assets middle managers bring to their unique position in your hospital system:

– Bringing the real experience from being a hospitalist to the top managers [23]. Your knowledge of how processes work makes you an asset to your hospital. Top managers are often far removed from the operationalizing of work and they need individuals who can lead with knowledge of the internal culture. Use this as leverage to make decisions, to share your point of view and suggest solutions. Relegate more difficult decisions back to your hospital leadership or the stakeholders in your reporting structure [3].
– Direct knowledge of how to motivate fellow hospitalists. Empower hospitalists to resolve their issues and conflicts on their own in the role of a 'coach' as opposed to a 'fixer' [3]. This has many advantages. It reduces some of the micromanagement of hospitalists which can lead to burn-out but also gives the front-liners necessary basic skills in conflict resolution which will help as more innovation ideas flow downstream from top management.

- You know your fellow hospitalists well enough to get to the truth about anything. Your input as a stabilizer and expert in operations means you must maintain the first hand knowledge of the front-lines. Ensure that you maintain the relationships with all the hospitalists you supervise and that you are comfortable with the basic functioning of any area under your jurisdiction. If you have both teaching and nonteaching hospitalists, daytime, mixed schedule or nocturnist hospitalists, you need to strive to be abreast of all the basic operational functions and workflow of their jobs.
- You know the vendors as well as the competitive landscape for EMR, quality reporting database, skilled nursing facilities or any other vendors whose real performance may elude top executives. Use this as leverage to be seen as an entrepreneur. Use your knowledge from the front-lines to advice senior hospital leadership on projects with significant financial consequences such as revamping the hospital's EMR/IT program.
- You do not have to blindly defend any vision or strategic planning initiative. You can be open and honest [23]. Your clinical know how and first hand knowledge makes you the right individual to speak honestly about the feasibility of projects being strategized by senior hospital leaders. Projects to improve patient safety, quality and financial metrics may have potholes that only a person on the ground can identify. Speaking honestly may reduce the feeling many hospitalist middle managers may share of being a marionette being pulled in many directions by senior leaders without having any input [24].
- You have the skills to bring hospitalists and specialists of diverse backgrounds and multiple system hospitals to work together. In the same vein, cultivate collaborative relationships with other 'middles' within and outside your hospitalist leadership structure. Connect with nursing leaders, hospitalist directors on other teams as well as in other hospitals. This will reduce the feeling of isolation and alienation [3].
- You know the adopters and constipators that will support or sabotage any change initiative. Ensure that you have the right people at the table at all times. Identify those fellow hospitalists on the front-lines whose opinions tend to sway their colleagues in one direction or another and get them on your side. If there are individuals who are habitually negative about any change or innovation, keep them out of the first round of planning. This will reduce some of the frustrating issues that come with getting a project started [19].

H. Keep track of your personal career goals and ensure you have a plan towards that goal. If there are opportunities for personal and career growth, seize them. Avail yourself of leadership academies and conferences to hone in on your leadership skills and to network with other 'middles'. Obtain a terminal degree if that option is available such as an MBA or Masters in Medical Management to name a few to boost your CV and help with career defining [24].

Enhance your leadership skills by mentoring new hospitalists and faculty. In turn, look for individuals within or outside your organizational hierarchy who may serve as mentors [24].

Mentor those below you and seek mentorship above.

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Chapter 19
Teaching and Feedback

Darlene Tad-y and Ethan Cumbler

The Role of Academic Hospitalists as Educators

In the past three decades, the presence of hospitalists has led to improved efficiency of care while having a positive effect on the supervision and education of medical students and residents in the hospital. Approximately 18 % of hospitalists practice in an academic setting, and have educational duties in addition to their clinical duties [1]. Hospitalist educators bring a wide variety of refined skills to the inpatient setting including superior teaching and feedback [1–3]. Previous concerns that trainees would perceive less autonomy on hospitalist teams have not been realized. In fact, trainees perceive more autonomy, increased attending accessibility and enhanced learning of clinical reasoning and decision-making when working with a hospitalist [4]. As such, hospitalists have increasingly taken on the responsibility of inpatient clinical teaching, including after-hours supervisory and teaching roles, while simultaneously being asked to maintain productivity [1, 5].

Challenges facing academic hospitalists in the current clinical learning environment include duty hour restrictions, adoption of the Next Accreditation System (NAS), and adapting to the learning style of the Millennial Generation. In 2011, the Accreditation Council for Graduate Medical Education (ACGME) introduced resident duty hours restrictions that placed more time constraints on residents than the

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previous, less stringent requirements of 2003 [6]. Restricting resident duty hours may adversely impact faculty ability to teach as attending physicians face increased time constraints to cover clinical responsibilities previously attributed to residents [7].

The ACGME implemented the NAS in 2013 which is composed of two key components: first, assessment of residents shifted to a competency-based framework using developmental milestones and second, creation of the Clinical Learning Environment Review (CLER) program [8]. Assessing resident achievement of milestones requires recalibration of expectations for competence as developmental, rather than discrete achievements, and relies heavily on direct faculty observation of residents. Academic hospitalists must understand the developmental milestones of their specialty and hone their observation skills while in the clinical setting. The CLER program emphasizes the importance of the clinical sponsoring institution's responsibility to provide high quality and safe patient care and learning. Site visits allow ACGME to assess a clinical sponsoring institution's effectiveness in six areas: Patient safety, quality improvement, transitions of care, supervision, fatigue management and duty hour restriction adherence, and professionalism [9]. Hospitalists are expected to be engaged members of this program.

Finally, the Millennial Generation has been well described as one that learns differently from previous generations. Millennials prefer structured, experiential learning in which design and presentation are highly valued. While they are sophisticated in their ability to harness technology to access immediate information or data, they require assistance in the interpretation and synthesis of that information. These learners also desire upfront expectations and frequent feedback on their performance [10].

Because of the scope and nature of hospitalists' clinical practice, we are well positioned to meet the current challenges of clinical training. Hospitalists offer expertise and mastery in the domains of systems of care, including resource stewardship and the provision of high value care, transitions of care, and patient safety. In addition, since hospitalists care for patients 24 h a day and have a constant presence in the hospital, supervision and teaching for trainees at night is also possible.

Teaching in the Inpatient Setting

Inpatient clinical teaching requires balancing effective patient care with high-yield learning. Hospitalists involved in clinical teaching must be able to master efficient patient care with the learner engaged in both the process of learning and the delivery of clinical care. The next section will provide a few strategies for optimizing teaching in the inpatient setting.

