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Editors

Physician Mental Health and Well-Being

Research and Practice

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To my family, Claire, Nathan and Anna, who bring me joy and inspire me to be a better person.

Kirk J. Brower, M.D.

To my wise and caring husband, Arthur and wonderful and beautiful daughters, Alissa and Erica, who have been so incredibly supportive and loving.
With sincere appreciation to Leah J. Dickstein, M.D., for her long-standing inspiration, passion, and commitment to medical student health and well-being.

Michelle B. Riba, M.D., M.S.

Preface

As physicians and mental health clinicians, there are few challenges greater than trying to prevent, understand, and help colleagues who may be suffering with mental health conditions. In our experience and from the existing literature, such conditions may start early in medical school and continue throughout various stages of professional and personal development. Research is growing and evolving in order to help us better understand risk factors and ways to help and improve the management of impairment. Caring for patients requires caring for physicians. In addition, an important shift of thinking in the field focuses not simply on preventing and alleviating stress, burnout, and mental disorders; but more positively on career satisfaction, engagement, and joy in medicine.

Our goals in presenting this book represent a coalescence of thought leaders in the field of physician mental health and well-being. We have asked the authors to focus on the scope of problems, causes and consequences, developmental issues, assessment and treatment, and key points. We have divided the book into three parts: Presenting Issues, Underlying Clinical Problems, and Interventions. Where possible and relevant, we have asked authors to provide clinical vignettes to provide examples of various scenarios.

Physician health impacts on the physician and his/her family, patients, the community, hospital and clinical staff, students, and the hospital. The impact of stress, burnout, and work-associated trauma is great. Disruptive and unprofessional behaviors, suicidal behaviors, and psychiatric conditions such as depression and anxiety, substance use disorders, and cognitive changes have major import on all these groups, depending on and working with physicians.

While this book offers a number of ways to recognize and think about presentations, issues, and problems that one may encounter with physician health and well-being, we recognize the need for more longitudinal studies to address the complex and difficult problems faced by physicians in this ever complex and challenging field.

We appreciate all our colleagues who have contributed to this book and the psychiatry residents who have helped review the chapters. We thank the physicians who have allowed us to try to help them through their difficult journey and to those who have consented to be part of clinical research to better understand obstacles and opportunities for improvement in the doctoring process.

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Part I

Presenting Issues

Physician Burnout and Wellness

Jodie Eckleberry-Hunt, Heather Kirkpatrick,
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Abstract

Physician stress and burnout are common in the practice of medicine and were once thought to be occupational hazards due to hard-driving personality traits. As a result, research focused on ways to help physicians cope with stress. Following decades of study, however, researchers believe that a significant portion of physician burnout is due to potentially modifiable workplace factors. While interventions still include teaching physicians ways to cope with stressful work, more attention is being given to how to change the healthcare workplace, not only to decrease physician burnout but also in order to improve patient quality and safety initiatives. This chapter defines burnout and outlines the historical context of its study and controversy over measurement. The chapter describes studies of physician burnout across the developmental spectrum and discusses the correlates. Finally, the chapter reviews effective intervention strategies and the movement to shift from burnout to physician wellness promotion.

1.1   A Case of Burnout

Dr. M is a 40-year-old internal medicine physician. She chose to go to medical school because she enjoyed school, wanted to make a positive contribution to the world, and enjoyed being around other people. Until recently, she felt passion for her clinical work; however, with healthcare reform and adoption of the electronic health record (EHR), she has started to feel overwhelmed by the number of patients and documentation requirements. She feels like work is a burden and finding compassion for patients is more difficult. Dr. M feels like there are massive weekly changes with multiple mandates based on new quality measures, which feels like busywork. There are new emphases on quality measures with her employer insisting clinical parameters be met regardless of individual situations. Dr. M feels like she has no control over staffing and scheduling, and she is spending an additional 2 h a day on documentation after clinical duties. She feels like hospital administration is more concerned with money than the needs of her patients. She feels pressured to see more patients with less time for each one. Dr. M noticed feeling extremely run down, and not feeling good about her work. No matter how much sleep she gets, she wakes up feeling unrefreshed. She is feeling angrier and more resentful toward patients who talk too much and take advantage of her good nature by complaining about problems that she can't fix. She has started to question if she is even making a difference. She wonders if it is time to think about doing something else.

This case illustrates an example of physician burnout, how it might evolve, and the stressors that physicians report to be associated with burnout. This is a common scenario, but there are also scenarios that initiate in the clinical years of medical school or in residency. All of the iterations involve commonalities of feeling emotionally burdened in the context of workplace interpersonal interactions.

1.2   Burnout Defined

The literature on physician stress and burnout has exploded (Schaufeli et al. 2008) since burnout was first noted in the medical literature in 1974 (Freudenberger 1974). Maslach (1982) defines burnout as a syndrome of emotional exhaustion (EE), depersonalization (DP), and, decreased feelings of personal accomplishment (PA) that results from the chronic stress of helping other people who are struggling. EE is the feeling of being emotionally drained and unable to replenish. A caregiver feels that there is no more to give, and as a result, the caregiver begins to distance from the patient as a defense mechanism. This leads to DP, which is a callous, cynical feeling about the patient as if the patient deserves what is happening. Once both EE and DP have set in, Maslach et al. (1997) speculate that the provider begins to feel less effective at work and has a lowered sense of pride, satisfaction, and accomplishment related to work or a lowered PA. This definition of burnout led Maslach and her team to develop a tool to measure the key elements, the Maslach Burnout Inventory-Health Services Survey (MBI-HSS). The original 22-item self-report form, designed for human service professionals, was called the Health Services Survey (HSS), and it yielded three subscales (EE, DP, and PA). Later, Maslach and her team developed two additional forms of the MBI designed for professions that might experience a different sort of burnout where there are general exhaustion and cynicism about the job without a focus on service to others (Maslach et al. 1997): the MBI-ES (Educators Survey) for educators and the MBI-GS (General Survey) for the general population. This chapter focuses on the HSS version that has been used among physicians. Developed for English speakers, there is some evidence that the MBI factor structure holds up well in other countries (Poghosyan et al. 2009), although other work suggests that the language is "American" and may not translate well into other languages and cultures (Kristensen et al. 2005). More studies are needed regarding the cross-cultural use of the MBI.

Although burnout encompasses emotional distress, it is thought to be distinct from depression (Maslach and Leiter 2016; Leiter and Durup 1994) and compassion fatigue (Slatten et al. 2011). According to the National Institute of Mental Health (2016), depression is a pathological state of sad/anxious/empty mood, hopelessness, low motivation, lack of pleasure, guilt or worthlessness, and possible vegetative symptoms that may include thoughts of suicide. Burnout and depression are related in terms of the EE domain (Wurm et al. 2016), and there are theories that burnout may lead to the development of depression. However, burnout and depression differ in that burnout necessarily involves interpersonal experiences solely in the workplace and does not include elements of hopelessness or thoughts of suicide.

Compassion fatigue is the experience of feeling emotionally traumatized or tormented by working with people who have been traumatized. It is like the experience of being a secondary victim. Burnout is different from compassion fatigue in that it is more chronic with a variety of potential causes that may include not getting along with others in the workplace or not having enough resources to service others (Slatten et al. 2011). At the heart of Maslach's burnout syndrome theory is the relationship with others, and this interpersonal stress is key. For burnout to be present, there must be some kind of workplace interpersonal stress.

1.3   Measurement Issues

The exact prevalence of physician burnout is difficult to know given the variation in how burnout is measured across studies. There seem to be five main reasons for the measurement variability. First, controversy remains about how to best define burnout and if the MBI is the most accurate measure of the phenomenon. Although the MBI remains the gold standard to measure burnout (Schaufeli et al. 2008; Halbesleben and Buckley 2004), there has been significant criticism and several attempts to develop new measures, but no measure has been found to be superior to the MBI. One of the main criticisms of MBI-defined burnout is that burnout may be more parsimoniously defined as emotional exhaustion alone, i.e., without depersonalization or changes in personal accomplishment (Maslach et al. 2009). Other instruments have examined exhaustion as multiple components (e.g., physical exhaustion, emotional exhaustion, mental exhaustion), but in the end, these elements are still exhaustion (Schaufeli et al. 2008). Maslach and Leiter (2016) argue that if researchers focus solely upon EE, valuable interpersonal information is lost (i.e., DP, which occurs in the context of working with coworkers and patients). This information is so central to the conceptualization of burnout that Maslach and Leiter (2016) believe that DP is a stronger measure of burnout than even exhaustion.

Another criticism of burnout theory and the MBI is that research on PA has been inconsistent. Newer statistical methods suggest that PA may develop independently of EE and DP (Kalliath et al. 2000; Maslach and Goldberg 1998). There are times when EE and DP are high, and PA is also high (Maslach et al. 2009). Kalliath et al. (2000) used structural equation modeling to demonstrate that the MBI has two solid factors of EE and DP, while PA wasn't a central factor. Current thinking is that declines in PA may or may not occur in burnout, but if declines are evident, the level of burnout is more significant (C. Maslach, Personal Communication, July 31, 2016).

The second reason is that there is a desire on the part of clinicians to make burnout into a dichotomous construct that is either present or absent, which would make burnout diagnostic. Maslach et al. (2009) state that the MBI was designed for research purposes and conceptualize burnout as a continuum across the three scales. Healthcare providers may prefer to conceptualize burnout as a black-and-white dichotomy that is either present or absent as then interventions may be designed to eradicate it. In other countries (e.g., Sweden and the Netherlands) burnout is an ICD10 diagnosis that can lead to time off of work (Maslach et al. 2009; Schaufeli et al. 2008). While the intention of those who want to make burnout a "diagnosis" is understandable, it distorts the syndrome of burnout as it was originally investigated and theorized to occur.

Third, there is recognition that physicians are more likely to participate in research if the instrumentation is maximally brief. Some researchers have shortened the MBI to include either EE or DP, which encompasses only part of burnout (Maslach et al. 2009). Other studies have simplified the measure of burnout to two questions as proxy measures for EE and DP (West et al. 2009) or one

statement asking physicians to rate themselves according to their own definition of burnout (Glasheen et al. 2011). The simplified and short measures make it easier to recruit busy physician participants, but they excessively distill burnout from the original theoretical construct (C. Maslach, Personal Communication, July 31, 2016).

Fourth, researchers have applied the MBI-HSS, which focuses on emotional exhaustion and cynicism related to patient care, to medical students in the first and second years of training. During the first 2 years of most medical schools, the focus is upon classroom coursework and independent study. There may be some limited exposure to patient care, but little ongoing patient care. It is difficult to say anything about burnout among these students when the measure was not meant to be completed by those in an academic setting. The MBI-GS would have been more applicable to this population. Other studies (Bore et al. 2016; Pagnin et al. 2014) have altered the MBI to apply to students, but the psychometric data on this method are limited, particularly among medical students.

The last reason is related to oversensitivity to the construct of burnout. In the MBI user manual (Maslach et al. 1997), the authors note that caution should be taken when administering the MBI that respondents are not biased toward burnout by knowing that they are completing a burnout survey. It is not clear the studies of physician burnout have taken steps to avoid this response bias.

1.4 Burnout Among Medical Students

In medical school, Kevin learned that if he studied hard, worked hard, and sacrificed personal time, he could achieve academic success. This success was rewarded by praise from her peers, teachers, and mentors. Kevin began to enjoy the sense of control that came along with achieving goals. By the time the clinical years arrived, Kevin was full of excitement and energy to help actual people. His initial enthusiasm was somewhat dampened by the negativity of the residents and attending staff. He would spend an hour with every patient and gather a full biopsychosocial history as he learned in class. However, the attending physicians kept cutting him off, telling him to hurry. He learned quickly that no one likes patients with chronic pain, chronic fatigue, or substance use. After seeing a fellow student get yelled at for being "unprepared" while rounding, Kevin also learned how to work harder and always have the "right" answers.

The experience of Kevin is common among medical students. Many of the lessons he learned were from the "hidden curriculum." The "hidden curriculum" is the cultural influences that aren't formally taught but are reinforced through role modeling. It involves enacted beliefs about patients, treatment of students, notions about time and control, and what constitutes good and bad medicine (Hafferty 1998). Although Kevin did not exhibit the signs or symptoms of burnout during medical school, the hidden curriculum and learned habits of self-sacrifice could certainly contribute to burnout later.

1.4.1 Prevalence of Medical Student Burnout

Although there has been speculation that physician burnout originates in medical school (Thompson et al. 2016; Brazeau et al. 2014; Dyrbye et al. 2007), research has mainly been cross-sectional, so it is difficult to identify when burnout first appears among medical professionals or how it changes over time. Research on medical student burnout is in the infancy stage; while recent research has grown substantially, there are flaws. For example, most of the research has used the MBI-HSS to measure burnout among medical students. This instrument is designed for use among professionals who serve "recipients" or patients with treatment or care, but generally, the first 2 years of medical school do not involve treatment or care of patients on a regular basis. It is likely that those who reference "burnout" among medical students are actually referencing stress, distress, or emotional exhaustion, but they are misapplying an instrument designed for burnout measurement of a different sort. Because of these measurement flaws and the fact that medical student burnout research is in the early stages, it is not clear what the true prevalence of burnout is among medical students. The reader is cautioned that the studies reviewed in this section all suffer from measurement flaws unless otherwise noted.

The reported prevalence rates of burnout among medical students range from 28 to 55% having high EE, 26–38% having high DP, and 27–74% having low PA (Lapinski et al. 2016; Thompson et al. 2016; Cecil et al. 2014; Dyrbye et al. 2014b; Dyrbye et al. 2010; Dyrbye et al. 2006). In a study where medical students were matched to nonmedical student peers (of unclear professions), medical students had significantly higher rates of EE and DP (Dyrbye et al. 2014b). In one small study that used the MBI-GS among medical students who were entering the third year, the authors found a prevalence of burnout to be 71%, which was defined as a high score on either the exhaustion or the cynicism scales (Mazurkiewicz et al. 2012). The only other identified study that used the MBI-GS found that first-year medical students had the lowest risk of cynicism, while second- and third-year students had the highest risk. First-year students had the highest risk of low PA, while third-year students had the lowest risk of low PA (Wolf and Rosenstock 2016).

Some studies show that female medical students are more likely to report burnout symptoms or distress, but those effects are small (Bore et al. 2016; Lapinski et al. 2016) and inconsistent (Cecil et al. 2014). It is also not clear if women are more likely to admit to distress compared to males. One study examined race and found lower burnout among racial minorities (Dyrbye et al. 2007).

In conclusion, some researchers (Brazeau et al. 2014; Dyrbye et al. 2006) have inferred that burnout initiates and worsens in medical school. However, this is a premature conclusion given that burnout has commonly been mismeasured in medical school years one and two. Increases in burnout related to patient care measures would be expected to increase in years 3 and 4 given that these are the years when medical students actually see patients.

1.4.2 Correlates of Burnout Among Medical Students

There are no causal studies of burnout among medical students; however, there is evidence that links burnout to the learning and work environment among medical students (Dyrbye and Shanafelt 2015; Dyrbye et al. 2005). Speculated causes in the learning environment include exposure to patients who suffer and die; the experience of mistreatment or poor relationships with professors, supervisors, and colleagues; and hospital rotations with overnight call (Dyrbye et al. 2005, 2006, 2009; Haglund et al. 2009).

A 2009 national study of medical students in the USA indicates that burnout in the first and second years of medical school was strongly associated with dissatisfaction with perceived level of support from medical school faculty and staff whereas burnout among third- and fourth-year students was most closely linked to poor clerkship organization and exposure to cynical resident physicians (Dyrbye et al. 2009). Some authors suggest that the role modeling of burnout-associated behavior by superiors increases anxiety and depression among students (Haglund et al. 2009).

Another commonly cited correlate of burnout among medical students is mistreatment (Cook et al. 2014). Mistreatment is defined as a behavior that conveys disrespect for others' dignity and disrupts the learning environment (Mavis et al. 2014). In a national study of medical students, 83% reported having experienced at least one episode of mistreatment by a faculty member or a resident, and in this study, recurrent mistreatment was associated with burnout (Cook et al. 2014). Between 2000 and 2011, 12–20% of medical students reported mistreatment, of which the most common form was public humiliation (Mavis et al. 2014). Typical sources of mistreatment are from clinical faculty and residents but also from nurses, other staff, and other students (Cook et al. 2014; Mavis et al. 2014). In a systematic review and meta-analysis, Fnais et al. (2014) reported that the most frequently cited sources of harassment among medical students were consultants, patients or their families, fellow and residents, and others (including faculty, interns, and other students). Verbal harassment was the most common while physical harassment was the least common types of abuse reported. The authors noted that sexual harassment is the most common form of abuse among medical students in the USA.

Medical students tend to report high levels of stress associated with long hours of study, examinations, debt, and relationship difficulties (Matheson et al. 2016). Dyrbye et al. (2006) reported that the more negative life events they had, the higher the burnout among medical students. Conversely, those who reported more positive life events had less burnout (Dyrbye et al. 2009).

Other studies show that behavioral and personal variables are associated with medical student burnout, such as lack of sleep (Lapinski et al. 2016; Wolf and Rosenstock 2016; Mazurkiewicz et al. 2012) and intensive studying (Lapinski et al. 2016). Cecil et al. (2014) found that physical activity was associated with higher levels of PA and lower EE, but Wolf and Rosenstock (2016) were not able to replicate this finding. Bore et al. (2016) identified that medical students with higher social support and resilience have lower reported burnout and distress. Another study found

a significant relationship between higher EE and lower perceived social support from friends, family, and the medical school itself. Lower perceived support from other medical students was also associated with lower PA (Thompson et al. 2016).

1.4.3   Potential Consequences of Medical Student Burnout

What we know about the consequences of burnout among medical students is speculative because causal models don't yet exist. Here, we describe theorized consequences of burnout.

There are multiple potential consequences of medical student burnout, including poor academic performance, negativity toward patients, loss of empathy, impaired academic integrity, substance use disorders, and suicide (Dyrbye and Shanafelt 2015; Dyrbye et al. 2005). There is evidence to suggest that burnout is strongly associated with serious thoughts of leaving medical school (Dyrbye et al. 2010b). One of the major concerns related to medical student burnout is the relationship of burnout to professional conduct. In a large national study of 2682 medical students, the authors found that students with measured burnout were more likely to report dishonest behavior and less altruistic views about society (Dyrbye et al. 2005, 2010a). Dyrbye et al. (2015) reported that medical students with higher burnout were less likely to feel a personal responsibility to help a colleague who was impaired.

Medical students with reported burnout do not typically seek help due to fear of stigma and discrimination and concerns about confidentiality (Dyrbye et al. 2015). These authors suggest that the reluctance to seek help is related to the "hidden curriculum," which teaches medical students that seeking help is for the weak and will be held against you. Unfortunately, students may instead engage in maladaptive coping strategies, such as excessive alcohol consumption. Jackson et al. (2016) reported a higher prevalence of alcohol use disorders among medical students with burnout.

Another important area of burnout research involves empathy. A study of fourth-year medical students found that higher burnout scores were associated with decreases in empathy and professionalism (Brazeau et al. 2010). This finding has been consistent in multiple studies (Paro et al. 2014; Thomas et al. 2007).

1.4.4   Treatment of Medical Student Burnout

There is a paucity of empirical research on factors that might decrease the incidence of or mitigate burnout. Much of what has been written is speculative due to a lack of evidence on efficacy. Some researchers suggest alcohol reduction programs, student debt reduction, wellness curricula, mindfulness programs, and small group-facilitated discussions (Jackson et al. 2016). Based on a review of the literature, Dyrbye et al. (2005) suggest a change in the overall learning environment, including more mentoring and positive relationships among faculty, reduced competition through grade reform to pass/fail, increased autonomy for students, increased compassion in the hidden curriculum, improved student health promotion, better identification of students who struggle, and a curriculum aimed at teaching stress management skills.

In a systematic review of the medical student stress management literature, Shiralkar et al. (2013) examined five randomized controlled trials and eight controlled, nonrandomized trials. There is some evidence to support that lectures, discussion groups, mindfulness, and hypnosis are effective in reducing stress, as well as a switch to pass/fail grading system. These findings are confirmed by other studies (Williams et al. 2015; Wild et al. 2014). However, there is a lack of consistent outcome measures used, which makes comparisons across studies difficult (Shiralkar et al. 2013).

The study of burnout among medical students is an emerging field of study. Much of what has mostly been done is cross-sectional and flawed by measurement issues associated with asking questions about clinical care during the preclinical years of medical school. Many questions remain about when burnout may first present, what causes it, the trajectory, and treatment practices.

1.5   Burnout Among Residents

Dr. H was excited to begin residency and be "a doctor." She volunteered to stay late to take care of severely ill patients, despite her senior residents warning her to pace herself, and she struggled to keep up with her academic studies. As her internship year progressed, her sleep debt grew, with limited periods of feeling refreshed. Downtimes were filled with guilt about not studying harder for boards or working on long-term projects. Often she wondered if she had consumed so much caffeine to stay awake to round and study that she was paradoxically unable to fall asleep quickly despite her exhaustion. Now that she had garnered a following of ambulatory patients, she began to feel that "everyone wants something from me."

Dr. H, as a resident, is responsible for working longer hours than in medical school with little ability to control her schedule. More so than in medical school, resident physicians are at a high risk of developing burnout. This may be due to study demands coupled with many hours of patient care. Although the work week is capped at 80 h in the USA, residents have less control over their schedule and workplace, yet have significant levels of responsibility. In addition, they have stress related to training concerns. Saddled with high debt, they must complete residency successfully and pass board exams in order to repay their debt. They are often forced to serve many supervisors and can receive perpetual critical feedback. Much of the literature acknowledges that resident physicians are vulnerable to depression as well (Mata et al. 2015).

1.5.1   Prevalence of Burnout Among Residents

Studies of residents are hampered by low response rates (Dyrbye et al. 2014a; Jovanović et al. 2016). Reported rates of burnout among residents include 41% having moderate to high scores on at least two subscales of the MBI-HSS (EE, DP, or PA) (De Oliveira et al. 2013); 13.7–86% having high EE; and 23.8–89% having high DP; and 8% having low PA (Doolittle and Windish 2015; Doolittle et al. 2013; Lebensohn et al. 2013; Pantaleoni et al. 2014; West et al. 2011).

The literature is mixed regarding whether or not resident physicians begin residency with burnout. While Ripp et al. (2010) found that 34% of interns reported burnout at orientation, Doolittle and Windish (2015) report that only 1.5% of first-year residents met the criteria for burnout prior to residency. At the beginning of residency, Rosen et al. (2006) found that 4.6% of residents had a combination of high EE and DP, but Pantaleoni et al. (2014) found that 17% of interns were burned out (i.e., had high EE or high DP). Similarly, Lebensohn et al. (2013) report that 13.7% of interns had high EE and 23.8% had high DP with only 67% of interns reporting life satisfaction.

Most studies find that rates of burnout increase significantly during the first year of residency. Doolittle and Windish (2015) conducted a longitudinal study and found that first-year residents' risk of burnout was 18.9% by February. High EE increased from 45% in July to 84.9% by February. DP rose similarly, from 63.6 to 84.9%. Interns who had passive coping styles and struggled with acceptance of stress were more likely to have high EE and DP. This is similar to a study by Pantaleoni et al. (2014) who surveyed residents longitudinally twice per year through residency. They found that burnout increased from 17 to 46% during the first year and then stabilized at that level until the last measurement mid-senior year. Similarly, cross-sectional studies report the highest burnout scores in the PGY-2 year (Jovanović et al. 2016; Kealy et al. 2016).

The literature is unclear regarding sex differences in burnout among residents. Some studies have found that women resident physicians have a higher prevalence of burnout (Cohen and Patten 2005; De Oliveira et al. 2013; Kassam et al. 2015) and women with higher DP were more likely to be on medication for sleep, mood, or anxiety (Lebensohn et al. 2013). However, other studies (Shapiro et al. 2015; Campbell et al. 2010; Woodside et al. 2008) found that measured burnout was more likely among male residents. Still other studies did not find any differences between men and women (Billings et al. 2011; Castelo-Branco et al. 2007; Doolittle and Windish 2015; Jovanović et al. 2016; Kealy et al. 2016; Lafreniere et al. 2015; Ripp et al. 2010). These studies took place at different residencies with different specialties, and with different measures of burnout (e.g., MBI, WHO-5 Wellbeing Index, single-item question about burnout), all of which may affect the variable findings on gender.

There are few studies of ethnic differences. Lafreniere et al. (2015) did not find differences in burnout scores among four reported ethnicities (White, Asian, Black, and Hispanic). Somewhat related to ethnicity, there has been discussion of location of medical school (either located in the USA or elsewhere) being correlated with burnout. Both Eckleberry-Hunt et al. (2009b) and West et al. (2011) found that US medical graduates have higher risk of burnout than international medical graduates attending US residencies (who may or may not be US citizens) while Woodside et al. (2008) report that residents who had been in the USA for more than 10 years (termed "acculturation status") had higher EE and DP than those residents who had lived in the USA less than 10 years.

1.5.2 Correlates of Burnout in Residents

There are many factors associated with burnout, but no controlled studies or causal models have been completed. For instance, several studies have found that higher alcohol use is associated with higher burnout in residents, but it is unknown if this is a cause or effect (De Oliveira et al. 2013; Eckleberry-Hunt et al. 2009b). Billings et al. (2011) reported that burnout was associated with significantly higher "hidden curriculum" scores (i.e., unprofessional behavior of attending and senior residents). Ripp et al. (2010) found that residents who self-identified as anxious, disorganized, or less calm were significantly more likely to have burnout. Similarly, Eckleberry-Hunt et al. (2009b), in a study of 150 residents from 13 different specialties, found that personality traits such as pessimism and perfectionism, lack of coping skills, lack of autonomy, time pressure, and poor relationships with colleagues were predictive of burnout. Pessimism was the factor associated with higher burnout in all three dimensions (EE, DP, and PA). Use of prescription medication (e.g., antidepressants or antianxiety medication) was most associated with lower risk of burnout. Shapiro et al. (2015) investigated the link between burnout and loneliness and found that they were related in a dose-dependent pattern.

One relatively clear finding from the literature is that long hours and lack of sleep are highly correlated with burnout (Castelo-Branco et al. 2007; Gupta et al. 2013; Jovanović et al. 2016; Lebensohn et al. 2013; Panagopoulou et al. 2006; Passalacqua and Segrin 2012; Rosen et al. 2006). Residents tend to sleep little (6.7 h), work long hours (Gupta et al. 2013; Panagopoulou et al. 2006), and are chronically sleep deprived (Rosen et al. 2006). Lack of sleep has been associated with higher DP (Panagopoulou et al. 2006).

In July 2003, citing a concern for patient safety, the American Council of Graduate Medical Education (ACGME) implemented a resident duty hour restriction of 80 h per week on average for patient care and didactics (Philibert et al. 2002). In 2011, after studies showed no improvement in burnout or self-reported medical errors, the ACGME instituted new duty hour restrictions which further limited single-shift hours to less than 28 h and required 1 day per week on average free from work (ACGME 2011; Nasca et al. 2010). Bolster and Rourke (2015) completed a systematic review of duty-hour restriction research and did not find a positive effect upon resident physician burnout. Rather, they did find that while night float rotations (in which one team of residents work nights only for 1 month) were a popular way to restrict duty hours, residents received even less sleep at home compared to non-night float residencies (where residents might be on call at night every 4–7 days). Residents cited an inability to change circadian rhythms, need to see family or friends, as well as pressure to be at didactics as reasons for less sleep. The Institute of Medicine recommends four or fewer stretches of night duty for residents (Ulmer et al. 2009). Newer research continues to show that burnout remains a problem after the 2011 duty-hour changes (Elmariah et al. 2016).

1.5.3   Potential Consequences of Burnout in Residents

The literature is mixed regarding the consequences of burnout. Research has examined outcomes, such as patient perceptions of empathy, test scores, mistakes, and health measures. Lafreniere et al. (2015) found that high DP (but not high EE) was related to lower patient ratings of resident empathy and ability to help. At least one study indicates that residents with a higher self-assessment of burnout recognize that their ability to empathize with patients was compromised (Kealy et al. 2016). Some studies have found that residents with higher burnout scores have lower self-reported adherence to best practice guidelines (De Oliveira et al. 2013), while other studies did not find differences in patient safety (Fahrenkopf et al. 2008). Of interest is the modifying variable of depression. Both De Oliveira et al. (2013) and Fahrenkopf et al. (2008) found an interaction between depression and burnout when examining outcomes of patient safety (best practices and medication order errors). It is not known whether depression occurs prior to the higher level of burnout or vice versa. Regarding medical knowledge, again, the research is unclear. Beckman et al. (2011) and West et al. (2010) reported no correlation among residents' burnout, in-training exam scores, or mini-clinical evaluation exercises (Mini-CEX). Only one study (West et al. 2011) found a significant effect of daily increased EE associated with lower in-training exam scores but this was a small effect (2.7 points), smaller than that of greater medical debt (5 points). Longer work hours for residents (but not necessarily burnout) have also been associated with avoiding or postponing necessary health and mental care (Dunn et al. 2009).

The study of burnout among residents has received significant attention because there is interest in how professional identity and health habits are formed during this crucial time. We are beginning to understand how burnout changes over time in residency and how factors such as sleep and duty-hour restrictions affect burnout. However, we still lack the data needed to discuss causality. We will discuss the treatment of burnout among residents in the section below on remedies to burnout.

1.6   Burnout Among Attending Physicians

In the case described at the outset of the chapter, Dr. M thought, as many other medical students and residents do, that everything would get better when she was in control. There is a common misconception that more control over practice decisions will increase after training ends. Research shows that physicians strongly identify a lack of control as being related to their self-identified burnout. As Dr. M became more and more disillusioned from why she chose medicine, she became more disconnected from patients. She didn't just start to dread seeing her patients, she started to feel resentful that they were asking things of her. A commonly cited factor related to the disillusionment and disconnect is the incorporation of more technology with the EHR. This created more

administrative and clerical burden and contributed to Dr. M feeling like there was even less time to spend with patients and get home in time to see her family. In the end, Dr. M started to question whether or not she should even be in medicine. This is a common depiction of the burnout syndrome among practicing physicians.

1.6.1   Prevalence of Burnout Among Attendings

One of the main challenges with estimating physician burnout prevalence is the wide variation in the way burnout is defined and measured by various researchers as described earlier. Cross-sectional estimates of burnout among attending physicians range from 28 to 60% who have high EE, 7 to 42% who have high DP, and 6 to 19% who have low PA (Kroll et al. 2016; Roberts et al. 2014; Shanafelt et al. 2014; Roth et al. 2011; Shanafelt et al. 2009; Deckard et al. 1994).