Bedside Rounding

Practicing hospitalists develop a personal pattern of rounding that maximizes efficiency and quality time with patients. Incorporating additional team members into rounds can drastically alter this pattern. With the addition of learners to the team comes the need to create a discussion forum, resulting in increased rounding time and a change in the patient–physician dynamic. Daily rounds, if done well at the bedside, can succeed in providing both excellent patient care and an exceptional learning experience for trainees on the team. Here are a few strategies to consider:

1. Manage the pace and structure of bedside teaching rounds. Providing a consistent structure for rounds each day will emphasize expectations and allow for prioritization and daily planning by trainees. Hospitalist preparation before rounds allows time to be maximized on higher educational value discussion and to minimize the time spent in data reporting [11]. No more than an hour-and-a-half to two hours should be spent on bedside rounding, allowing the residents time to complete their daily tasks (e.g., entering orders into the Electronic Health Record (EHR), documentation, and calling consults). Create brief teachable moments during rounds by reserving 5 min every day to share a clinical pearl from your experience, or "just in time" instruction on the care of a patient, that will teach them how to avoid clinical mistakes you have made in your medical career. Such brief and targeted "daily teaching moments" does not require the commitment of creating formal didactic presentations yet will likely be valued higher by the learners [10]. In addition, trainees should be guided on length of their oral presentations and encouraged to present effectively and concisely. Recognize that new patients or patients preparing for discharge may require more time during rounds, and thus be flexible in pacing rounds. It may be necessary to stop bedside rounding and complete the remainder of patient care decisions at "sit down rounds."
2. Call out "learning events." Because of the busy and multitasking nature of the clinical environment, learners do not always recognize when teaching (or learning) in the clinical setting is occurring. It is easier to attend to learning when one identifies a learning moment with a teaching point. It also brings clarity for the teacher when you have labeled explicitly the topic of instruction. You can help trainees identify these opportunities by simply labeling, or identifying, that a "learning event" has occurred. This can be as explicit as specifying, "The teaching point here is…" or "The clinical pearl we should take away is…"
3. Role model excellent physician behaviors. Trainees can learn a great deal through observation; bedside rounds present trainees with the chance to take note of an attending's practice of the art and science of medicine. Academic hospitalists can utilize rounds to demonstrate exceptional communication

practices with patients and interprofessional teammates. For example, inviting a patient's nurse to join the team when visiting with a patient can allow you to demonstrate effective team communication as you discuss the plan of care for the day with the patient and nurse.

4. Incorporate physical exam teaching. The skills of excellent clinical examination have eroded as physicians have come to rely on radiologic testing to provide data about patients' anatomy. The best physical exam teaching is done with real patients. Bedside rounding affords the opportunity for both trainees and attendings to observe and practice proper physical exam techniques. While students and residents feel that learning physical exam skills are critical, the frequency of teaching they receive on physical exam has been declining. Moreover, trainees report very little observation of or feedback on their physical exam skills. [12] Consider these strategies for incorporating physical exam into bedside rounds:

- The Rare/Interesting Finding: Choose between one and three patients each day with rare or interesting exam findings. Allow each team member to elicit the exam finding with the patient's permission. As the trainees practice eliciting the exam finding, ask each person to share "out loud" what they are eliciting and compare notes.
- Variations of Common Findings: Identify two to three patients with similar but slightly different findings (e.g., rales due to fluid overload versus those in a patient with interstitial pulmonary fibrosis). Ask the trainees to compare the differences in how to elicit and describe the findings.
- Empower the senior resident to "show and tell": this allows you to both observe and assess your resident's exam skills and also gives the resident a chance to teach junior residents and students.
- Maximize the educational impact of shared observation of the patient. Little additional time is consumed to reflect out loud during your physical exam on what you are observing and thinking. This provides a higher quality experience than simply watching an attending to silently go through the steps of their own physical exam. Occasional reflective statements while observing or modeling communication transforms the experience from witnessing to learning for students with minimal additional time.

Patient care rounds for the busy hospitalist provide the opportunity to visit with the patient and to complete patient care tasks, such as counseling and physical examination. With trainees, however rounds serve as vital teaching time, and also time to make patient care decisions. Balancing these aspects is important to meeting the needs of both patients and learners.

Teaching Clinical Reasoning

Metacognition

Metacognition represents the ability to recognize your own cognitive processing [13]. In contrast to simply evaluating whether a correct diagnosis is made, metacognition challenges the learner to assess the quality of the underlying reasoning that went into coming to this diagnosis. This process is the lens through which implicit biases can be brought into focus. Medical cognition represents the decision-making necessary to determine if a patient with chest pain and hypertension needs a CT angiogram to evaluate for aortic dissection. Metacognition represents reflecting on how having a recent morbidity and mortality conference on aortic dissection has made it feel more probable than it did before and how having a high patient census increases the use of cognitive shortcuts, called heuristics, which may make it easier to miss a rare but critical diagnosis.

Heuristics are well known to every clinician. They are the path of least cognitive effort, yet they can lead the clinician astray precisely because most of the time they will lead to the correct path. Consider these examples

- "Anchoring bias" in which the initial hypothesis is not reexamined as new information trickles in
- "Satisfied search" which leads to identification of pneumonia on chest X-ray but failure to continue to find the misplaced central venous line
- "Therapeutic momentum" in which a suboptimal management plan inherited from another clinician is continued.

Each of these heuristics can lead to suboptimal or incorrect care. The hospitalist, who has likely encountered many of these heuristics, has an opportunity to teach learners how to avoid these pitfalls.

Conscious reflection represents a concrete teaching tool for these abstract concepts [13]. This is an opportunity for the hospitalist to role model and encourage the learner to explore not only decisions, but also the implicit assumptions and biases which influence them [2]. Students and residents appreciate when hospitalists are contemplative about their own practice, their errors, and explore how to improve; to "reflect on how they learn" [2]. An example of reflection about cognitive processing would be "prospective critique." For this method a high-stakes decision for a specific patient is selected. This anchors the critical reflection of cognitive process in practical application.

The Janus method of prospective critique

Teach by example, or ask the learner to analyze their cognitive process, by examining a clinical decision faced in the care of a specific patient for which there is no prospectively knowable correct path. Offer two choices for action. Presume that the decision which is selected first was incorrect and the patient has come to harm. Ask the learner to imagine a skeptical interrogator, outlining why this choice seemed foolish in the context of the adverse outcome. Have the learner defend this decision by explaining the reasoning behind the choice. Then reverse the scenario; ask the learner to suppose they had selected the opposite path, which has also come to a grim end. Have them imagine the inquisitor defining the holes in the logic of having pursued this path and then with equal vigor defend the clinical reasoning which made this choice appear prospectively reasonable. At the end of the exercise, challenge the learner to analyze which path of reasoning was stronger. This methodology takes the emphasis off of "which choice will be correct" and guides the learner to examine the underlying clinical reasoning. In the process of having to frame compelling arguments for both paths, insights can be elucidated as to how decisions themselves are made.

The Art of the Memorable Lesson

Story and Emotion

Teaching without leaving a durable memory lacks value. This is intuitively obvious yet it is surprisingly easy to fall into the trap of focusing on what is taught rather than what is learned. Think back to all of the lectures you have attended in your career. How many were dull, confusing, and worst of all … immediately forgotten? A study of the traditional teaching forum of Grand Rounds found residents retained only about 40 % of key learning objectives over a nine month span [14]. Now consider the pearls or lessons you remember to this day. What makes a lesson memorable? It is worth giving some thought to how to embed the memory of a teaching point deeply in the mind of the learner. Tie new knowledge into an existing framework, create connections between facts, between the known and the unfamiliar. Imbue a teaching point with emotion; surprise, fear, and amusement.

Often an effective method to create a lasting impression is to attach the teaching point to a story. Stories tie facts to emotions, to passion, to memory. If you stop to consider it, your medical training has been filled with stories. Every disease is attached to a name, to a face, to a person, to a story. Call upon these stories when it is your turn to teach. A memorable story has emotion because it is about real

people. Learners value enthusiasm and passion in their teachers [2]. Entwine a core lesson in a story and you can create a teaching moment which will endure.

Selective Focus

One of the more common barriers to teaching is lack of time. Paradoxically, one of the more common barriers to learning is information overload. Participants in a one-hour long talk typically retain less than 10 % of material covered [14]. For teaching on the wards, it is useful to consider a limited set of information that you want each learner to retain and exercise educational discipline around these key points. Learners often do not want, and cannot process, a comprehensive discussion of definition, epidemiology, pathophysiology, diagnosis, treatment, and prognosis for a disease state on rounds or even in dedicated chalk talks. Exemplary hospitalist educators pick teaching points which relate to ongoing patient care [2]. Focus your teaching on what the student needs to learn from you that day and limit your scope.

Commitment to Memory

Repetition fosters retention. At the end of rounds, the end of a small group didactic session, or the end of the day, a method to increase retention of the knowledge is to ask each learner to share "one thing" they learned which they will remember in 6 months. Making this a standard practice will foster mental review of lessons learned, induce articulation of a key lesson, and, if done in a small group setting, allow for repetition of your key points in the voice of your learners. Such an exercise also reinforces the need for the teacher to bring out unique and valuable teaching points to every exposure and provides real-time feedback on what is being received by the learners.

Learner as Teacher

When faced with a question to which he did not know the answer, did Osler reply "That is an excellent question … why don't you do some reading on it tonight and come back and teach us what you learned"? Challenging your learners to flip the script and become teachers for a topic is an exceptional way to take the educational experience to a new level. Highly effective hospitalist teachers freely admit to not knowing all of the answers [2]. Set expectations in advance on the frequency, format, and time learners will have to develop and present their topics. If needed, help learners select focused, narrow topics to on which to present. Create a

framework for knowledge acquisition, role model the importance of the skill, and create space for its value to be expressed.

Dedicated Didactic Session—the "Chalk Talk"

Great teachers do not simply take more time to teach. For learners on the wards in the era of work-hour limitations time is as precious to them as it is for the teacher. Duty hour limitations has reduced the time available for attending didactic teaching by 0.8 h per week [7]. A teaching attending in the era of work-hour limits needs to be capable of maximizing the efficiency of educational time on the wards.

Reserving 30 min of more formal didactic or small group discussion time in the afternoon, when the bulk of clinical work is complete, allows more complex topics to be tackled without disrupting the workflow of the day. Allowing the learners to prepare for the topic prior to the teaching session allows fact delivery to be minimized and application/conversation to be maximized [10].

While the whiteboard has since replaced true chalkboards, the concepts inherent to a great learning experience are the same. Use the board and markers as tools with which you can make explicit your reasoning process, rather than just lists of words. As you write on the board, symbols such as arrows, boxes, and circles help the learners make visual links to concepts and relationships [15].

Representative teaching day for a traditional ward service attending

1. "Contemplation"—Begin the day with a brief contemplation about an aspect of the nature of medicine, a core challenge you have been wrestling with in the care of a patient on the service, a medical error, interprofessional interactions, or other meta-issues within medicine. This reorients the team to the larger mission and humanistic qualities of medicine and offers a chance for the attending to role model reflective introspection.
2. "Sit down rounds"—Allows learners to create a shared mental model of each patient's clinical condition and develop a plan for the tactics and goals of patient care. This provides a safe space for learners to explore gaps in knowledge or errors in thinking away from the patient bedside. This works best when all participants have prepared for rounds in advance to optimize time for discussion around decision-making and management. The attending needs to assure that a few brief teaching pearls are made explicit as part of this session.
3. "Bedside teaching"—Label this "physical exam rounds" on some days or "communication rounds" on others depending on the dedicated intent of the learning experience. Bedside rounds is focused on the teaching which can only occur at the bedside. Examples might include: elucidating a history, physical exam, communication with patient and family, or

breaking bad news [14]. Target only new admissions, patients with changing exam findings, or important communication needs to assure that each encounter is a high-yield learning experience. Physical exam rounds works best when patients have been oriented, and agree, to the nature of this teaching session otherwise examination in a group setting can cause patient discomfort [14]. Routine follow-up exams and communication by the attending can occur outside of teaching rounds.

4. "Afternoon teaching session"—Offers the chance to discuss a disease state or therapeutic management relevant to a patient on the service in more detail. Incorporate time for learners to present their own teaching points.
5. "Commitment to memory"—At the end of the teaching day, or even after each educational encounter, ask each learner to articulate "one thing you learned today that you will remember."

Feedback

The shift toward competency-based medical education in both undergraduate and graduate medical education has changed how medical educators are approaching learner assessment. The need for direct observation of learners by faculty has increased dramatically to track learners' trajectory toward competence. Here again, hospitalists provide a valuable service with a constant presence in the inpatient setting to observe learners' development. However, to help learners actually progress toward competence effective feedback about observed behaviors is necessary.

Managing Expectations

At the beginning of a new educational relationship, it is helpful to establish expectations for desired behaviors from your learners. The first step in setting expectations for a learner on the wards is to understand their personal goals for the experience, including what they are hoping to gain and how you can help them to accomplish their goals. Having explored the learner's perspective for self-directed expectations, it is important to describe what success looks like from your perspective. Thus, the setting of expectations should be a collaborative experience [14]. Individuals who reach medical school are motivated, hard-working, and high-performing. In this context, failure to meet expectations often reflects a failure to make the expectations themselves sufficiently explicit. At the beginning of a rotation, sit down and paint a picture of what a good learner at their level looks like to you. To the extent possible describe this in terms of behaviors. For instance, if

your goal is for them to have a strong fund of knowledge, explore together an appropriate text to read or method to employ to reach that goal. If a good student in your experience shows evidence of outside reading, ask them to bring in an article every few days to share what they are reading. If you expect them to be "invested in their patients" be clear that this means that you want them to call patients after discharge for follow-up. Having described "good"; set aspirational goals. Explore together what "exceptional" looks and feels like.

Delivering Feedback

Being able to deliver feedback to learners is both one of the hardest yet most valued traits of exceptional teachers on the wards [14]. Feedback is broader than correction of error but represents a key component of continuous improvement. Understanding motivation is essential to effective feedback. The purpose is to drive improvement. Being explicit about behaviors you want to see continued is as important as highlighting behaviors you would like to see changed. Feedback works best when it is anticipated. Set expectations early about your style of feedback, how often and when the learner should expect it. Effective feedback is prompt, specific, and encourages self-assessment and learner reflection [14]. Solicit the learner's self-assessment of the domain on which feedback is being given.

Suggested framework for feedback:

1. Elicit reflection and insight from the learner
2. Describe concrete behaviors (matter-of-fact)
3. Compare to desired behaviors
4. Coach for improvement by describing both what the learner should do in the future as well as how it can be accomplished.

In an era of increasing demands on resident time and evolution in medical education, hospitalists are ideally suited to play an integral role in the growth of future physicians. Academic hospitalists can take advantage of unique skillsets to help learners with their growth. Teaching and feedback of learners provide ideal opportunities to impact residents and medical students in a truly substantive way.

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Chapter 20
Engaging Others in Patient Safety and Quality Improvement

Darlene Tad-y and Patrick Kneeland

The Need to Train Physicians in Quality and Safety

Training medical students and residents has evolved to include competency domains in systems-based practice (SBP) and practice-based learning and improvement (PBLI), which are endorsed by the Accreditation Council of Graduate Medical Education (ACGME) and the Association of American Medical Colleges (AAMC) [1]. Across the spectrum of training, these competency domains describe knowledge, skills, and behaviors related to activities of quality improvement and patient safety. Moreover, developmental milestones and entrustable professional activities (EPAs) have been created at both the undergraduate and graduate medical education (GME) levels (Table 20.1). At the GME level, the milestones and expected behaviors are the same across specialties.