In one of the few studies that compared physician burnout to the general population, Shanafelt et al. (2012a) found that 32.1% of physicians had high EE and 19.4% had high DP compared to 23.5% of the general population who had high EE and 15% who had high DP. The study was replicated 3 years later, and at that time, 43.2% of physicians had high EE and 23% had high DP compared to 24.8% of the general population with high EE and 14% with high DP (Shanafelt et al. 2015b). The authors reported a 10% increase in burnout over the course of 3 years among physicians but not the general population. It is important to note, however, that this data was cross-sectional and not longitudinal.

Studies that examine gender differences in physician burnout provide conflicting results, with some studies finding higher burnout among women (Shanafelt et al. 2012b; McMurray et al. 2000), and other studies finding no differences (Shanafelt et al. 2012b). Therefore, the relationship between burnout and gender is inconclusive (Glasberg and Norberg 2007). Studies comparing specialties of medicine vary widely in the prevalence of burnout, although primary care specialties generally have a higher incidence (Shanafelt et al. 2012a). It is not clear that specialties other than primary care have consistently elevated burnout profiles.

1.6.2   Correlates of Attending Physician Stress and Burnout

Few, if any, studies identify the exact causes of physician burnout as most of the studies are cross-sectional, have self-reported data, and use a methodology which only allows for correlational findings vs. causality. Historically, burnout among physicians was thought to be related to working long hours and doing the emotionally taxing work of caring for the sick and dying. However, researchers are beginning to argue that burnout is increasing among physicians, particularly due to workplace issues not directly related to patient care (Shanafelt et al. 2015b). Implied causes of burnout are those factors highly associated with the presence of burnout

and those that make logical sense, such as those associated with job stress (Weigl et al. 2015). The findings described in this section should be interpreted in light of the previous measurement issues (e.g., measurement variability) described above.

In a study of primary care physicians, 49% reported moderate to highly stressful jobs, 27% self-reported burnout, and 30% reported a high likelihood of leaving their jobs within the next 2 years. The more difficult patient encounters reported, the higher the burnout and the higher job dissatisfaction (An et al. 2013). Another study of primary care physicians found that 67% reported having high stress, 49% reported poor control over the week, 58% reported busy or chaotic workplaces, 62% had high documentation pressure, and 57% reported spending moderate to excessive amounts of time on the EHR at home. Common themes associated with physician work stress and burnout include lack of work control, lack of work-life balance (Spinelli et al. 2016; Glasheen et al. 2011; APM 2001; Frank et al. 1999), lack of collegial support, type of practice setting, lack of financial rewards (Scheurer et al. 2009), number of hours worked per week and number of nights on call (Shanafelt et al. 2012b), fear of lawsuits, patient suffering (Guest et al. 2011), poor leadership (Shanafelt et al. 2015a), poor support staff (Deckard et al. 1994), lack of sleep, and death of patients (Firth-Cozens 2001).

Work-Life Balance. Much is being written about work-life balance or imbalance as a source of stress among physicians. In a study of members of the American College of Surgeons, Dyrbe et al. (2013) found that 47% reported a work and personal life conflict, and this report of conflict was strongly associated with higher EE and higher DP, lower quality of life, depression, relationship problems, alcohol misuse, and career dissatisfaction. More than 30% of the sample reported an intention to leave their current practice within the next 2 years. Glasheen et al. (2011) found that work-life balance and lack of control over scheduling predicted low physician satisfaction and that low physician satisfaction predicted burnout. However, Keeton et al. (2007) found that while work-life balance was strongly associated with career satisfaction, control over scheduling, hours worked, marital status, and having children mediated the relationship. Once these researchers controlled for the mediating factors, there was no relationship between work-life balance and career satisfaction. Eckleberry-Hunt et al. (2016) found that it was not the numbers of hours worked per week, but rather the perception of workload that was associated with lower physician wellness. These studies show that the issue of work-life balance is a complex one. There are aspects of a career in medicine that necessitate a work-life imbalance (Eckleberry-Hunt et al. 2009a), so it is not clear that traditional measures of work-life balance fit with the expectations of being a physician. It may be that physicians want more flexibility in scheduling based on home needs.

Physician Satisfaction. Physician satisfaction is another oft-cited correlate of physician burnout (Keeton et al. 2007). It is sometimes measured concurrently with burnout to underscore the negative effects of workplace stress and possible turnover. Sometimes satisfaction is measured as a predictor of burnout, and other times, physician satisfaction is used to describe a wellness state. More studies are using satisfaction measures because there are strong relationships among high stress, lower

job satisfaction, and greater intent to leave the practice of medicine or decrease working hours (Williams et al. 2010). The Minimizing Error, Maximizing Outcome study (MEMO) between 2001 and 2005 demonstrated that chaotic practices and perceived low control by physicians are associated with stress, burnout, job dissatisfaction, and a greater likelihood of leaving the practice (Perez et al. 2015). Linzer et al. (2009) found that time pressure, chaotic work environments, less perceived control, perceived low work quality, poor communication, and less team work are associated with physician dissatisfaction, stress, and burnout.

One focus of recent work on physician satisfaction and burnout is the idea that physicians are responsible for increasing amounts of administrative work with the explosion of information technology in healthcare (e.g., EHR) (Murray et al. 2001). A recent study found that physicians' own ratings of their ability to manage the workload predicted emotional exhaustion on the MBI (Eckleberry-Hunt et al. 2017). According to other studies, physicians are tasked with seeing more complex patients with fewer support staff resources and more time is spent on clerical functions (Linzer et al. 2016a; Rosta and Aasland 2016). The clerical functions include insurance company paperwork but overwhelmingly refer to computer documentation. Since the introduction of the EHR, physicians are responsible for demonstrating "meaningful use." In 2011, the Centers for Medicare and Medicaid Services established the Electronic Health Record Incentive Programs to encourage healthcare professionals and institutions to adopt electronic technology with the aim of improving quality and safety initiatives in healthcare. Meaningful use refers to physicians and healthcare institutions meaningfully using the EHR so that additional quality and safety data can be collected to improve the overall healthcare system and reduce health disparities (U.S. Department of Health and Human Services 2016). These initiatives have resulted in a significant increase in the computer-based workload of physicians.

Physicians find themselves in a position where they are doing work that they were not trained or prepared to do in an environment where the objectives are constantly shifting (Kumar 2016). Woolhandler and Himmelstein (2014) found that US physicians spend 8.7 h per week on administrative tasks not considered to be patient care related, which equals 16.6% of the entire workweek. This finding was reinforced by Sinsky et al. (2016) who did a direct observation study of physicians' work tasks. They found that physicians spent half of their time on EHR tasks and desk-related work with less than one-third of their time spent on face-to-face time with patients. For every hour a physician spent on direct care, another 2 h was spent on EHR and desk-related activities that extended the workday by 1–2 h.

Areas of Worklife. Maslach and Leiter (1997) theorize that the basic cause of burnout is a mismatch between a person's expectations and what the job requires or provides in six domains. *Workload* refers to the amount of work that a physician expects to do compared to the amount of work that a physician is given; for example, when a physician is consistently scheduled to see many more patients than expected, dissatisfaction results. Multiple studies demonstrate the relationship between work overload and higher EE and DP (Lee et al. 2013). *Control* or autonomy refers to having input or influence over decisions

that affect the quality of patient care, the workplace, or the work schedule. The literature strongly supports a relationship between autonomy and burnout or job satisfaction (Spinelli et al. 2016; Friedberg et al. 2013; Shirom et al. 2010; Freeborn 1998). *Reward/recognition* involves circumstances when a physician feels that his or her efforts are not rewarded or recognized. This may involve salary or incentives but may also involve acknowledgement by management or colleagues. *Community* refers to the sense of community in the workplace. When there is a breakdown in teamwork and collegial relationships in the workplace, when the joy of working with others and camaraderie are gone, then an important source of social support is lacking. *Fairness* relates to a sense that everyone is treated with respect and that decisions are justly applied to everyone. The work is shared equally and no one is given special treatment. Finally, *values* encompasses a mismatch between physician values and organizational values. In an interesting study, Glasberg and Norberg (2007) looked at the gap between what a person thinks is the right thing to do and how the person is forced to act in the workplace. These authors found that healthcare providers who have to deaden their conscience in order to remain in healthcare have higher levels of EE and DP. When a physician feels rushed in the patient visit without enough time to do what is right for a patient, they postulate a value conflict (Glasberg and Norberg 2007). Some authors refer to the "moral distress" of physicians (Lamiani et al. 2015) or when physicians who feel like leadership is more committed to nondirect patient care activities, like EMR documentation and productivity (Spinelli et al. 2016).

Multiple studies provide support for the factors described in the areas of work-life model. (Spinelli et al. 2016; Alarcon 2011; Leiter et al. 2009). A particularly significant study was done by the Rand Corporation in 2013, using both qualitative and quantitative methods to examine physician satisfaction. When physicians felt like that they were able to provide high-quality care, satisfaction was likewise high (Friedberg et al. 2013). However, many physicians didn't feel like they were able to provide as high-quality care, especially due to the EHR. The physicians in the study felt like the EHR has worsened their satisfaction because it is not user-friendly, is time consuming and inefficient, interferes with face-to-face patient care, and degrades clinical documentation. Autonomy, work control, a capable support staff, value congruence with leadership, collegiality, fairness, and respect (with patients, colleagues, and leadership) were associated with greater physician satisfaction. Physicians felt more satisfied when they were doing work that matched their skill level and not performing clerical duties that others could perform.

Other studies suggest that individual traits such as personality, life experiences, and stressors external to the workplace are related to a risk of burnout (e.g., type A personality) (Lemaire and Wallace 2014). Although there have been efforts to study individual factors that predispose physicians to burnout, Maslach and Goldberg (1998) argue that situational variables play a stronger role.

1.6.3   Potential Consequences of Burnout Among Attendings

Some argue that burnout has a widespread effect beyond individual physicians, including increased healthcare costs associated with illness, disability, workers' compensation claims, absenteeism, sick leave (Dewa et al. 2014b), turnover (Shanafelt et al. 2016b; Atkinson et al. 2006), lower productivity (Dewa et al. 2014b), lower quality of work (Eckleberry-Hunt et al. 2017; Lu et al. 2015; Weigl et al. 2015; Firth-Cozens and Greenhalgh 1997; Maslach 1982), lower patient satisfaction (An et al. 2013; Anagnostopoulos et al. 2012; Haas et al. 2000), poor patient communication (Ratanawongsa et al. 2008), physician illness, substance use, psychological disorders, and family conflict (Maslach 1982), all of which can cost billions (Maslach and Leiter 1997). Dewa et al. (2014a) attempted to attach a specific cost to physician burnout and conservatively estimated a future loss of \$185.2 million due to early retirement and \$27.9 million due to reduced patient care.

Because physician wellness is linked to quality and safety outcomes, there are calls to add physician wellness (and all healthcare provider wellness) to the Triple Aim (Sikka et al. 2015). The Triple Aim is an effort to encourage health improvement among populations, improvement of the patient experience, and reduction in the cost of healthcare (Bodenheimer and Sinsky 2014). The thought is that as morale in healthcare worsens, there are disruptions to teamwork (Welp et al. 2016) and engagement, which will undermine the premises of the Triple Aim. Bodenheimer and Sinsky (2014) believe that health provider burnout is a threat to patient safety, and therefore, the Triple Aim should be expanded to include "provider wellness" (including a broad range of healthcare providers) and renamed as the Quadruple Aim.

1.7   Remedies to Burnout

Research on reducing or preventing burnout is in the preliminary stage. It is very difficult to design a study for busy physicians that includes randomization and a control group, and prevention is also challenging to study. Most of the intervention studies target affected physicians by helping them learn better ways to cope. Common coping strategies include working through stress, talking with coworkers, humor, or denial (Lemaire and Wallace 2010). Avoidance and denial are associated with higher EE (Lemaire and Wallace 2010). More frequent use of wellness promotion strategies (e.g., optimism, life balance, vacations, support) is related to lower burnout and higher quality of life (Lemaire and Wallace 2010). Based on a systematic review and meta-analysis, West et al. (2016) suggest that no one strategy has been proven more effective than another, but the most effective will probably include combined individual and organizational strategies.

Mindfulness and Reflection Groups. The findings on mindfulness-based interventions are promising (Maslach and Leiter 2016; West et al. 2014; Epstein and Krasner 2013; Maslach and Goldberg 1998). Goodman and Schorling (2012)

recruited physicians and other healthcare providers to complete an 8-week program in mindfulness. They found reductions in all domains of burnout lasting up to 15 months. Krasner et al. (2012) studied primary care physicians who participated in group sessions that included mindfulness meditation, narrative writing, appreciative inquiry, and discussion. Participants engaged in eight sessions that lasted two and a half hours each, an all-day session, and ten monthly maintenance sessions. The topics included boundaries, attraction to patients, self-care, suffering, and end of life. At the end of the 15-month study, all scales on burnout had improved along with mood. Amutio et al. (2015) studied 42 physicians who participated in a 1-year study of the effectiveness of mindfulness-based stress reduction (MBSR) with eight weekly two-and-a-half-hour sessions plus an 8-h retreat and 10 months of maintenance instruction. They found a significant reduction in heart rate and improvement in relaxation states. Because these interventions are quite lengthy, Fortney et al. (2013) developed an abbreviated MBSR program among primary care clinicians and found lower burnout, anxiety, stress, and depression, as well as a higher sense of well-being. These results were maintained over the course of the next 9 months with no further intervention. Similarly, Goldhagen et al. (2015) tested a 2–3-h mindfulness-based resilience intervention with resident physicians and found that their intervention did not decrease burnout. However, residents with depression, anxiety, and stress trended toward lower scores of depression and anxiety at 1-month follow-up.

There are very few randomized controlled trials of mindfulness and reflection groups. West et al. (2014) performed a randomized clinical trial of physicians that incorporated mindfulness and lasted 2 years. The control group received 1 h of protected time per week to use how they wished. The intervention group engaged in a facilitated small group curriculum every 2 weeks for 9 months. The small group focused on reflection, discussion, and problem solving. After 9 months, the authors found that job satisfaction improved. The group who received an extra hour of protected time did not demonstrate the same benefits, indicating that simply having more time is not protective.

In summary, mindfulness-based interventions hold great promise to reduce burnout among physicians. However, there are two main difficulties with these studies. First, they are time consuming, and it can be difficult to recruit participants whose central complaint is a lack of time. Second, these are not randomized clinical trials, meaning that the participants may have been predisposed to improvements because of cognitive expectations and because they self-selected to participate. There are very few randomized clinical trials of burnout interventions among physicians, and these interventions have not been studied for long-term effects (West et al. 2016).

Cognitive interventions. Cognitive interventions among physicians show promise similar to mindfulness interventions. Sood et al. (2014) studied physicians by recruiting them into a 90-min small group session of SMART (Stress Management and Resiliency Training). After 12 weeks, measures of stress showed improvements, anxiety decreased, quality-of-life ratings improved, and resilience scores improved compared to a wait-list control group. Regehr et al. (2014) performed a meta-analysis and found that cognitive-behavioral therapy (CBT) and mindfulness-based interventions that deal with stress reduction significantly reduce anxiety among

physicians (Murray et al. 2016). Many of these studies suffer from similar challenges to validity with a lack of randomization and control group comparisons. In reality, one of the biggest challenges is that few physicians report that their healthcare organizations offer individual services for burnout (Roth et al. 2011).