The vast spread of quality improvement (QI) curricula have shown that students, residents, faculty, and clinical staff can successfully learn the principles of QI and patient safety (PS), thereby achieving the milestones and competencies related to QI and PS [2–5]. Unlike progression through clinical training, the progression of knowledge and skills related to QI/PS is not commensurate with level of training [6]. In reviewing the activities and behaviors listed in Table 20.1, you will note that hospitalists often lead and participate in many if not all. Given the constant interactions with systems of care and learners, hospitalists are well-positioned to be role models, teachers, and mentors in QI and PS.

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Table 20.1 Examples of EPAs and related competencies and activities

Learner	EPA	Competencies	Activities/tasks
Medical student	Identify system failures and contribute to a culture of safety and improvement	Systematically analyze practice using quality improvement methods and implement changes with the goal of practice improvement	Grasps improvement methodologies enough to participate in quality improvement efforts
Resident—Internal medicine	Improve the quality of healthcare at both the system and individual level	Improves healthcare delivery	Advocate for quality patient care and optimal patient care systems
			Participate in identifying system errors and implementing potential systems solutions
			Recognize and function effectively in high-quality care system
Resident—Pediatrics (Proposed)	Apply public health principles and quality improvement methods to improve care and safety for populations, communities, and systems	PBLI 4: Analyze practice	Apply knowledge of population health
		PBLI 7: IT	Function in an interdependent health care team
		SBP 3: Cost awareness	Collaborate with others to improve systems
		SBP 4: Advocate for quality	Recognize one's professional responsibility to populations, communities and society at large
		SBP 6: System errors	Utilize technology (e.g. patient registries and databases)
		SBP 7: Promotion of health	Demonstrate adaptability in developing and implementing improvement plans
		P4: Cultural competence	Utilize risk/benefit and cost/benefit analysis

Opportunities and Challenges for Integrating Learners in QI/PS Efforts

The Case for Teaching QI/PS

Hospitalists in particular have embraced the shift of the practice of medicine into a systems-based approach involving teams and collaboration across disciplines and specialties. Hence, hospitalists have become indispensable as leaders and participants in ongoing, continuous QI, and PS work. While, all physicians remain crucial stakeholders in successful efforts for change, few physicians feel that they have been trained or have encountered the necessary skill set and knowledge to design and implement systems improvement.

Hospitalists can offer direct leadership and participation in QI/PS work, and can also help close the gap with QI/PS training by teaching the next generation of physicians, nurse practitioners, and physician assistants to effectively lead and participate in QI/PS.

Since Hospitalists practice at the intersection of patient care and quality improvement we are well-equipped to answer the call to navigate systems and create change for improving patient care or hospitalists engaged in QI or patient safety work in their clinical setting, including residents and other practitioners to your efforts will add new dimensions because work must be done "through" others as opposed to doing the work directly. As with any teaching effort, the rewards can greatly outweigh the challenges inherent to working through learners.

Benefits of Doing QI/PS with Trainees

Applicants to medical school and residency often cite their desire to "do something meaningful" as a reason for pursuing a career in medicine. While this remains a motivation for physicians throughout our careers, we are the most energetic, enthusiastic, and the least jaded about "doing the right thing," early on in our careers. Harnessing this energy in our learners can prove fruitful in the setting of QI or safety work. Another boon attributable to the relative youth of trainees in their career is that they may be more apt to change as they have not yet established consistent patterns of practice—in effect, they are not yet "stuck in their ways." In this regard, they are more open to new or different methods of clinical processes and may be more willing to explore alternatives to the current practice.

Residents and students are more often at the "sharp end" of patient care compared to their teaching attendings, including hospitalists. As frontline providers, they have a keen understanding of the intricacies of clinical processes, which includes shortcuts and work-arounds for inefficient or broken systems. They are

often more adept at using the electronic health record and can easily identify where clinical processes can decrease the quality or safety of care we provide to patients. Their perspective can also offer creative solutions, and some that they may have already implemented as they have struggled to bypass dysfunctional processes. Effectively incorporating trainees can actually increase the success of QI initiatives, and has led to more robust and sustainable improvement in patient outcomes [7, 8]. Trainees are also often key stakeholders for any QI/PS effort in the hospital and so their involvement in a project can facilitate more robust engagement of this vital group.

Challenges of Doing QI/PS with Trainees

Unfortunately, the same attributes that make trainees advantageous partners in QI/PS work also creates very specific challenges. While their inexperience as clinicians allows them to be more malleable, it also limits their ability to lead and participate in efforts. First, students and residents focus mostly on their own microenvironment with little grasp or understanding of the larger system of care, and are therefore less aware of broader clinical processes. In addition, their role as trainees removes them from having formal decision-making capabilities, though they may still be able to wield some influence in given their critical role as frontline providers. For these reasons, a faculty mentor who can act as a representative or liaison to clinical stakeholders is necessary to allow for a successful improvement project.

Another significant challenge of conducting QI/PS work with trainees are the limitations imposed by their training per AGGME on the degree of their participation. Obviously, medical students and residents must prioritize the requirements of their clinical training and at times, those competing demands will prevent trainees from being able to fully engage in an "extracurricular" activity. Furthermore, students and residents are often only transient citizens of the institutions in which their working, making it less likely that they will feel committed to improving conditions at a particular institution. The lack of a constant presence at a single site because they are rotating at other locations removes them from the day-to-day and longitudinal progress of any project.

An additional barrier to conducting QI/PS work with trainees is, there has generally been a paucity of faculty who feel comfortable leading and mentoring QI/PS efforts, much less teaching and role modeling the physician's role in this work. While this has changed to some degree in recent years, many faculty may still feel intimated and ill-equipped by the proposition of mentoring residents through QI/PS work.

Framework for Involving Trainees in QI/PS

Creating an Educational QI/PS Experience

As with any field, QI/PS have their fair share of knowledge content, theory, vocabulary, and concepts that provide the foundation for the work and all of which should be a prerequisite for a trainee to be familiar prior to engaging in QI/PS. Didactic curricula have been shown to be successful in increasing learners' knowledge and priming them of quality and safety concepts, to hence enable active participation in experiential QI/PS programs [3, 7, 9]. However, much like clinical practice, learners best achieve competence in QI/PS through experiential curricula—essentially, leading or participating in meaningful QI.

As a hospitalist, while you can become involved in both didactic and experiential programs, incorporating trainees into your own QI work will likely yield greater rewards. It is important however, not to overlook the need to provide an excellent learning experience for your learner as well as hopefully achieve great results for your project.

You can control two essential ingredients to set the stage for a great experience for your learners: choosing the project and setting expectations.

Choosing the Right Project

Without a doubt, the project that you will choose to work on with a learner will have considerable influence on how the learner will perceive the experience. Much like managing a learner in the clinical setting, you will face the challenge of giving the learner enough autonomy to choose their own project versus being too prescriptive and choosing a project for the learner. Consider these factors in choosing a project:

Factors to consider in choosing a project: scope, clinical setting, relevance, and impact.