Resiliency Building and Stress Management. Resilience refers to how well a person reacts to stress, and how quickly the person returns to baseline and even grows stronger (Epstein and Krasner 2013). One new strategy focuses on resilience building among physicians by teaching physicians the skills necessary to effectively manage stress so that they can thrive in personal and professional endeavors (Kumar 2016). Resilience building can include anything from mindfulness and cognitive-behavioral skill acquisition to communication skills, optimistic attributions, organizational skills, and work-life balance (Kumar 2016).

Saadat et al. (2012) randomly assigned 60 residents to three groups: an intervention group that received a 16-week "Coping with Work and Family Stress" program consisting of 90-min sessions; a group with 90-min release time from physician duties where participants were told to read, study or relax; and a control group whose daily clinical assignments did not change. Outcome variables were measurements of coping styles, stressors, social support, psychiatric symptoms, and alcohol and tobacco use. They found that residents in the intervention group had lower job and partner stress, less anxiety, and reduced alcohol consumption. Residents in the other groups had higher levels of stress, higher anxiety, and more alcohol consumption.

Kumar (2016) suggests that building resilience among individuals can result in "herd immunity" whereby the effects extend to others who work with them and beyond. At the same time, Kumar (2016) cautions that too much focus on individual physicians via skill building can detract from the value of changing the work environment, which may be a root cause of the original stress.

Changing the work environment. Other studies are not limited to the individual. Instead, the focus is upon changing the situation, work environment, and medical training (Daskivich et al. 2015; Jennings and Slavin 2015; Schwenk 2015) based on theorized causes of burnout. Although these studies are few in number, researchers suggest that improvements may include more teamwork where emotional burdens of caregiving can be shared (e.g., increasing frequency of life-prolonging technology that leads to challenging ethical dilemmas), as well as the burden of electronic documentation (e.g., order entry, prescription processing, and charge capture) is shifted from the physician to trained teams. These teams could also assist with health coaching, preplanning of the visits, and enhancing the flow of visits and the overall day (Bodenheimer and Sinsky 2014; Shanafelt et al. 2016a). An example is a study by Dunn et al. (2007) who surveyed physicians about factors related to well-being and developed an improvement plan. Their intervention involved setting physician goals, developing flexible work schedules, customizing scheduling templates, incorporating physician interests, designing better offices for flow, providing care management for those patients with higher social needs, reducing EHR burden, adding resources for predictability, spending more time on clinical issues during meetings, and providing bereavement services. The aim was to increase physicians'

sense of control, improve order, and increase meaning. Their interventions led to increased physician satisfaction and decreased burnout. Similarly, Linzer et al. (2016b) employed a quality improvement team to develop work-related interventions aimed to improve work-life conditions. They found that work-life interventions do improve burnout and professional satisfaction.

Another workplace intervention study addressed the overall demeanor of the workplace. Leiter et al. (2012) implemented a civility intervention (promoting civility, respect, and engagement) in the workplace and found that burnout decreased and lasted up to the year following reevaluation. Biglan et al. (2012) found that nurturing environments that promote psychological flexibility are more associated with well-being. They suggest that we begin to move away from highlighting individual characteristics and begin to think of how to improve environments.

Based on the theory of mismatch, Maslach and Leiter (1997) suggest that prevention starts with employee engagement. Management can work with employees to design organizational projects, which will keep people involved and connected with one another. These projects can address the mismatches, reduce value conflicts, and continue as ongoing process improvements. Maslach and Goldberg (1998) agree that more attention needs to be on situational and organizational variables for maximal improvement as these have a much stronger role in burnout. This is a neglected area of research (Murray et al. 2016).

1.8   Positive Psychology and Physician Wellness

The study of physician burnout remains robust, but there is an increasing shift to examining physician wellness. Instead of just thinking about how to prevent burnout, researchers think we should consider how to promote physician wellness (Eckleberry-Hunt et al. 2009a).

As with research on burnout, the research on physician wellness is challenged by measurement issues. Much of the literature defines physician wellness as a lack of burnout, a lack of distress, or career satisfaction (Dyrbye et al. 2012; Wallace and Lemaire 2007). Maslach and Leiter (2016) suggest that to be well is the opposite of burnout, something they refer to as engagement. Engagement is measured by low scores on EE and DP and a high score on PA. However, this definition of engagement gives undue attention to burnout, whereas wellness is more than the opposite or absence of burnout. In positive psychology, wellness is about strengths, resilience, and what makes people thrive (Seligman and Csikszentmihalyi 2000). Positive psychology highlights prevention and how human strengths (e.g., optimism, hope, honesty, insight) can act as buffers against stress and pathology (Seligman and Csikszentmihalyi 2000).

There is a range of terminology used when addressing physician wellness, including satisfaction, happiness, and engagement (see Glossary in Chap. 13). There have been some attempts to define it and describe correlates from a more positive perspective (Eckleberry-Hunt et al. 2016).

Wallace and Lemaire (2007) suggest that work demands and work resources are related to wellness. Having enough work resources is thought to actually buffer the effects of work demands, and positive patient interactions are also thought to promote physician well-being. Zwack and Schweitzer (2013) performed semistructured interviews of physicians and found that gratification from the doctor–patient relationship, leisure time activities, supportive collegial relationships, reflection, boundaries, professional activities, self-awareness, appreciation, and acceptance were qualities associated with being well.

In a systematic review of physicians' occupational well-being, Scheepers et al. (2015) reported that physicians with higher occupational well-being had a more positive work attitude and were seen as more helpful to others. The authors generalize that physicians who are well may be more likely to be adherent, which means that physician well-being is central to optimal patient care. This study lends support to the idea of adding provider wellness to the Triple Aim.

The challenges regarding these studies are that most of the work has utilized small-sample-size interviews or qualitatively based focus groups and they are thus not potentially generalizable to all physicians. Studies rely on self-report, which may not be accurate, and the definition or measure of wellness is subjective. Moreover, the measures of wellness don't necessarily get at wellness from a positive perspective by measuring wellness as decreased burnout following an intervention. Most researchers consider wellness to be present when the burnout score is low or when burnout decreases following interventions. When this is done, the focus, again, becomes burnout rather than wellness in its own right.

The Utrecht Work Engagement Scale takes a positive psychology approach by examining vigor, dedication, and engagement instead of a lack of burnout (Schaufeli et al. 2008), but recent work has called into question the validity and dimensionality of the instrument (Byrne et al. 2016; Fong and Ho 2015). Another promising instrument is the Physician Wellness Inventory (PWI) (Eckleberry-Hunt et al. 2016) which includes high career purpose (CP), lack of distress (D), and high cognitive flexibility (CF). These researchers examined the relationship of the PWI domains to physician happiness. They found that CP had the strongest association to happiness followed by low distress. CF was not related to physician happiness, and neither was the number of hours that a physician works. In another study, Eckleberry-Hunt et al. (2017) found that physicians' ratings of their mental health status and ability to manage workload predicted the wellness scales of the PWI. The PWI was developed on family physicians and hasn't yet been extended to other medical specialties, and much more work needs to be done to ensure that the factor structures remain across other samples. However, this is initial evidence that finding meaning in work and not necessarily the number of hours may be related to a physician being well. The future direction of wellness research should be on further exploring what it means to be well and interventions that result in increases in measures of thriving.

In summary, physician wellness is thought to be a construct that is related to burnout but is more than the absence or low levels of burnout. Much more research needs to be done to better understand the qualities that help physicians thrive and be well.

1.9   Summary

Research on physician burnout has exploded over the last 20 years. While there remains some disagreement on how burnout is defined and measured, there is clear evidence of high levels of emotional exhaustion and depersonalization across the spectrum of medical specialties equally affecting men and women. The exact causes of physician burnout are only speculative given the lack of longitudinal studies. When burnout was originally conceptualized, it was thought that the stress of working with chronic suffering was the root cause. This idea has evolved to focus on technology, workplace, and organizational factors. Current theories suggest that workplace changes will be the most effective in curtailing burnout. Such workplace changes include changes in the way the burden of technology is shared among team members and less clerical and administrative tasks for physicians in order to increase meaning. The study of physician wellness as more than the absence of burnout is in the infancy stage, and more work needs to be done to define wellness and identify ways to measure it.

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Work-Associated Trauma

2

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Contents

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Abstract

Traumatic events are experienced by most people at some point in their life. Following a traumatic event many individuals return to previous functioning and some feel an increased sense of efficacy. However, a sizable minority experience adverse psychological and behavioral effects. These effects include distress reactions, health risk behaviors, and psychiatric disorders. Workplace traumatic events and responses most studied in physicians include exposure to injured and dying patients, medical errors and complications, bullying, disasters, and workplace violence. Developmental issues confer specific risks for medical students and residents, as well as early and late career physicians. Prevention measures which reduce exposure to workplace trauma are optimal. Physicians exposed to traumatic events will benefit from the use of prompt, evidence-based interventions. Many will seek and benefit from self-help interventions and peer support, but some may need formal assessment and treatment through employee assistance programs and traditional psychiatric care. Effective prevention and treatment can enhance physician well-being and career retention as well as patient outcomes.

2.1   Scope of the Problem

Exposure to traumatic events is an unavoidable part of medical practice. From the beginning of medical education when students first lay eyes on cadavers through their later years as seasoned physicians, the very nature of medicine is to come closer to death and serious injury than the rest of society. Physicians also experience traumatic events such as workplace violence at rates higher than most occupations. When natural and man-made disasters occur, hospitals and physicians bear the brunt of caring for those injured and sickened. Significant literature exists on the impact of traumatic events and disaster on individuals and populations. Evidence suggests that physicians experience witnessing injury and death differently and employ different methods of coping. Strategies to mitigate stress and distress due to work-associated trauma should take into account these differences. For this reason, any discussion of physician health and mental well-being must include how physicians experience traumatic events and their immediate and persisting effects.

In order to understand work-associated trauma, it is first necessary to properly define terms. Medical and other literature liberally use the terms trauma and traumatized to describe a broad range of stressful life events including traumatic events, stressors, and adversity. More significantly, there is a tendency to blur the boundary between events and reactions. From a diagnostic and research perspective, it is useful to be more precise and circumscribed in defining trauma. *Trauma*, derived from the Greek word meaning "wound," in its simplest definition is a physical or mental injury. The diagnostic criteria for Posttraumatic Stress Disorder

(PTSD) describe *traumatic events* as exposure to actual or threatened death, serious injury or sexual violence through direct experience, witnessing, or repeated or extreme exposure to aversive details (DSM-5, 2013). *Traumatic events* are defined by these characteristics, whether or not the individual goes on to develop symptoms. *Traumatic stress* refers to the range of distress responses, health risk behaviors, and psychiatric disorders that can occur in response to traumatic events. *Stressors* are defined as external stimuli that disrupt the equilibrium of an individual. *Adversity* refers to longer-term, sociological and community-based negative stressors that affect individuals or groups. For the purposes of this chapter we will discuss a broad range of stressors and adversity that lead to psychological responses, most of them will be traumatic events.

Physicians and other healthcare workers have the potential for exposure to a wide range of traumatic events. Table 2.1 summarizes some common traumatic events experienced by physicians. Caring for large numbers of patients or patients with whom the physician can identify strongly can induce traumatic stress in caregivers. Exposure to chemical, radiological, or infectious agents can be a traumatic event. Finally, physicians can be subject to adversity in the work environment through harassment, bullying, threats, and assault in the workplace. The following sections will discuss various traumatic events, stressors, and adversity related to the healthcare workplace and their impact on physician mental health.

Table 2.1 Examples of traumatic events experienced by physicians

Unexpected or sudden patient death
Medical errors and complications
Treating seriously ill or injured children
Exposure to chemical, radiologic, or infectious agents
Natural disasters/man-made disasters
– Large numbers of sick and injured patients
– Loss of infrastructure and resources to care for patients
– Making triage decisions and rationing care
– Family members injured or in danger
Mass violence
– Treating seriously injured patients
– Large numbers of wounded patients
– Attack in or near healthcare facility
Workplace violence

2.2   Causes and Consequences

Literature on the effects of traumatic events comes largely from studies of individual and community responses to emergency and disaster events. Most individuals exposed to traumatic events will emerge with limited or no adverse effects, promptly and effectively resuming their social and occupational roles (resilience). Some may even experience an increased sense of competence, self-efficacy, and belief in their ability to manage future stressors (often termed "posttraumatic growth"). However, a sizable minority will experience a range of adverse psychological and behavioral effects, including distress reactions, health risk behaviors, and psychiatric disorders (see Fig. 2.1).

Following a traumatic event, distress reactions are most common. Individuals often feel anger and vulnerability. A loss of faith and demoralization may also occur. Many individuals experience insomnia, irritability, and feelings of distractibility (Rundell and Ursano 1996). Some individuals display physical symptoms as a manifestation of psychological distress, ultimately presenting to healthcare settings. Somatic complaints such as headache, dizziness, nausea, fatigue, and weakness are common in the wake of a traumatic event, even when an identifiable physical disorder cannot be found (Ford 1997). Most who seek care present to primary care and emergency settings. An awareness of distress reactions as a frequent consequence of traumatic events is important for primary care and emergency providers to avoid misattribution of these symptoms to other medical causes, ultimately delaying definitive care.
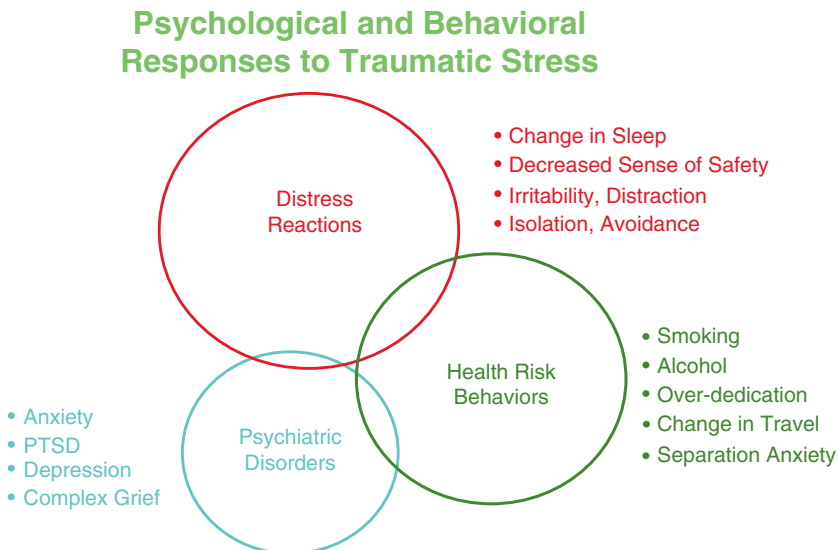
Fig. 2.1 Psychological and behavioral responses to traumatic events

Health risk behaviors are also increased following traumatic events. Increased use of alcohol, caffeine, and tobacco are common mechanisms for self-medicating distress or symptoms of traumatic stress (Vlahov et al. 2002). A decreased sense of safety may lead to restricting of activities and isolation, which reduce access to helpful social support networks (Rubin et al. 2005). Intimate partner and community violence may increase as distress escalates (Harville et al. 2011).

Psychiatric disorders develop in some individuals following traumatic events. The most studied of these is Posttraumatic Stress Disorder (PTSD) (Ursano et al. 2010). Many studies suggest that approximately 10–20% of those exposed to a traumatic event will develop PTSD, though many more individuals will experience milder symptoms, which can persist and become problematic (Goldmann and Galea 2014). The course of PTSD varies, though intentional acts of violence often result in escalating symptoms over time (see Fig. 2.2). PTSD is not the only trauma-related disorder, nor perhaps the most common (Fullerton and Ursano 1997). Some studies find depression to occur even more frequently than PTSD following disaster (Miguel-Tobal et al. 2006), with others experiencing generalized anxiety disorder, panic disorder, and increased substance use (North et al. 2002).

There are certain characteristics of traumatic events that have the ability to amplify or mitigate traumatic stress responses. Duration and intensity of exposure to traumatic events are the most consistent factors predicting adverse outcomes in exposed populations. Natural disasters tend to generate lower levels of impairment than technological disasters or episodes of mass violence (Norris et al. 2002). Events that are the result
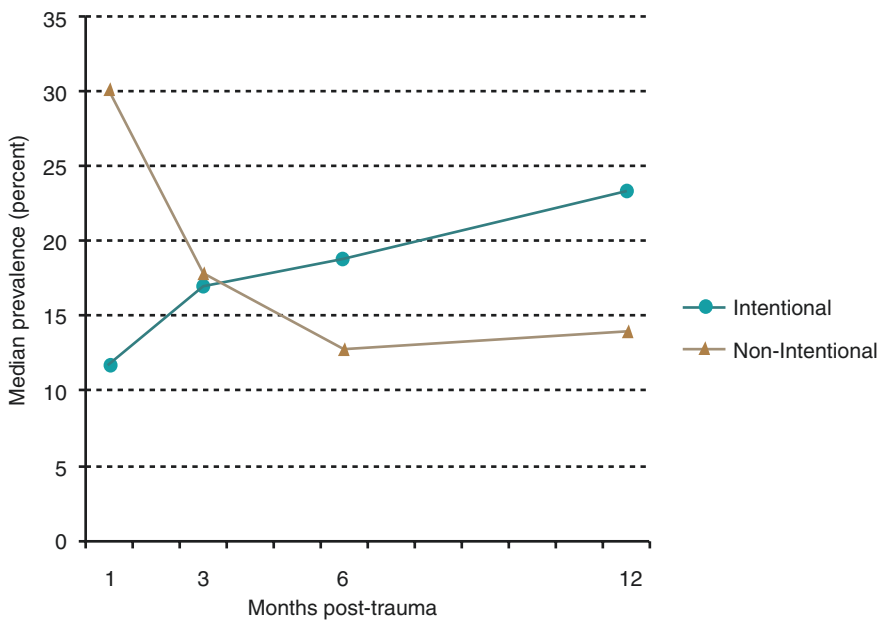
Fig. 2.2 Median prevalence of PTSD in DSM-5-Experiencing categories of intentional and non-intentional trauma ($N = 14$ and 21 studies, respectively) (Santiago et al. 2013)

of intentional human action tend to result in the most severe psychological impact. Events with significant uncertainty about immediate risk and the potential for lasting effects, such as exposure to infectious diseases or nuclear material, tend to generate unique, widespread, and lasting psychological effects.

There is a dose-related response to traumatic events that impacts the likelihood of traumatic stress. For example, a vascular surgeon amputating the leg of a single patient in a day is unlikely to develop a distress response or psychiatric disorder. The same surgeon having to amputate seven legs following a terrorist blast has a significantly increased likelihood of experiencing insomnia, increased alcohol use, or feelings of detachment from family and coworkers.

2.2.1 Injured and Dying Patients

From the beginning of medical education, physicians in training are exposed to death and serious injury. For many, initial exposure to death and injury is a traumatic event, but the expected outcome of graduated exposure to death and injury is to produce resilient physicians. Most physicians' first exposure to death and the dead occurs early in medical education in the gross anatomy laboratory. Research indicates many students experience anxiety during dissections (Grochowski et al. 2014), but gradually accommodate to being around cadavers, with decreasing rates of symptoms such as intrusive imagery between the first and second semesters of medical school (Bob et al. 2014). Other aspects of medical education can generate distress in students and are worth noting. Students experience significant distress related to personal feelings, interpersonal dynamics, and their relationship to patients' suffering or death during simulation in medical education (Pai et al. 2014).

Physicians continue to experience reactions to injury and death throughout their careers. No specialty is immune. In a survey of 113 surgeons, one in five reported symptoms consistent with a PTSD diagnosis, and two-thirds exhibited some symptoms. This was independent of the amount of exposure to surgical trauma patients (Warren et al. 2013). Oncologists experience the death of patients on a frequent basis as a traumatic event. In his book *The Emperor of all Maladies*, Dr. Siddhartha Mukherjee captured his experience of this by writing, "In the parking lot of the hospital, a chilly, concrete box lit by neon floodlights, I spent the end of every evening and the end of rounds in stunned incoherence, the car radio crackling vacantly in the background, as I compulsively tried to reconstruct the events of the day. The stories of my patients consumed me, and the decisions that I made haunted me" (Mukherjee 2011). In this environment, some individuals develop coping mechanisms that ultimately reduce their experience of distress. However, coping mechanisms that involve numbing, avoidance, or shutting off emotions can result in decreased empathy, potentially impairing a physician's ability to provide adequate patient care (McFarland and Roth 2016).

Death of or injury to a child is a particularly traumatic event for all physicians. In a study of Belgian emergency physicians, 36% reported that sudden death of a young person or trauma/accidents involving young people was their most significant traumatic event (Somville et al. 2016). Identification with those who have

been severely harmed ("that could have been me") increases risk for adverse psychological symptoms (Herberman Mash et al. 2016). Having children of their own contributed to this effect. Psychiatrists face the particularly challenging traumatic event of patient suicide. In a 15-year survey of Canadian psychiatrists and trainees, half experienced a patient suicide. Of those who experienced a patient suicide, 60% did so by the end of their first year of training (Ruskin et al. 2004).

2.2.2 Medical Errors and Complications

Another potential traumatic event for any physician results from action or inaction in their daily work that results in harm to patients—medical errors and complications. Medical errors are the third leading cause of death in the United States (Makary and Daniel 2016) and have the potential to occur in every specialty and every setting. The term "second victim" has been used to describe physicians involved in medical errors and complications (Wu 2000). Scott et al. performed an in-depth analysis of 31 "second victim" physicians who indicated developing symptoms consistent with PTSD. These physicians recalled distressing aspects of the event in extraordinary detail many years later, reported ruminative thoughts about the event that adversely affected work and sleep, and experienced abrupt emotional recollection of the event when confronted by triggers such as a patient with a similar name or performing the same procedure in the same location (Scott et al. 2009). A study of critical care personnel who committed medical errors identified symptoms of guilt (53.8%), shame (42.5%), and anxious rumination (37.5%) (Laurent et al. 2014). Other symptoms following medical errors include anxiety about future potential errors (52%), loss of confidence in abilities as a physician (45%), and sleep disruption (36%) (McLennan et al. 2015). Surgical disciplines experience similar rates, with 53% of surgeons reporting an adverse patient event in the last year as a traumatic event (Hu et al. 2012). Malpractice cases can be another source of continuing stress with 25% of 7164 surgeons reporting a lawsuit within the past 24 months, which was associated with burnout, depression, and suicidal thoughts (Balch et al. 2011). In an effort to cope, physicians may turn to risky behaviors. In a 1991 survey, Wenokur and colleagues identified increased alcohol use among 11% of physicians sued for malpractice. Fifty-four percent of the affected physicians considered their ability to care for patients compromised but only 6% sought any type of mental health treatment (Wenokur and Campbell 1991).

2.2.3 Bullying

Bullying of physicians in the workplace occurs both in-person and online, and is experienced by physicians in various levels of training and across disciplines. Although not classified as a traumatic event by DSM 5 criteria for PTSD, workplace bullying is a significant stressor and should be considered in this discussion of physicians and work-associated trauma. The experience of workplace bullying is an

international phenomenon, though most research on the subject has occurred in developed countries. Bullying in medicine has also received increased media attention (Chen 2012; Srivastava 2015) and is considered significantly established that the topic has its own Wikipedia page (Wikipedia page). Depressive symptoms have been associated with physician bullying, for as long as 3 years following the incident (Loerbroks et al. 2015). Nearly 16% of those experiencing bullying reported posttraumatic stress symptoms above the threshold score on the Impact of Events Scale-Revised (Malinauskiene and Einarsen 2014).

Though direct in-person bullying has historically been the primary means by which these events occur, cyberbullying is an increasing problem. A study of physician trainees found that 46.2% experienced cyberbullying, which reduced job satisfaction and increased mental strain (Farley et al. 2015). Fellow trainees were the perpetrators in most instances, outpacing the frequency of bullying by managers by nearly threefold.

A significant challenge to addressing bullying involves fear of reprisals. In the healthcare setting, trainees and junior physicians may be particularly vulnerable. The increased use of mobile technology and social media within the healthcare field present both challenges and opportunities in the management of physician bullying. Healthcare entities can begin to address bullying of physicians by establishing a culture of mutual respect and zero-tolerance policies, which reduces fear and stigma associated with reporting incidents of bullying.

2.2.4   Disasters

Disasters are natural or man-made events which injure or sicken large numbers of people, significantly damage property and infrastructure, and overwhelm existing resources. Healthcare workers find themselves doubly exposed to trauma during disasters. Not only must they care for sick and injured patients with limited resources, they or their family may also directly experience traumatic events. There is limited literature specifically looking at physician responses to traumatic events related to disasters, but much can be extrapolated from general disaster literature. Physician disaster responders may be exposed to mass death and injury, grotesque and disturbing sensory input, and extreme distress in those identified as patients. First responders are at increased risk for a range of adverse mental health effects, such as PTSD (Morganstein et al. 2016). Several studies have examined the impact of disasters on the psychological well-being of medical students. Distress reactions, such as sleep difficulties and decreased perceptions of safety, are common, as well as psychological symptoms, such as anxiety and depression. Following the Christchurch earthquake in New Zealand in 2011, approximately 10% of medical students experienced moderate to severe distress 7 months later (Carter et al. 2014).

In the immediate aftermath of a disaster, physicians may find their home or workplace damaged or destroyed, and still be required to manage competing demands of tending to patients or helping their own families. Vignette 1 captures the experience of a physician balancing the call to care for sick and injured and the need to tend to his own family's needs.

During disaster response and recovery, healthcare demand is much greater than available resources, and healthcare providers find themselves in the position of triaging patients and rationing care. Physicians involved in or witnessing emergency or disaster situations commonly feel a sense of obligation to help those in need. Physicians in training, such as medical students, may doubt their competency. Those who lack adequate training, such as Basic Life Support, may have doubt or anxiety about stepping forward to participate in these events. Feelings of guilt may result from a physician or trainee's inadequate response or lack of response in the aftermath of a disaster. This can include withholding care due to excessive demand or inadequate resources to offer intervention that they would otherwise offer under normal circumstances. Disasters differentially impact children and other vulnerable populations, and thereby expose healthcare workers to a greater number of serious injuries or deaths in children. For those required to provide care, the range of responses may be similar to those experienced by other first responders. A lack of education and training as well as psychological preparation for these extreme events can exacerbate negative effects and impair functioning.

Vignette 1

Eventually the generators did fail or run out of gas. Doctors and nurses had to use flashlights to walk down corridors that became instantly engulfed by obscurity and darkness. Basic rounds were made in the dim light that penetrated from the outside windows. Critically ill patients were ventilated manually, and a stifling heat mounted in the hospital corridors and rooms. It became extremely urgent to find a way out of this dead-end situation; how many people needed evacuation? From a quick count, approximately 1200, including a total of 160 patients, employees, and physicians and their families.

Meanwhile, one of the fellows trapped at the Veterans Affairs hospital had to make a difficult choice. With water chest-deep and rising, he began to seriously worry about his wife, who was 7 months pregnant and had spent the past 72 h in the hospital with him. He decided to leave and wade the waters, challenging the conditions of the streets and the violence outside of the hospital. He walked in waist- to chest-deep water with his wife and carrying his dog until he reached dry ground about 2 miles away. From there, he walked 5 more miles to his apartment uptown. On arrival, his heart sank: his vehicle was smashed under a large tree and was unusable. In the haste of the moment, he let himself through the broken window of a neighbor's house. He looked around and found a spare key to his neighbor's truck parked outside, took it, and drove himself and his wife to safety in a nearby state (Raggi and Raggi 2005).

2.2.5   Hazardous Exposures

Exposure to environmental hazards represents another significant type of traumatic event. These include chemical, radiological, and infectious exposures in the course of routine medical care and disaster response. Exposure to occupational hazards

appears to lead to increased somatic symptoms (Somville et al. 2016). Physicians may be most threatened by infectious diseases they are called on to treat. Codes of medical ethics have historically recognized this risk, "When pestilence prevails, it is [the physicians'] duty to face the danger, and to continue their labors for the alleviation of the suffering, even at the jeopardy of their own lives" (AMA Code of Medical Ethics 1847). Some contemporary infectious diseases generate significant anxiety in physicians due to their virulence and devastating implications of infection. Diseases such as HIV have the potential to generate significant traumatic stress in treating physicians, particularly those that find themselves exposed. Highly transmissible and deadly agents such as Ebola, Marburg, and SARS are not only lethal to those infected, they also represent a threat to healthcare workers. In the Ebola outbreak of 2014–2015, 3% of more than 27,000 cases and 5% of more than 11,000 deaths were healthcare workers (Mulligan and Siebert 2015). Even though these numbers were highly concentrated in African countries, Europe and the United States also experienced cases of transmission to healthcare workers. Vignette 2 captures the experience of nurses exposed to an infectious Ebola patient in 2014. Influenza is another pathogen that poses risk to healthcare workers with the potential for generating psychological trauma. In one study of healthcare workers exposed to H1N1 influenza during the 2009 epidemic, up to 1 in 3 emergency room workers became infected with the virus (Sandoval et al. 2016). Physicians and other personnel may respond to this perceived threat by calling in sick or overtly refusing to attend work, further diminishing an already overstressed healthcare workforce during a time of increased care demands.

Vignette 2
(from Statement by RN's at Texas Health Presbyterian Hospital as provided to National Nurses United 2014)

"When Thomas Eric Duncan first came into the hospital, he arrived with an elevated temperature, but was sent home. On his return visit to the hospital, he was brought in by ambulance under the suspicion from him and family members that he may have Ebola. Mr. Duncan was left for several hours, not in isolation, in an area where other patients were present. No one knew what the protocols were or were able to verify what kind of personal protective equipment should be worn and there was no training. Subsequently a nurse supervisor arrived and demanded that he be moved to an isolation unit—yet faced resistance from other hospital authorities. Lab specimens from Mr. Duncan were sent through the hospital tube system without being specially sealed and hand delivered. The result is that the entire tube system by which all lab specimens are sent was potentially contaminated."

"There was no advance preparedness on what to do with the patient, there was no protocol, there was no system. The nurses were asked to call the Infectious Disease Department. The Infectious Disease Department did not have clear policies to provide either. Initial nurses who interacted with Mr. Duncan wore a non-impermeable gown front and back, three pairs of gloves, with no taping around wrists, surgical masks, with the option of N-95s, and face shields. Some supervisors said that even the N-95 masks were not necessary. The suits they were given still

exposed their necks, the part closest to their face and mouth. They had suits with booties and hoods, three pairs of gloves, no tape. For their necks, nurses had to use medical tape, that is not impermeable and has permeable seams, to wrap around their necks in order to protect themselves, and had to put on the tape and take it off on their own."

"Nurses had to interact with Mr. Duncan with whatever protective equipment was available, at a time when he had copious amounts of diarrhea and vomiting which produces a lot of contagious fluids (United 2014)."