1. *Scope*: Remember that the learner's ability to influence change will be limited. You may also think that your scope of influence is limited; however, it will be much wider compared to your learners' in your clinical setting. It is important to consider activities or care processes that the learners can potentially influence or impact so that they can play an active role in the project.
2. *Clinical setting*: A clinical setting in which you can work with your learner on a QI project is ideal. Consider that QI can be taken on in any setting in which care processes occur. Some learners and projects may be better suited to an ambulatory versus inpatient setting. For hospitalists, the majority of our projects will

take place in the inpatient setting, in which case then be mindful when choosing specific units or services. This will also dictate the additional stakeholders that will likely be involved.

3. *Relevance*: Think about what goals or initiatives are currently important to your clinical institution and are also interesting to you and your learners. QI efforts must be inherently connected to clinical aims, and so it makes sense to align your efforts with the interests of your institution. Choosing a project that is irrelevant to your clinical institution's mission or current goals will prevent you from being able to resource your project. Also recognize the temptation to choose "one-off" projects that are unrelated to continuous QI efforts that may already be under way.
4. *Impact*: Both you and your learner will be willing to work harder when you know that the effort will amount to a real and meaningful change in patient care. Ultimately, this is the goal of any educational and QI initiative. Your project can also lead to significant change for processes which will affect you or your learner's daily practice.

Setting Expectations

Since this is a QI project with learners, the educational component of the project must not be forgotten. Also, consider competing demands for your learners' time and energy as you formulate your expectations for their learning and the goals of the project. Make learning the top priority, rather than "success" of the project. Remember that QI involves **continuous** change and improvement and that this concept should also be emphasized to your learners. With regards to a "successful" project, consider what success truly means in the context of your learners. How will you communicate this to your learners? What can they realistically expect to be the fruits of their labor? Keeping in mind the factors stated above, clarify in your own mind what you hope to accomplish clinically.

Allow them to make mistakes and learn from them remembering not all quality improvements are successful but much can be learnt and applied to the continued improvement process.

It is also important to establish up front expectations for accountability and scholarship. Specify to your learner the role that you will play as mentor for the project. For example, learners may be overwhelmed by the prospect of having to engage clinical leaders and reassure the trainee that you would certainly be available to be involved in those processes. Establishing goals for dissemination of your results will also be important, including responsibility for Institutional Review Board applications and determining authorship for any future related scholarly products.

Examples of Educational Tools of QI/PS

While QI and PS curricula are now widely available for learners and faculty to use, utilizing familiar infrastructures can effectively motivate understanding of QI/PS concepts for learners. In this section, we offer some suggestions for employing frameworks that medical trainees are already very familiar with to help them learn these new concepts (Also reference Chap. 14).

The QI H&P

One of the earliest and most frequently performed activities that medical trainees do is the patient history and physical (H&P). The structure of the H&P is well engrained and provides a stepwise process that guides clinical decision-making. Trainees can easily substitute the process of working through a complicated patient dilemma with solving a complex systems issue. Figure 20.1 shows the "QI H&P," a tool that you will be able to use with your learners to provide a 30,000 foot perspective on your QI project. Each step of the "QI H&P" helps the learner think about the "illness" of the healthcare system they are trying to address and is a great

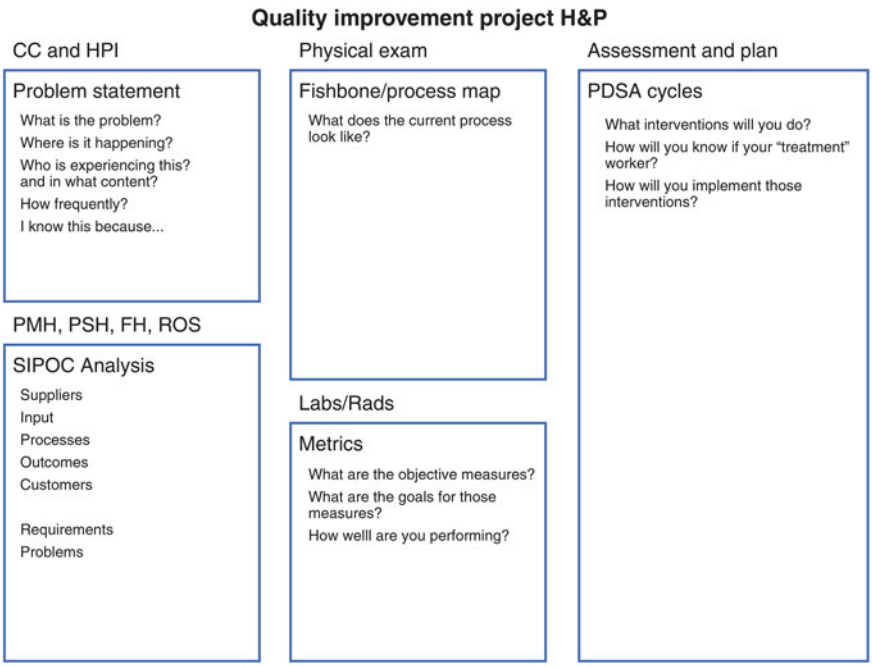

Fig. 20.1 QI H&P

first step in getting the learners to begin the approach to a QI project and the steps that carrying out the project will entail. Ideally, you would work through each section of the H&P with your learner before starting your project. Each section is described in more detail below:

Problem statement: Think of this as a patient's chief complaint and history of present illness (HPI). Similar to the HPI, there are certain components that should be included in their problem statement. Ask them to answer these five questions:

- What is the problem?
- Where is it happening?
- Who is experiencing this? In what context?
- How frequently?
- I know this because…**generally, this is the most difficult one to answer. The answer is about the data which informs you about the problem you are trying to address.

Once they have been able to answer those questions, create the "one-liner" and craft the problem statement using this format:

WHAT is wrong - WHERE it happened - WHEN it occurred – TO WHAT EXTENT it occurs – I KNOW THIS BECAUSE…

This task helps them drill down and understand the core of their QI project.

SIPOC Analysis: Think of this as the past medical, surgical, family history, meds, and allergies, and ROS in your H&P. The SIPOC analysis helps your learner further contextualize the problem you plan to address with your project. Consider using an easy-to-recognize example with learners before applying to their chosen QI project. Good choices include manufacturing examples, such as mobile phones. Ideally, the supply chain and services or people involved would be intuitive. It is easiest to start with the "output" and then direct the learners to think about the other categories. Remind the learners that the more specific the details provided now, the better their understanding maybe of the problem. See Table 20.2 for an example.

After reviewing an example with your learners, ask them to complete a SIPOC analysis for their intended QI project.

Table 20.2 Example of SIPOC analysis

SIPOC	Tech example = iPhones™	Your example
Supplier	Chip companies, component parts companies	
Input	Chips, plastic covers, wires, screen, etc	
Process	Building of the iPhone, manufacturing process	
Output	iPhone	
Customer	Tech-savvy hipsters; Gen X and Y users; etc	

The additional categories of "requirements" and "problems" are often the "next level" of understanding a problem, which requires a little bit more understanding of the surrounding systems and anticipated issues that the project may run into. This step helps to generate a list of stakeholders and key processes that will be important in later parts of the project.

Fishbone Diagram and Process Map: Just as the physical exam provides valuable information as part of the H&P, a fishbone diagram (also known as the Ishikawa diagram or cause-and-effect diagram) or a process map will help your learner understand the "anatomy" of the problem they will be addressing. Both can be done for your project, however, generally each project can lend itself well to one or the other. Help your learners decide which one will be most informative for their project. Whether you choose the fishbone diagram or process map to graphically explore your project, be prepared to provide a considerable amount of assistance to your learner with this task.