2.2.6   Workplace Violence

Healthcare workers are at a relatively higher risk of workplace injury compared to other occupations. United States hospitals and nursing care facilities have higher than average rates of nonfatal workplace injuries (BLS 2016). Physicians throughout the international healthcare community also experience workplace violence. A variety of social, cultural, and economic changes in the delivery of healthcare parallel increased rates of violence toward physicians (Shi et al. 2015; WHO 2002). Among Pakistani physicians surveyed about their experiences over the past 12 months, one in six reported a physical attack and 60% reported verbal abuse. Among those, 40% screened positive for anxiety and depression on the Global Health Questionnaire-12 and one in six were positive for PTSD using the PTSD Checklist-Civilian, with physical attacks being the most significant predictor of PTSD (Zafar et al. 2016). Studies looking at workplace violence to date have been directed toward quantifying the problem and less directed to understanding the sources and underlying risks (Phillips 2016). Table 2.2 summarizes a useful differentiation of types of workplace violence according to the relationships between the perpetrator, the workplace, and the victim. Violence in the workplace occurs along a spectrum from verbal harassment to direct threats of violence, threatening with a weapon, physical assault, and homicide.

Verbal violence is by far the most common form of workplace violence in healthcare settings. Verbal violence can range from insulting or demeaning remarks directed toward a healthcare worker to direct threats of physical violence. Physical violence occurs along a spectrum ranging from unwanted contact or striking by

Table 2.2 Types of workplace violence (Phillips 2016)

Type	Description	Example
I	Perpetrator has no association with the workplace or employees	Person with criminal intent commits a robbery
II	Perpetrator is a customer or patient of the workplace or employees	Intoxicated patient punches a nurse's aide
III	Perpetrator is a current or former employee of the workplace	Recently fired employee assaults former supervisor
IV	Perpetrator has a personal relationship with employees, none with the workplace	Ex-husband assaults ex-wife at her place of work

patients to physically injurious assault to homicide. Psychiatry specialists and emergency medicine physicians are most likely to be victims of workplace violence. A sample of emergency room workers in 2007 showed that nurses, physicians, and support personnel were threatened with violence three times per year and physically assaulted once per year (Kowalenko et al. 2013). In a 2011 study of U.S. emergency medicine residents and staff, 78% of emergency physicians reported some type of workplace violence in the last year. Of these events, 75% involved verbal threats, and 21% involved physical assault by a patient (Behnam et al. 2011). Commonly cited causes of violence in healthcare settings include delays in consultations and/or care, intoxication, and psychiatric disorders (Belayachi et al. 2010). Though patient-initiated violence is the most often researched in emergency settings, some literature suggests rates of violence by patients' relatives may be even higher (Ayranci 2005).

Nurses and other health professions are even more susceptible. In 2013, the United States Occupational Safety and Health Administration (OSHA) recorded over 7000 violent injuries that resulted in days away from work for nursing aides and assistants, and almost 2000 violent injuries to registered nurses (OSHA 2015). In a survey of inpatient psychiatric nurses between 2011 and 2013 staff identified 3867 injurious assaults by patients against hospital staff, with a rate of 0.55 assaults per 1000 patient-days (Staggs 2015). Physicians at all levels of training are potentially exposed to workplace assaults. In a comparison of medical students and social work students, medical students experienced higher levels of workplace violence while social work students received more education on methods to manage agitated patients (Ellwood and Rey 1996).

In addition to distress and psychological disorders, workplace violence is associated with increased rates of burnout, as well as reduced quality of life and job satisfaction (Heponiemi et al. 2014). The experience of workplace violence leads physicians to consider means of enhancing personal safety, such as procuring firearms, knives, or other weapons (Kowalenko et al. 2005). Consequently, preventing workplace violence and enhancing perceptions of safety for physicians and other medical personnel represent important areas of public health safety and prevention for healthcare organizations.

2.2.7 Mass Violence

Mass violence is a highly traumatic event for the public and physicians involved. Acts of mass violence such as mass shootings, terrorist bombings, or other large scale attacks incorporate multiple characteristics that amplify their psychological impact. First, they are intentional acts which have a greater traumatic impact compared to natural or random events. Second, multiple victims will increase the number of individual traumatic events. Finally, victims tend to be innocent bystanders and therefore perceived by responders with greater identification and horror. Emergency physicians, trauma surgeons, and orthopedic surgeons describe caring for mass shooting victims as "just like any normal day at a trauma center, but amplified" and often struggle with compartmentalized emotions for years (Castellucci 2016). Recent mass shootings both in and out of healthcare settings have captured

public attention and generated significant anxiety and fear. Between 1980 and 1990, there were 78 workplace homicides by firearm, and 19 of these were physicians (Goodman et al. 1994). Kelen and colleagues reviewed media reporting of hospital shooting events between 2000 and 2011 and identified 154 hospital-related shootings, of which 91 occurred inside the hospital. Motives for shooting varied, including grudge (27%), suicide (21%), and euthanizing an ill relative (14%). In 45% of hospital shootings, the victim was the perpetrator, either self-inflicted or shot by security response (Kelen et al. 2012).

2.2.8   Factors Amplifying and Mitigating Risk

In considering the impact of traumatic events on individuals and groups, it is important to consider characteristics of exposed individuals that may leave them more vulnerable to lasting reactions or conversely more resilient. Individuals most *directly exposed* are at greatest risk for psychiatric disorders after the trauma. In the disaster literature, the directly exposed group usually includes individuals most proximal to the disaster (North et al. 2002), those who experienced physical danger, and those who directly witnessed traumatic events. In addition, individuals who have attachments with primary victims, first responders, and support providers are at greater risk (Wright and Bartone 1994) than "detached" bystanders. It is reasonable to extrapolate this to all traumatic events experienced by physicians, meaning that those closest to the scene and those with more emotional attachment to victims are more likely to experience traumatic stress reactions. Those who are injured during a traumatic event will typically experience more symptoms of traumatic stress. Gender plays a role, with men more likely to experience traumatic events, but women more likely to develop PTSD (Breslau et al. 1999).

Traumatic exposure within the healthcare workplace occurs against a background of exposure outside the workplace. History of developmental trauma and abuse is a known risk factor for traumatic stress reactions in the future. Physician exposure to interpersonal violence outside of the workplace has proven difficult to quantify. In a 2012 survey of the Massachusetts Academy of Family Physicians one-third of practicing family physicians reported experiencing or witnessing abuse during their development (Candib et al. 2012). A comprehensive review of interpersonal violence and physicians showed that female physicians report a higher incidence, are victims of interpersonal violence, and that shame over being a victim may reduce reporting below that of the general population. However, physicians who were themselves victims may be more likely to identify and report violence toward their patients (Hernandez et al. 2016).

2.3   Developmental Issues

Physicians' professional stage of development impacts their experience of psychological trauma. Medical students have little authority or responsibility and may experience additional distress due to mistreatment from both fellow professionals

and patients. Residents ("house officers") have increased responsibility and accountability, but with limited authority, for patient care and potential adverse outcomes. Staff physicians bear the ultimate responsibility for patient outcomes and have the greatest exposure to adverse patient interactions. Understanding the unique vulnerabilities for physicians at various developmental stages offers the opportunity to enhance prevention efforts designed to minimize exposure to traumatic stress.

2.3.1   Medical Students

Imbalances of power and control play a significant role in the experience of traumatic stress for medical students. This power differential leaves students vulnerable to mistreatment. Student mistreatment occurs along a spectrum from public humiliation to physical or sexual assault. In this regard, it is very similar to forms of interpersonal violence. Though advocacy for medical student well-being has increased in recent years, mistreatment or "hazing" of students often goes unreported, making true estimates of its frequency extremely difficult. The American Association of Medical Colleges reports the rate of student mistreatment around 17% (AAMC 2011). However, other studies of medical students in the USA and other countries have found reported rates to be much higher (Frank et al. 2006; Rautio et al. 2005). A recent study found that 64 and 76% of medical students reported at least one incident of mistreatment by faculty and residents, respectively (Cook et al. 2014).

Student mistreatment is extremely stressful for victims and confers increased risk for poor health outcomes and psychological symptoms. In a study of medical students during their clinical year at Brown University, Heru and colleagues observed that most students reported experiencing mistreatment or observing another student being mistreated (Heru et al. 2009). They also found more than half the students experiencing mistreatment reported Impact of Events Scale-Revised scores that exceeded the threshold for posttraumatic stress disorder. Students who are abused indicate these experiences have a significant effect on their specialty selection and career trajectory (Haviland et al. 2011).

Students may also experience elements of medical education curricula as traumatic events. As mentioned previously, gross anatomy teaching requires exposure to and dissection of deceased human remains. It is traditionally viewed as a right-of-passage and a milestone by which preclinical students begin the process of transitioning from layperson to physician by crossing the boundary of the human body. The dissection experience produces distress in about half of medical students (Sandor et al. 2015). Fear of stigmatization and being perceived as unfit to serve as a physician prevent many students from talking about these reactions. During the dissection experience, identification with human remains (i.e., "this could be my grandmother") increases distress. Seeing the hands and face of the cadaver increases this effect. Exposing students to the least distressing body parts first and teaching students cognitive coping strategies may reduce adverse effects. Normalizing a range of emotional and physiologic reactions during dissection and encouraging

open discussion of these reduces stigma and barriers to help seeking and promotes healthy peer interactions that become useful later in their medical careers.

Simulation training has rapidly proliferated in medical education in the twenty-first century, is generally well-received by students, and offers new and innovative methods of teaching (Takayesu et al. 2006). High stress simulation, such as those involving severe trauma or death to patients, has been found to be extremely stressful for students and may result in significant and lasting distress (Pai et al. 2014). Monitoring of student well-being in the development of simulation activities and follow-up assessment or debriefing in the post-simulation time period can allow educators to identify and provide interventions for students experiencing traumatic stress.

2.3.2   Residents ("House Officers" or Junior Doctors [UK])

Residency serves as a significant and extended period of professional transition with numerous stressors, adversity and traumatic events. Becoming a resident or "house officer" removes a physician trainee from the protection of medical student status, imposing increased responsibility and accountability with limited authority and autonomy. In contrast to medical students, residents typically have increased exposure to patients and physician staff as well as a greater degree of physiologic deprivation through erratic food intake and reduced sleep. Increased interaction with staff and patients exposes residents to mistreatment, bullying, workplace violence, and medical errors and complications.

House officers work extremely long hours conducting patient care, often leaving little time for social interactions outside the work environment. Existing relationships may be severely strained during this 3–5-year period of training. Opportunities are limited to broaden a support network outside of the socialization that occurs in the setting of medical training. Consequently, residents' social networks are largely predetermined, composed primarily of other house officers exposed to the same stressors and deprivation. Because social support is critical to reducing the impact of distressing experiences, residents may be particularly vulnerable to the adverse effects of traumatic events encountered during training.

The adverse effects of stress on residents may be reduced by early training on understanding and coping with occupational hazards, decreasing exposure to stressful events, adequately addressing physiologic needs, and enhancing social support systems.

2.3.3   Early and Late Career Physicians

Following training, physicians may be exposed to a wide range of traumatic events throughout the cycle of their careers. The status of being an attending physician brings unique developmental issues that can impact both the experience of traumatic stressors and the ways in which physicians choose to respond to these events.

Following training, early career physicians are given authority, responsibility, and accountability for patient care. This can be experienced as a positive transition, affording increased levels of esteem and financial compensation. It may also represent a loss of certain protective factors afforded to those in a training environment. Early-career, post-residency physicians may feel significant stress bearing the full responsibility for patient care, including medical errors or adverse outcomes. A lack of adequate preparation for this new role may amplify feelings of uncertainty or distress. Following specialty training, physicians may also feel ill-prepared to manage the challenges inherent in their healthcare system. Uncertainty about policies and procedures, where to obtain needed resources, and the hectic schedule of a junior physician can leave these individuals increasingly vulnerable to the adverse effects of work trauma.

Late-career physicians may be vulnerable to burnout after years of managing the demands of both patient care and a constantly evolving healthcare system (see also Chap. 1). Specialties that involve patient care in high volumes or extreme intensity may be particularly vulnerable, such as primary care, mental health, emergency, and trauma specialties. Following years of practice, physicians may become cynical about patient care as well as the healthcare systems in which they work. Feelings of helplessness and hopelessness about the ability to effect change diminish motivation and a sense of well-being. Frustration or anger may also leave physicians more vulnerable to the stress inherent in routine patient care as well as higher stress challenges that inevitably emerge. Finding meaning in work, collaborative approaches to patient care, and developing skills to navigate administrative challenges within a healthcare system serve as protective factors.

2.4 Assessment, Intervention, and Treatment

Thorough assessment and prompt, evidence-based intervention following traumatic events aid physician recovery and optimize performance. Important considerations include prevention measures, barriers to care, and the role of leadership. Assessment should examine a broad range of behavioral and psychological reactions to traumatic events as well as level of impairment. Evidence-based treatments focus on reducing distress, enhancing well-being and optimizing social and occupational functioning.

2.4.1 Prevention

Education on stress, normalizing responses to stress, when to get help, and what resources exist are at the core of effective prevention of psychological impairment following traumatic events. Ensuring "adequate equipment" and "protection" helps people feel safe going to work and doing their job. Firefighters check their protective equipment not just to make sure it works, but to increase their sense of personal safety when stressful events occur. Physicians' benefit from ensuring similar

protections are in place through training and procedures to reduce perceptions of risk and increase feelings of safety. This allows them to spend less physical and mental energy concerned with personal well-being and more on the well-being of patients. This is just as true for first responders as for physicians charged with caring for others who may be harmed themselves.

Prevention of trauma reduces morbidity for affected physicians and may limit adverse effects on patient care. Prevention involves recognizing high-risk characteristics of traumatic events, identifying at-risk physicians and system vulnerabilities, and taking mitigation steps that promote individual and organizational resilience (see Table 2.3 and Chap. 11). Historical public health interventions are a useful paradigm to consider for efforts to prevent work-associated trauma in physicians. For instance, the advent of seat belts dramatically reduced the rate of injury in automobile accidents, thereby decreasing distress reactions, health risk behavior, and psychiatric disorders associated with them. Examination of human and system factors as well as specific vulnerabilities in healthcare settings and physician training programs can elucidate areas to target for intervention (see also Chap. 13).

Anticipatory training is an important aspect of enhancing the resilience of physicians to work-associated trauma. Individuals are most likely to fear things they do not understand and feel unprepared to manage. Providing physicians with an understanding of traumatic events, normal and expected behavioral and psychological reactions, methods of self-help and peer assistance, and access to expert resources

Table 2.3 Sample work-associated trauma prevention matrix

Cause	At-risk	System vulnerability	Mitigation
Workplace violence	Emergency department and primary care, and mental health providers	Lack of security guards or other physical security measures; inadequate training on management of agitation	Enhance security measures; train on patient communication and de-escalation techniques
Bullying	Medical students and house officers, vulnerable populations	Tolerant organizational culture; lack of knowledge regarding policies and procedures	Leadership messaging about organizational values; policies and procedures on reporting and response; training on resources
Medical errors and complications	All physicians	Inadequate instruments, documentation, policy or procedure regarding management of high-risk procedures	Enhanced ergonomics; improve charting systems; review and revise policy and procedure for high-risk interventions; education and training on mitigating and responding to incidents
Death and injury	Oncology, trauma surgery, psychiatry	Lack of awareness of potential vicarious impact; limited emphasis on self-care techniques	Anticipatory training of potential exposures; education on self-care and when to get help; adequate resources to support personnel

can enhance coping and reduce distress. Ensuring physicians have the knowledge and skills they need to identify and address work-associated traumatic stress allows them to focus less on concerns about potential adverse experiences and more on optimal performance of their work duties.