Metrics: Identifying appropriate objective measures for the project can be one of the most challenging aspects of QI for learners. This exercise will help them to begin to comprehend what types of measures are relevant to their projects and is a good starting place for them. It is crucial to emphasize to the learner that identifying appropriate metrics is the only to know whether or not change has occurred.

One example that can illustrate the utility of metrics for the learner is using the Hemoglobin/Hematocrit (H/H) as the metric for the treatment of anemia. In this case, the objective measure is the level of H/H. The intervention could be blood transfusion. The example illustrates that the metric proves or disproves that the intervention caused a change. The analogy can be further carried to the "trend" of the H/H such that theoretically, a run chart or control chart could be used to demonstrate how various interventions have affected the H/H.

Plan-Do-Study-Act (PDSA) Cycles: Finally, you can begin discussion of interventions with your learner. Encourage them to hold off on proposing interventions too early, before they have understood their problem in more depth, just as we would do clinically. Ideally, their interventions will be formulated from all the information they have gathered from the previous steps. Remind them that in QI, more than one intervention could be planned, even at times simultaneously. Their goal will be to implement their ideas in quick, time-limited intervals. Measurement of their results is a key component of the intervention, so it is important for them to know how to observe and record their metrics appropriately.

Now that an overall picture has been completed with your learners, as a team, they can proceed through each step in more depth with further mentoring from you.

Systems-Based Morbidity and Mortality Conference

Morbidity and mortality (M&M) conferences has been a mainstay of medical education for many years. Traditionally, M&M provided a forum in which physicians could openly discuss adverse events and errors with peers in a nonpunitive

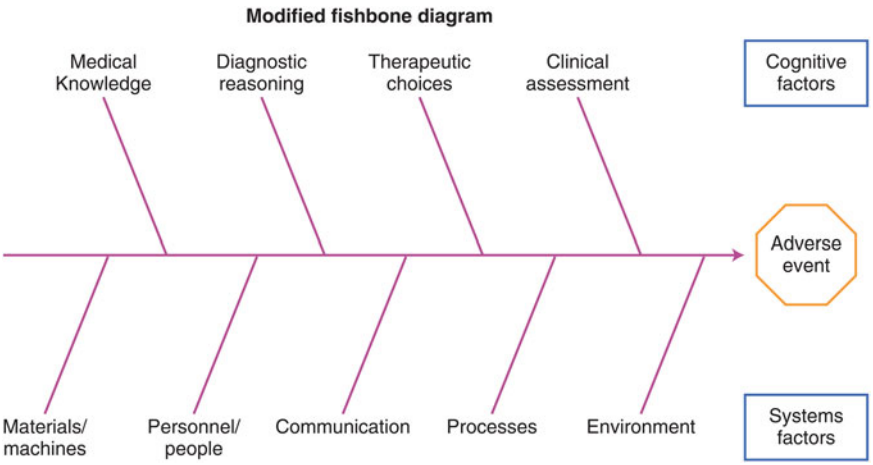

Fig. 20.2 Modified fishbone diagram. Adapted from http://www.degruyter.com/downloadpdf/j/dx.2014.1.issue-2/dx-2013-0040/dx-2013-0040.xml

fashion with the goal of preventing the same errors and improving patient care. The traditional M&M format did not necessarily employ to Just Culture principles to the discussion, and opportunities to model recognition of error and use explicit language in error discussion were often missed [10].

A restructured M&M that focuses on quality and patient safety can teach patient safety principles and lead trainees to think about how healthcare systems can actually jeopardize our patients health, and can also serve the quality and safety agenda of an institution [11–13]. As an educational conference, it is helpful to focus the learners' attention to not only the systems factors that may have contributed to an adverse event, but also the cognitive factors. Figure 20.2 shows an example of a fishbone diagram that has been modified to highlight both cognitive and systems factors that can lead to adverse events for patients {Reilly:fv}.

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Chapter 21
Introduction to Research as an Early Career Hospitalist

Nidhi Goel and Robert J. Habicht

Dr. Lane is a new hospitalist at an academic medical center. He has completed his new physician orientation and it has become quite clear that research publications are heavily weighted for promotion. While Dr. Lane did collaborate on a few small research projects in residency, he has not led one himself. He would like to start his career off right and begins thinking about how to approach his first research project as an attending physician.

Research can be one of the most daunting tasks in becoming a successful academic hospitalist, but is also one of the most important. Broadly, well-executed research has the potential to improve the delivery of care to patients, explore important aspects of the learning environment, and help in identifying best practices. On a personal level, research provides necessary skills in project design and critical appraisal of literature. The demonstration of these skills is an invaluable asset for building your professional portfolio in academia. Research also serves to provide familiarity with the academic sphere, which is of paramount importance to the young hospitalist.

Hospitalists in academic medical centers play key roles in filling growing clinical needs, both teaching and nonteaching, as well as engaging in more nontraditional roles like leads in quality improvement and patient safety projects [1, 2]. With the burgeoning needs for academic hospitalists to fill these nontraditional roles, hospitalists may question whether they can be successful in pursuing research endeavors. In many institutions, the number of peer-reviewed publications of research are a main driver for promotion. This chapter aims to help guide the early

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career hospitalist on practical approaches to take to start a successful career in research.

Step 1: Choose a Mentor

Choosing the right mentor may not intuitively seem like the first step to take when planning for a research endeavor. However, the time taken to explore and identify an appropriate mentor will pay large dividends later. Not having a mentor is associated with less likelihood of producing peer-reviewed first author publications [1]. For the resident still in training or the early career hospitalist, research mentors may be different than those who serve in the role of a career mentor.

Many young physicians mistakenly assume that finding a mentor with similar research interests is the only necessary quality to consider. In reality, that is, only one of the considerations that should be taken into account. Of course, finding a mentor with a strong record for publication is always ideal. However, other characteristics are important to consider when seeking out a mentor, research or otherwise. Hospitalists have found that reputation of the mentor is important. Intuitively, this makes sense as those mentors with good reputations are typically those who have been successful as mentors in the past. The mentor should also be enthusiastic, inspirational, and able to give meaningful career advice. Having a mentor that knows how to motivate a mentee helps prevent stagnation and moves towards success in completing projects. Given the early development of hospital medicine as a field, research mentors that are hospitalists may not abound at your institution. If this is the case at your institution, seeking out mentors in other fields is an important step to pursue. This may take effort on your part and may begin with first meeting with your hospitalist director or division head to discuss possible mentors.

It is sometimes best to have a trusted third-party introduce you to a potential mentor. This third party is often a hospitalist director, division head or a veteran hospitalist. Prior to meeting with the potential mentor, seek out information about that mentor including research interests and experiences from other mentees. Try to become familiar with the time a potential mentor has been able to commit to mentees in the past. A mentor who has an excellent reputation is often the one that is most sought after. If he/she cannot provide adequate time to your growth as a researcher, then it may be worthwhile to consider a different mentor. Keeping this in mind, try not to prejudge the commitment of mentors, as some of the most gifted mentors are successful in mentoring several junior faculty members. Knowing the personality of your mentor and general expectations of mentees can be valuable prior to meeting with your mentor. Prepare in advance of your meeting by considering some projects that may be of interest to the two of you. Preparing ahead of time with project ideas demonstrates to the mentor that you are taking the potential relationship seriously and are approaching it with professionalism and resolve.