Identification of system issues that put physicians at increased risk of exposure to traumatic events is an important aspect of prevention. Enhanced safety measures can protect physicians from workplace violence. Physicians working long hours and arriving and departing the workplace at early and late hours may leave them more vulnerable to assault coming and going from work. Optimizing human factors and reducing system vulnerabilities can decrease medical errors and complications. Rigid hierarchical structures and tolerance for harassment and mistreatment may create an environment in which physicians and other healthcare workers are more vulnerable to physical and sexual assault. These and other interventions, as a part of continuous systems improvement, can lead to identification of potential vulnerabilities that expose physicians to traumatic events. Mitigation efforts through ongoing process improvement reduce adverse impact on physicians and optimize patient care.

2.4.2   Role of Leadership

When physicians experience work-associated trauma in a healthcare or other system, leaders play an important role in reducing harm and mitigating the impact of traumatic events. Fear of uncertainty may lead to avoidance of communication about the traumatic event. In healthy organizations, leaders reach out to communicate with physicians impacted by traumatic events. Communication marked by active listening, empathy, support, and a desire to help reduces feelings of fear and isolation. In this way, leaders can provide the initial support to physicians impacted by traumatic events, a critical element in reducing distress and promoting recovery (Brewin et al. 2000). Another key aspect of this communication is that leaders convey to their organization that distress reactions are acceptable and that the group can and will support members through their distress. Leaders must also pay attention to their own distress reactions and health risk behaviors following traumatic events. Poor sleep, over-dedication to the point of exhaustion, or withdrawal from their leadership role will have a negative effect on coping within the workplace following traumatic events. Leaders in these circumstances may feel isolated and, although they may be reluctant, should seek peer or expert consultation to assist in managing their own distress.

Leaders need to address grief and loss that arise following traumatic events. Grief leadership is the process of recognizing and giving voice to what has been lost following traumatic events, providing a sense of hopefulness about recovery, and a positive outlook on the future. Effective grief leadership helps a physician begin the process of making meaning of the event they have experienced. A sense of hopefulness about the future conveys that a leader understands there may be adverse effects following a traumatic event and that the physician is part of an organization that desires to support them through the process of recovery.

2.4.3   Assessment

Following traumatic events many physicians will manage distress without intervention or seeking peer support. However, physicians experiencing significant or impairing distress need timely assessment by personnel trained to understand the unique effects and comorbidity associated with traumatic stress. Employee Assistance Program (EAP) personnel serve this role in many institutions. Some organizations utilize in-house or contracted medical providers who are able to conduct formal evaluations when traumatic stress is the presenting concern. The effectiveness of EAP counselors and therapists in providing assessment is largely dependent upon their training, comfort, and being adequately resourced. Individuals who lack adequate training can exacerbate the experience of trauma rather than alleviate it. When assessment personnel are inadequately resourced, they may become overburdened and unable to provide the time, energy, and continuity of support to assist the physician in need.

Assessment should consider not simply the presenting concern or specific traumatic event, but the physician's entire "network of stressors" (see Table 2.4). Thus, familiarity with the professional culture of physicians and their workplace environment, in addition to stressors not specific to physicians, is essential. Any additional stressor can exacerbate the primary traumatic event, adding to a physician's burden of distress. Individuals will predominantly manifest distress reactions, health risk behaviors, and less frequently psychiatric disorders (see Fig. 2.1). A focus exclusively on making a psychiatric diagnosis will often overlook a range of psychological and behavioral responses contributing to significant distress and functional impairment. Assessment can include a clinical interview as well as the use of standardized scales for trauma and comorbid illnesses (i.e., PTSD Checklist -Civilian Version, PHQ9 for depression, and AUDIT-C for alcohol consumption). Another consideration when assessing physicians following traumatic events should be a clear understanding of the intensity and duration of the physician's exposure to

Table 2.4 Network of stressors to be considered during evaluation

Medical and mental health conditions (chronic pain, depression, anxiety, grief)
Substance use and misuse (alcohol, prescription medication, other controlled substances)
Problems with supervisor or coworkers (harassment, bullying, poor communication)
Patient-related difficulties (medical error, bad outcome, lawsuits)
Inability to get work done (inadequate resources, overworked, burnout)
Family challenges (divorce, separation, custody, conflicts, illness, and death)
Other social difficulties (legal, financial, neighborhood, lack of support)

traumatic events. Knowing such details as the number of injuries treated, time spent stabilizing patients, and the nature of their injuries can provide clues as to the likelihood of a distress response down the road even if the physician reports no acute distress. Remember, the likelihood of a distress response following traumatic events is dependent on the frequency and intensity of exposure.

Evaluation for comorbidities associated with traumatic stress may reveal additional symptoms or disorders, which complicate treatment planning. Symptoms of depression, anxiety, and substance use should be elucidated and considered in the process of developing interventions. Somatic complaints may also be common, such as headache, indigestion, dizziness, or palpitations, among other symptoms. These are easily overlooked, particularly by those performing evaluations who lack medical training. When physical symptoms predominate, repeated illness or missed work days may occur. In these instances, the supervisor should offer support and talk directly with a physician about their well-being and the experience of their traumatic event. Ensuring that physicians are aware of helping resources and encouraging them to utilize these before impairment worsens can be a helpful intervention.

The level of disability or impairment should also be considered. Though many physicians who experience a traumatic event may appear to function effectively, assessment should involve determination of occupational impairment which may adversely affect the physician's ability to provide medical care. Care should be taken to reduce the degree to which the assessment of disability serves as a stigmatizing event and barrier to effective care for the physician.

2.4.4   Treatment

Treatment for physician work trauma includes early interventions to address distress reactions and health risk behaviors in which the primary goals are to reduce adverse effects, preserve functioning, and decrease progression to psychiatric disease. When psychiatric disorders occur, evidence-based psychotherapy and pharmacotherapy may help reduce symptoms and functional impairment. Complementary and alternative interventions have an increasing body of knowledge supporting their use in the treatment of traumatic stress. A range of behavioral self-help interventions that are patient-centered and provider supported may be used throughout. Many physicians will prefer peer support over formal intervention. A comprehensive treatment plan involves the use of interventions which address the unique circumstances of the trauma in the context of the physician's preferences (see Table 2.5).

2.4.4.1 Early Interventions

Early interventions found to be effective in the treatment of mass trauma include promoting safety, enhancing calming, increasing self- and community-efficacy, encouraging social connectedness, and engendering a sense of hope or optimism. Collectively, these have been termed Psychological First Aid (PFA). PFA serves as a framework for interventions designed to support the well-being of individuals and communities in the aftermath of traumatic events. Though PFA has not been

Table 2.5 Interventions for work-associated traumatic stress

Psychological first aid (safety, calming, efficacy, connectedness, hope/optimism)
Self-help interventions
Peer support
Trauma-focused psychotherapies (CPT, PE, SIT, EMDR)
Pharmacotherapy (focus on regulating sleep and promoting calming; short-term use)
Complementary and alternative interventions (yoga, meditation, mindfulness)
Behavioral interventions (diaphragmatic breathing, muscle relaxation, imagery)

CPT Cognitive processing therapy, *PE* Prolonged exposure therapy, *SIT* Stress inoculation training, *EMDR* Eye movement desensitization and reprocessing

well studied in response to physician work trauma specifically, these principles have strong expert consensus as the most effective interventions following psychological trauma (Hobfoll et al. 2007). The utility of PFA principles can reasonably be extrapolated to the physician population and serve as an important evidence-based guide to developing appropriate interventions. There are five essential elements to PFA. (1) Promoting safety is established by removing individuals from immediately traumatic experiences and protecting them from secondary traumatization. (2) Calming involves reducing arousal symptoms through relaxation techniques as well as providing information about assessment and management of the traumatic experience. (3) Self-efficacy enables traumatized physicians to identify ways they can mitigate stress reactions and take a proactive role in their recovery from trauma. (4) Connectedness reinforces existing social support networks and helps the physician build additional systems of support (colleagues, supervisors, others outside the work environment) where appropriate. (5) Hope and optimism remind the physician that reactions and symptoms are a normal response which is expected to diminish over time and, when needed, additional resources will be made available.

The additional treatment modalities listed subsequently in the "Assessment" section serve the purpose of addressing one or more of the five essential elements of PFA. Those delivering care to physicians who have experienced a traumatic event should consider the degree to which any additional interventions effectively fit within the framework of PFA principles.

2.4.4.2 Self-Help and Peer Support
Well-established self-help behavioral interventions for managing distress reactions include diaphragmatic breathing, progressive muscle relaxation, and guided visual

imagery. These can be taught by a healthcare provider or learned through online or other resources by the physician who requires treatment for trauma. These interventions facilitate the essential element of calming and reducing physiologic arousal. Their benefits include being easily accessible, having little or no side effects, and increasing patient self-efficacy. Another benefit of self-help interventions is that distressed physicians can utilize these resources without risking stigmatization through seeking formal care. These interventions can be used in conjunction with psychotherapy, pharmacotherapy, or complementary and alternative treatments.

As mentioned previously, most physicians will be reluctant to seek formal intervention even if they are experiencing significant distress reactions following traumatic events (Hu et al. 2012). Peer support is another common intervention that has significant utility for physicians experiencing distress reactions. Elements of formal peer support programs include preparing clinician peer supporters through a structured training program, matching appropriate peers (e.g., a surgeon helping another surgeon in distress), and ensuring confidentiality of communications (Shapiro and Galowitz 2016).

2.4.4.3 Psychotherapy

For physicians that go on to develop trauma-related disorders following a traumatic event, trauma-focused psychotherapies, such as Cognitive Processing Therapy and Prolonged Exposure Therapy, have the strongest evidence of benefit. Other therapeutic interventions, such as Stress Inoculation Training and Eye Movement Desensitization and Reprocessing have also been found to be helpful in reducing symptoms of trauma. Trauma-focused psychotherapies incorporate imaginal exposure to the traumatic event in conjunction with an examination of cognitions the physician may have about aspects of the event and their meaning. Negative thoughts such as "It's all my fault," "If only I hadn't said something then this wouldn't have happened," and other distorted cognitions are examined in collaboration between the physician and their treating provider. Subsequently, alternative and more balanced thoughts are considered and eventually used to replace the distressing negative thoughts. Trauma-focused psychotherapies also incorporate real-world behavioral interventions to assist patients in overcoming avoidant behaviors. These psychotherapies reduce the full range of symptoms associated with disorders such as PTSD. They have also been found to be effective in reducing the frequency and severity of early symptoms if delivered shortly after the trauma and prior to the development of a formal psychiatric disorder.

2.4.4.4 Pharmacotherapy

Pharmacotherapy following a traumatic event should generally be time-limited and symptom focused. Insomnia is a nearly universal symptom following a traumatic event. Because regulating sleep is critical to reducing arousal symptoms (and promoting the "calming" element of PFA), short-term sedative-hypnotic medication may be used to relieve insomnia. Eszopiclone (Lunesta) and Zolpidem (Ambien), both of which enhance GABA activity, are commonly prescribed for initiation insomnia. Prazosin (Minipress), an alpha-adrenergic blocker has demonstrated

efficacy in treating insomnia associated with posttraumatic symptoms as well as reducing the frequency and severity of associated nightmares and may be used at doses up to 15 mg nightly. Physicians with comorbid depression may benefit from the sedating histamine properties of trazodone (Oleptro), originally developed as a serotonin reuptake inhibitor (SSRI) for the treatment of depression. Medication for sleep should be provided in conjunction with additional interventions to promote sleep hygiene and address the range of PFA principles. As with all interventions medication should be tailored to patient preference.

For those physicians who develop trauma-related disorders following a traumatic event, evidence-based pharmacotherapy includes SSRIs and serotonin-norepinephrine reuptake inhibitor (SNRIs) as first-line therapy. Mirtazipine (Remeron) also shows evidence of efficacy in treatment of PTSD as does prazosin for treatment of PTSD-associated nightmares. Benzodiazepines have primarily negative evidence and are generally contraindicated.

2.4.4.5 Complementary and Alternative Interventions

Complementary and alternative approaches to the treatment of trauma stress have an increasing body of research supporting their efficacy, and preliminary studies as well as anecdotal evidence of benefit are promising (Wynn 2015). These interventions are increasingly sought out by patients as alternatives to traditional biological interventions. Patients commonly report a desire for options that enhance self-efficacy and reduce the incidence of side effects as a rationale for using these modalities. Mindfulness practices have the most robust research base to support their efficacy. Mindfulness is the practice of purposefully focusing on what is happening in the present moment without passing judgment. It requires one to attend to thoughts, feelings, or sensations without resisting or trying to change them. This practice has generated increasing attention in the field of healthcare as an intervention to reduce the stress and anxiety linked to a variety of adverse health outcomes. Animal-assisted therapy has become increasingly popular in the management of a range of psychiatric symptoms, including those associated with traumatic stress as well as anxiety and other disorders. Animals may assist individuals who would otherwise be reluctant to engage in social activities following a traumatic event; thus, enhancing the critical treatment intervention of social support. Yoga, meditation, and acupuncture are additional alternatives that should be considered. Patient preference is an important determinant in considering whether to offer interventions currently considered complementary and alternative.

2.4.4.6 Barriers to Care

Barriers exist for physicians seeking care for traumatic stress. In spite of increased awareness and understanding of mental health, stigma continues to serve as a barrier to help-seeking for physicians (Hu et al. 2012). Stigma may be an internal phenomenon in which a physician's negative perception of help-seeking may lead them to avoid seeking care. Healthcare institutions can also foster a professional culture which stigmatizes the use of help-seeking resources. Subtle or overt messages from colleagues, supervisors, and the broader healthcare organization may signal judgment,

mistrust, and a lack of confidence or professional esteem directed at those who use mental health or other help-seeking resources. Additional barriers include inadequate knowledge about available resources as well as lack of confidence in the efficacy of these resources. Concerns about confidentiality and adverse career impact are also commonly cited by physicians as reasons for which they avoid using helping resources.

The requirements to monitor and restrict the practice of physicians who are found to be impaired may serve as a significant barrier to help-seeking behaviors. Physician training culminates in a status of being an attending or staff provider, marked by independence and autonomy. Physicians are typically vigilant to the requirement for oversight and potential work limitations that accompany "impaired provider" status and being placed in provider wellness programs. Fearing a loss of status and professional esteem can serve as a barrier to care. Healthcare systems can encourage provider self-identification by minimizing or eliminating measures that will be experienced as punitive, including being publicly identified, confidentiality violations, and loss of pay.

2.5   Key Points

- Physician work-associated traumatic events are both common and unavoidable.
- In considering responses to traumatic events, it is important to maintain the distinction between the events and responses to them.
- Traumatic events include those experienced by non-physicians such as natural disasters and mass violence as well as unique experiences such as exposure to death and dying and the expectation of providing care during infectious disease outbreaks.
- The full complement of traumatic events, stressors, and adversities reviewed in this chapter identify potential times for intervention by healthcare organizations and training institutions.
- Common responses to traumatic events include distress reactions, health risk behaviors, and psychiatric disorders.
- Awareness of these predictable responses as well as unique developmental vulnerabilities can guide appropriate interventions.
- The goals of intervention are to reduce levels of distress in affected physicians, restore their ability to provide care, and minimize the likelihood of lasting symptoms or impairment.
- System-based efforts should identify and mitigate vulnerabilities to reduce the likelihood of traumatic events, educate physicians on expectable responses, and open the door for self-help, peer support, and formal assessment and treatment.
- Interventions for traumatic stress should incorporate the five principles of Psychological First Aid: safety, calming, self-efficacy, connectedness, and optimism.
- Providing a range of patient-centered, evidence-based interventions and formal treatment options can enhance compliance and increase well-being for physicians who have experienced traumatic events.