Just as important as choosing the right mentor is being the right mentee. You must be committed to the project and willing to accept and implement feedback.

You need to take the initiative to bring as much as you can to the table, to make the relationship as easy as possible for the mentor. Work with your mentor to establish goals, objectives, and deadlines, and hold yourself accountable for meeting them. By establishing deadlines with your mentor, you create a pact of accountability that will focus your efforts on timely completion.

Step 2: Generate a Research Question

When choosing a research topic, you must first decide what you want to know from your research and what you expect your research to show. Given, the many clinical and administrative duties inherent in being an academic hospitalist, it is best to consider your position and career aspirations when brainstorming research ideas. Think critically about the aspects of your position you value or the direction in which you would like to take your career. It is best to choose research projects that apply to your current position or will set you up for future positions. Early on, however, you may be approached to join a research project that may seem out of your scope of interest. Consider taking advantage of these opportunities as they offer an avenue to network and build relationships with others involved in research. When considering research, there are essentially four types of research questions to consider:

- Basic science—how does it work?
- Translational research—how can basic science findings be applied to human subjects?
- Efficacy studies—what are the specific effects?
- Outcomes and effectiveness research—how well does it work in real settings?

In general, much of the research done by hospitalists is clinical and patient-oriented, focused on outcomes and health services, or educational. For hospitalists in particular, it can be informative to start with clinical cases or hospital quality measures. In doing so, knowledge and process gaps can be elucidated and bring potential research questions to light. Alternatively, if you are an academic hospitalist who spends the majority of your clinical time on a teaching service, you may consider education research, focusing on ways to improve student and resident learning. Choosing research projects that you can incorporate into your daily practice makes it easier to conduct that research.

Once a potential research question has been identified, the next step is to assess the quality of the question. Doing a focused but thorough review of pertinent literature to gain an understanding of previous research in that area is the first step in identifying the novelty of the potential question. In assessing relevance and interest, it can be helpful to attend conferences to better understand the scope and momentum of research being performed in that particular area.

In doing these assessments, what you want to know is whether the question has been asked and answered previously, or if it is answerable at all. Performing these

analyses may also bring to light ethical and feasibility issues that you had not previously considered. Feasibility has many aspects—sample size needed, ease of data collection, and control of confounding variables, to name a few. Knowledge of these factors will help you determine whether answering the project is reasonable within time and resources available.

A mentor is critical to help you shape your research question appropriately and discuss possible early pitfalls in study design. Often this process will lead to reformulation of the question, into something achievable but still relevant to the field of interest. Asking the question in the "right" way will also allow you to determine what type of study you need to design in order to get an answer.

Step 3: Determine the Type of Study to Use

The first step in executing successful research is in understanding what defines "good" research. Research should ask important questions that have the potential to yield significant observations or information to the medical field. The findings should be of interest not only to the investigator, but also to the medical community at large. Most hospitalists will engage in clinical or educational research, as they are most relevant to our practice and easiest to incorporate into our daily lives. While this may seem less intimidating than doing laboratory-based basic science research, clinical studies present their own challenges and should not be undertaken lightly.

Broadly, clinical research can be divided into two subtypes: observational and experimental. Observational studies involve passive observation without manipulation of study variables. The variables being observed either involve the selection/division of study participants or a measured outcome. Observational studies can involve following individuals over time, as in a cohort study, or looking at their characteristics at a single point in time, as in a cross-sectional analysis. These can be done retrospectively or prospectively. A retrospective review can often provide the basis for prospective observation.

A summary of the types of observational studies is provided in Table 21.1 [3, 4].

In experimental clinical research, there is manipulation of one or more independent variables, with subsequent measurement of the effect of that manipulation on dependent variables. The gold standard for this type of study is the randomized, double-blinded controlled trial. These studies are designed to assess a particular intervention to determine its efficacy. To generate high quality, reliable results, the control and interventional groups must be similar so as to minimize confounding variables and reduce bias.

No matter the type of study, the two main variable types will be predictors and outcomes. These can be subdivided into quantitative versus categorical variables. Quantifiable variables exist on a scale, as in blood glucose levels or length of hospital stay. In contrast, categorical variables are in unambiguous finite groups, such as dead or alive, where there is no variable value between groups. Defining

Table 21.1 Types of observational studies

Study design	Description	Strengths	Weaknesses
Prospective cohort	• Define and select a population • Measure predictive variables • Measure outcomes at a defined future time point	• Good for defining incidence and possible causes of conditions • Can measure predictive variables as they occur	May require follow up over long period of time to generate adequate power
Retrospective cohort	• Identify population based on past events • Collect data on predictive variables from prior records • Collect outcome data based on prior or present events	•Establish that predictors precede outcomes • Less time consuming than prospective cohort	Limited control over sample and data available for analysis, Vulnerable to bias
Cross-sectional	• Measurements made at one point in time with no follow up • Select sample from a population • Measure predictors and outcomes	• Can describe the distribution of variables • Fast, inexpensive • Can generate questions for future studies	Hard to establish causal relationships
Case-controlled	• Often retrospective • Cases = those with a disease • Controls = those from same population but without disease • Measure predictors between the two groups	• Can be descriptive of cases • Can yield information with small sample size • Well suited to rare conditions	Vulnerable to bias based on retrospective analysis of predictors

variable types will influence the power of the study and the amount of data needed to produce reliable results.

When planning your study, it is important to use standard or validated definitions of variables, if they are available in your research area. Examples include pain scales, patient satisfaction surveys, or withdrawal assessment scores, which have passed a standard rigorous enough to be widely recognized as being valid. If no such variables exist for your question of interest, you can develop your own through analysis of prior studies and clinical experience.

Step 4: Design Your Study

The research question that you ask and your plan for answering it will heavily influence the amount of data that needs to be collected in order to generate meaningful conclusions. Determining sample size is of critical importance and should be done as early as possible in the process. It impacts feasibility of the study as a whole, as well as all aspects of study design. Knowing how many data points you require will help to guide your target population, as well as the period of time over which you would be collecting data.

Once you have more information regarding the amount of data needed to answer your original question, you may need to narrow, broaden, or shift the scope of your question to make the study meaningful and feasible. Determination of sample size should be made in conjunction with someone who has a mastery of statistics. If you do not have these skills yourself, it is critical to make use of resources available at your institution. Many academic institutions have research centers geared toward helping investigators to implement good study design and navigate the intricacies of statistical analysis. If your institution does not have such a resource, you should seek out other professionals who may have more experience with statistics. Again, your mentor may help direct you to a good resource if this is the case for you. Also, many graduate programs in statistics have students or fellows who may have a research requirement. These individuals may be able to provide assistance at little or no cost to you.

Your mentor will be able to help you design your study appropriately and review the work you have done. It is critical to engage all parties involved in your research project as early as possible in the study design process. A delay in doing so may compromise the integrity of the entire project. If errors are made in planning the research project, time will necessarily be lost while you correct those mistakes. If errors in study design are not recognized prior to starting the study, the data could lose its utility. It is, therefore, important to have an appropriate mentor and others, including a statistician, review your study design before approaching the IRB approval process.

Step 5: Obtain Approval from the Institutional Review Board (IRB)

The IRB is yet another intimidating aspect of research to many investigators. Each institution has its own IRB, though it may be called by other names, such as the Ethics Review Board. The purpose of the IRB is to ensure the protection of participants in human subjects research, and to guarantee informed consent prior to participation. The IRB also protects the research team and the institution from federal penalties by imposing various safeguards on the research process.

Certain projects do not require an IRB. The largest group of these projects relative to most hospitalists involves quality assurance or quality improvement projects that are for internal use only and that do not contribute to a more generalized base of knowledge. Otherwise, all human subjects research requires initial IRB evaluation, and most will also require ongoing review to ensure continued compliance with ethical standards. If protocols are found to be of minimal risk to subjects, they may qualify for expedited review. Even this can take a great deal of time, so doing it early is beneficial.

The specific components of the IRB will vary by institution. Generally, they will ask for a description of study design, number of participants, estimated time frame, risks and benefits to participants, procedures for obtaining consent, and plans for data analysis. IRBs are required by federal law to contain nonscientists, so it is important to use lay language in certain parts of the application. All descriptions should be as explicit and specific as possible to avoid ambiguity.

Step 6: Data Collection and Management

Once you have received IRB approval, data collection can officially begin. The next major hurdle is in data management. How this is done depends largely on your data sources—paper surveys, existing datasets, electronic lab reports, etc. Based on the type of source, you can determine who will be entering data into the database, and how they will be doing so.

You may be able to design data entry forms within Microsoft Access or other data management software. There are also translation packages that can translate data to and from various formats, as between statistical software and a simple spreadsheet. If you are collecting hospital lab data, many electronic medical records will allow you to export data points in spreadsheet format. Often times, you may be left with manual entry into data tables or spreadsheets.

Programs such as Microsoft Excel are very easy to use and approachable, but allow for multiple types of data to be entered for the same variable and are vulnerable to mixing of data across types when attempting to sort for analysis. Microsoft Access, while more cumbersome to set up and use, offers more options for maintaining data types within variables, linking of various data types across

tables, and descriptions of variables. It may be worthwhile to become familiar with the use of Microsoft Access if you do not have formal training in statistical analysis.

Choosing an appropriate data management plan, and taking the time to structure it well from the beginning of the project, can make data analysis significantly easier. It is critical to remember that the quality of the database is entirely dependent on how well data was described as it was entered.

Step 7: Data Analysis

Once data has been collected, you need to ensure its "cleanliness." This involves examining your data set for glaring disparities and inconsistencies that create false data points. Scanning for data that should not exist (e.g., sperm counts for participants who are female) and for missing data points can greatly improve the quality of your database.

The most important step in analyzing collected data is choosing the appropriate statistical test for the question being asked and the variables being measured. What test is chosen will depend on the number of groups being chosen, how many variables are being compared, the distribution of those variables, and the relationship between them. Here again, someone with training in statistics should be involved. There are also various online and textbook resources available for guidance and self-instruction in statistics.

Step 8: Disseminate the Results

When choosing a publication for submission of a manuscript, it is important to determine the target audience. Having done a literature search while exploring your research idea in Step 2, you should be able to identify potential journals for submission. Consider your study outcomes and what audience would be interested in learning about your findings. Each journal will have its own publication requirements, regarding style and length, among others. Follow these requirements exactly as written. Review the mission statements of potential journals and keep the goals of the journal in mind when writing your paper [5]. In addition, read articles that were previously selected to that journal in order to get a sense of the writing style that is most appropriate. Make sure that your manuscript speaks to the audience for that journal. Not doing so will likely result in a rejected manuscript.

Once your manuscript has been submitted, it will be reviewed and either rejected or returned with requests for modifications and/or clarifications. If you receive a request for a "revise and resubmit," make the appropriate changes to the manuscript and write a cover letter that addresses each of their comments point-by-point. You can include pertinent new text from the manuscript in the cover letter when responding to a specific comment. After resubmission, the journal editor may request additional

modifications or clarifications. Again, follow the same process to respond. The journal will then make a final decision whether or not to proceed with publication.

In addition to publication, you should take advantage of other opportunities to showcase your research. Local and national meetings of societies in your field will often have forums for poster or oral presentation of research. This can be a very rewarding way to display your research, network with others who may have similar research interests, and find research collaborators.

Resources

Knowing what resources are available to you and making full use of them will greatly enhance your ability to design and execute a project in an efficient and effective manner. As previously mentioned, many institutions have research offices whom you should engage as early as possible. They can often assist in study design, grant applications, IRB application, and many other aspects of research development. Once you have collected your data, they can also provide support with analysis. Take advantage of lecture or workshop offerings from your institution or associated medical school to learn how to perform various aspects of research.

Remember to utilize professionals at your own institution even if in a different role or field than yours. They can serve as both mentors and collaborators. In addition, you may find research mentors outside your institution, highlighting the importance of building a strong network of research colleagues.

Executing a project can be incredibly labor intensive and time consuming, especially with the demands of clinical duties. At many institutions, there is an abundance of students who seek to gain experience with research. This offers them the opportunity to become involved in a project and potentially future publications. For the investigator, these individuals can often be a wonderful source of enthusiastic, no-cost collaborators. They can be especially useful in data collection and entry, both of which require minimal skill but which can be incredibly time consuming. It is important, however, that the student gains knowledge and skills from their experience. If they are to be involved in some of the more tedious tasks of the project, be sure to include them in other important aspects of the research project. Invest in their future by providing them with critical research skills that they can later use themselves.

Funding

Over the last several years, it has become increasingly difficult to secure research funding. As a resident or early career hospitalist, it may be helpful to find projects that require little or no funding. If you will require funding for your project, this process must be started early, as it takes a considerable amount of time.

There are various places to explore funding sources. The website http://www.grants.gov is sponsored by the federal government. It is a resource to assist in grant searches, applications, and the tracking of applications. Another source would be in professional societies or nonprofit organizations related to your field of interest. Many organizations have potential funds allocated to research. In addition, most institutions advertise funding opportunities through newslettters or emails. Look carefully over these communications.

For Residents: Planning the Timeline

Performing research as a resident brings with it its own obstacles and challenges. The rigors of a busy residency schedule can make it difficult to find dedicated time to conduct research that is predictable. Creating a research calendar by setting goals and objectives for specific time points can help you organize your research and ensure that you move forward with a project, even as you balance other clinical duties. When considering research projects, it is important to account for time commitment; smaller projects are more easily attainable and can produce a great deal of valuable information. For residents, keep the following in mind as an example:

PGY-1: Start thinking about what field might interest you. Perform literature reviews of potential topics to think about those that are more intriguing. Find a mentor that can help you to think about your topic and plan how to move forward.

Late PGY-1/early PGY-2: Finalize your research question. Perform a focused literature review and begin your study design. Have other people at your institution review your study design, and implement their feedback. Apply for funding if you need it. Apply for IRB approval. Once this is obtained, begin data collection, using a data management strategy you formulated during your study design.

Mid-late PGY-2/PGY-3: Finish data collection. Analyze the data. Submit abstracts for poster presentations and apply for publication.

Final Thoughts

Research is simultaneously intimidating, challenging, and rewarding. Done well, it can be an invaluable asset to your career. As you get started, remember to choose approachable projects to which you can commit. Be willing to change gears as necessary. Utilize periods of lighter clinical duties to move your project forward, knowing that there will be times when your schedule will leave you unable to focus on research.

Utilize the people and resources around to you to advance your research skills. As your abilities grow, so will the breadth and complexity of projects that you can achieve. Be assertive in seeking out the opportunities that best suit your interests

and goals, and then methodical in how you approach them. The result will be effective research that betters the field of hospital medicine and advances your academic career.

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