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Disruptive and Unprofessional Behaviors

3

Alan Rosenstein

Contents

Abstract

Disruptive behaviors in health care can have a profound effect on staff relationships that can lead to impaired communication, reduced information transfer, and dysfunctional team collaboration that can negatively impact patient care. Recognizing what disruptive behavior is and what it can do is the first step in

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enabling organizations to develop appropriate programs and effective strategies to reduce its occurrence. Disruptive behaviors occur across all disciplines, but when physicians are involved, by virtue of their role as captain of the ship, it can set off a chain of events that seriously compromises process and flow. By gaining a better understanding of the forces shaping physician attitudes and behaviors, organizations can then provide the necessary assistance and resource support to enhance behavioral adjustments. The ultimate goal is to not only reduce the incidence of disruptive events, but to also improve overall staff relationships, care efficiency, and instill a positive work atmosphere that increases staff morale, physician engagement, and overall satisfaction.

3.1   Introduction

Physicians spend years of training and dedication developing their skills to provide excellent care to their patients. Most of their training focused on improving their knowledge and technical competencies in an effort to master their craft. Until recently, little attention has been paid to improving their interpersonal skills which are necessary for effective leadership, communication efficiency, and team collaboration. Most of the time physicians provide services in a professional manner leading to successful outcomes of care. However, for a variety of different reasons, there are other times when physicians act unprofessionally to the point where it becomes disruptive to staff relationships and can compromise patient safety and quality of care (Rosenstein and O'Daniel 2008; The Joint Commission 2008; Dang et al. 2016). Despite the fact that this is such a significant issue, many organizations still struggle to address disruptive behavior in an effective manner (Rosenstein 2015a). Reducing the incidence of disruptive behaviors will require a multistep approach that includes a combination of education, training, intervention, counseling, and resource support to enhance compliance with expected professional behavioral standards (Rosenstein 2015b).

3.2   Definition

The first step in the process is to raise awareness of what disruptive behavior is. The term disruptive behavior was originally used to describe any inappropriate behavior, confrontation, or conflict ranging from verbal abuse to physical or sexual harassment that can potentially negatively impact patient care (Rosenstein and O'Daniel 2008). The types of offensive behaviors described in this category include yelling; abusive language; condescending, berating, or disrespectful behaviors; overt bullying; or intimidation. Direct physical abuse is reported to occur less than 5% of the time (Fig. 3.1). More recently, The Joint Commission modified the definition to remove the term "disruptive behavior" and to redefine such behaviors as any behavior that can undermine a culture of safety (http://www.jointcommission.org/assets/1/6/Leadership standard_behaviors.pdf). While that is a general definition, each organization should develop its own operational definition of disruptive
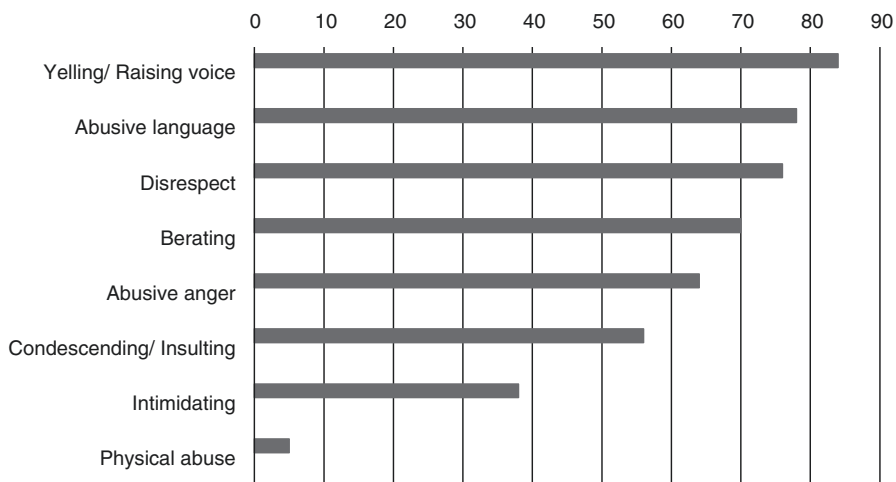
Fig. 3.1 Types of disruptive behaviors

behavior that is clear and appropriate to their organizational mission and objectives. This is crucial prior to developing appropriate policies (such as a Code of Conduct Policy) and procedures (such as how the organization will respond to alleged disruptive behaviors), which set the expectations for professional behaviors and hold noncompliant individuals accountable for their actions.

3.3   Causes

The next step is to try to figure out why these types of behavior occur. Nobody intentionally starts the day planning to be disruptive; it's just that a variety of disturbances can get in the way. In an effort to provide effective strategies to reduce their occurrence, we need to gain a better understanding of the factors affecting physician values, attitudes, and behaviors. Table 3.1 divides these factors into two categories: internal and external forces. We recognize that it is impossible to apply a cause-and-effect relationship to each individual factor; instead, we need to consider the interplay of these factors and their role in influencing emotions and reactions.

Table 3.1 Influencing factors

Internal factors	External factors
Age and generation	Training
Gender/sexual orientation	Health care reform
Culture/ethnicity/spirituality	Complexity/electronic medical record
Geography/life experiences	Adverse events/litigation/personal issues/debt
Mood/personality	Stress and burnout

3.3.1 Internal Factors

Age and generational issues are based on the values and perceptions reinforced by the existing status of the social, economic, and political environment at the time in which the individual grew up. Differences in views as to work ethic, commitment, views of authority, and work-personal life balance are different for each of the groups (variously defined such as Millennials <1980–1995>, Generation X or Gen X<1965–1979>, Baby Boomers <1946–1964>, Veterans/Traditionalists <pre 1946>), which under stressful situations may lead to conflict in the workplace environment. Various assumptions are made about generational differences and medical professionalism among millennials and those from Gen X, such as a declining work ethic and commitment, less willingness to work long hours, and a greater focus on lifestyle balance compared to the older generations (Smith 2005). During stressful periods some of these differences can lead to potential conflicts in workplace dynamics. Other differences have been noted between millennials and Gen X medical trainees (Borges et al. 2010). On the other hand, a survey study of 1178 physicians comparing baby boomers to Gen X doctors found no generational differences regarding commitment to medicine, job satisfaction, patient care attitudes, work-home balance, perceptions of work load, or use of harmful coping strategies (Lemaire et al. 2013). Moreover, Gen X physicians did not work fewer hours but were more likely to report burnout than baby boomers. While conclusions cannot rest on a single study, it is important not to stereotype generations based on impressions, which may increase conflict between them, nor to minimize real differences. It's not that either group is right or wrong, it's just that they have different ideas and approaches to work responsibilities (Executive Dialogue 2013). As the older workforce retires and the younger workforce moves in, the issue of how to deal with millennials is taking center stage (Thew 2015). Accordingly, many organizations have addressed the issue by offering programs that educate physicians about generational differences and similarities and to provide strategies to help them reach compromises during periods of conflict or disagreement (Roberts et al. 2012).

Gender: Women make up an increasingly larger proportion of physicians in Canada, the USA, Australia, the Netherlands, and the UK (Lemaire et al. 2013). Differences between male and female physicians may affect the way they react in stressful situations. Women are more likely than men to feel overworked and burned out, report work-family conflicts, shoulder child care and household duties, and reduce their work hours after their children are born. Consequently, they have been considered to be less committed to their medical career (Lemaire et al. 2013). In terms of coping responses, women are more likely than men to talk with colleagues about problems and to receive social support from relatives and friends in addition to coworkers. Men are more likely to keep their stress to themselves, dig in, and focus all their attention to the task at hand. They are also more likely to use humor as a way to pacify the situation (Gray 2004). In the past these differences were exacerbated by the predominantly female nursing workforce and the predominantly male physician task force. While the percentages are changing, potential conflicts may still arise. Many organizations have addressed these issues by educating staff

on sexual equality and harassment (Jagsi et al. 2015). Other issues related to gender workforce equality and tolerance or discrimination to sexual orientation may also influence individual behaviors.

Culture and ethnicity: As the world situation changes, we are seeing a greater diversity in our patient and staff populations with a greater influx of foreign-born or foreign-trained nursing and medical staff in the USA. They come with their own ethnic, cultural, and religious beliefs that affect values, thoughts, and beliefs as to religion and spirituality, hierarchy, authority, and communication styles. In difficult situations this can lead to misunderstandings in purpose and intent that may negatively affect communication efficiency, expectations, and outcomes. In this regard, there is a big push toward training providers on cultural competency and/or providing diversity training to help individuals better understand individual needs and values, address hidden assumptions or biases, and provide effective solutions for more effective communication (Beach et al. 2005; Williams and Wyatt 2016; Curtis et al. 2007; Holm et al. 2017).

All of these factors combined with genetics, socioeconomic factors, geographic influences, and other individual life experiences help to shape an individual's personality (McCracken and Hicks 2012).

Relationship management: Given the multidimensional influences contributing to attitudes and behaviors, key strategies for improvement should focus on introducing a variety of different training programs designed to enhance personality and relationship management. These programs might include such topics as sensitivity training, diversity management, cultural competency, mindfulness, generational gap values, personality traits, conflict management, stress management, anger management, sexual harassment training, customer satisfaction, and improving overall communication and collaboration skills. Some organizations have added a more in-depth focus by providing training in emotional intelligence to enhance staff and patient relationships (Rosenstein and Stark 2015; Goleman 1995). The process includes a four step approach designed to (a) enable the individual to gain a better understanding of their own individual perceptions, values, biases, and trigger points, (b) raise social awareness by enabling the individual to better recognize the perceptions, needs, and values of others, (c) learn how to modify their own behaviors, and (d) be more sensitive to the cues and reactions needed to foster a positive relationship and positive outcome. Each of these programs have value, but success will depend on the specific situation, underlying organizational dynamics, culture, leadership commitment, and individual motivation.

All of these internal factors have a deep-seated impact on a person's mood, disposition, character, and personality, and may be more difficult to address than some of the external factors to be discussed in the next section.

3.3.2   External Factors

Training environment: The external factors include current day circumstances that influence present state perceptions. For physicians one of the key factors starts with

the training environment. Some equate this training to a fraternity/sorority hazing type environment where individuals are harassed to the point of losing self-esteem. In some cases, this can lead to severe cases of stress, burnout, depression, and suicidal ideation (Karim and Duchcherer 2014; Mata et al. 2015; Dyrbye et al. 2010). In response, trainees try to develop knowledge and technical competencies through exhaustive independent study. As a consequence, there is less focus on developing personal and team collaboration skills, which leads to a lower degree of sensitivity and emotional intelligence. This presents a definite liability in today's complex multi-spectrum health care environment so dependent on multidisciplinary collaboration and full spectrum care. The problem is further exacerbated by the traditional hierarchal health care structure with dedicated roles and responsibilities and set boundaries between the different health care disciplines. This is further accentuated by the different incentives and priorities of administrative management. Fortunately, there are movements in place to try and deal with these training hazards. Many medical schools are now looking for more "well-rounded" and "better adjusted" students who are majoring in something other than the traditional math and science tracks (Schwartzstein 2015; Rappleye 2015). The MCAT (Medical College Admission Test) now includes questions on sociology and humanities (Schwartzstein et al. 2013). Some of the more progressive medical schools are adding programs that focus on improving emotional intelligence and communication skill efficiencies, in some cases pairing medical students with nursing students, pharmacy students, and individuals from other disciplines during their freshman year to learn about the different perspectives on care management responsibilities (Lutfiyya et al. 2016; Muller 2013; Reeves et al. 2015; Brock et al. 2013). The overall goal is to build personal relationships and develop team competencies along with clinical expertise.

Health Care Reform has added another level of stress to the work environment. Whereas physicians used to pride themselves on their ability to provide excellent care with autonomy and control, the introduction of new regulations, utilization controls, changing incentives, and performance/accountability metrics has forced many physicians to reassess their positions and change models of care. In addition, the growing complexity of health care management, frustrations of dealing with electronic documentation and other administrative requirements, less time spent on direct face-to-face patient care with increasing productivity demands, and medical school debt can have a significant negative impact on physician attitudes and behaviors (Shanafelt et al. 2016). Furthermore, many physicians fear adverse outcomes, malpractice litigation, and having to share bad news with families. During tense moments in the operating room, emergency department, and critical care units, a physician's perception of non-responsiveness or incompetence on the part of other team members may fuel disruptive behavior. Ironically, such behavior can increase the risk of adverse events and litigation (Hickson and Entman 2008; Rosenstein 2013). As far as a remedy, it's unlikely that we'll be able to change the system, although physicians can hopefully expect that electronic health record software will evolve to better facilitate physician work-flow (Ratwani et al. 2015). We can also provide more education to help the physician better understand why this is

occurring, the intent, what the projected service impact will be, and then provide the necessary support to help physicians adapt in meeting these new objectives. Dealing with stress and burnout has the greatest potential for success.

Stress and Burnout: Stress and burnout can often provide the tipping force for the onset of disruptive behaviors (Rosenstein 2016a). Recent studies have shown that more than 50% of physicians report a significant amount of stress and burnout that has led to increasing irritability, cynicism, apathy, fatigue, disillusionment, dissatisfaction, and in some cases more serious depression, behavioral disorders, and even suicidal ideation (Shanafelt et al. 2015a; Privitera et al. 2014; Danielson et al. 2013; Rosenstein 2012a). As a result, there has been a significant drop in physician morale and a growing amount of physician dissatisfaction, and many physicians have either changed practice settings, joined different groups, or moved into salaried positions (The Physicians Foundation 2016). Others have either left the profession entirely or chose early retirement. Not a good situation particularly with the looming physician shortage.

So how should physicians deal with stress and burnout? The first issue is physician awareness. Many physicians are unaware that they are working under stress and the physical and emotional toll it's taking on their livelihood. If they do admit that they are under stress, they accept it as being part of the job and rationalize that they have been working under stress all their lives. Even if they think they may need some outside help, they are reluctant to ask in fear of concerns about their competency, confidentiality, discoverability, or being stigmatized (Kay et al. 2008; O'Reilly 2012). These are significant barriers that need to be addressed before moving forward. If physicians are reluctant to admit their distress or receive assistance, we need to look for the organizations that they are associated with to take a more proactive role in trying to encourage and provide support.

Where to begin? As mentioned previously, there is a growing amount of evidence suggesting that high levels of stress, burnout, depression, and even suicidal ideation start during the first year of medical school (Schwenk et al. 2010). This probably results from a combination of factors of having individuals driven by a strong, competitive, and egocentric personality being dropped into an intensely complex and bewildering hierarchal system without direction and a sense of nowhere to go. These problems are further exacerbated by a sense of physical and emotional exhaustion, stress, and fatigue, which can take a toll on physical and mental well-being. One of the major barriers is the student's as well as physicians' reluctance to seek help for issues related to stigma and/or time (Gold et al. 2016). Fortunately, many organizations are making a concerted effort to provide resources to help trainees adjust to the pressures in the academic environment (Salles et al. 2015).

Once a physician gets out into practice, there are other day-to-day pressures that promote a stressful environment. As mentioned previously, many physicians are either unaware or reluctant to admit that they are under stress, and even if they do recognize it, they won't take any action on their own. In this case, physicians need to look for outside assistance from friends, peers, or the organizations with which they are associated to help. The most consistent approach is to provide proactive support at the organizational level. Unfortunately, many physicians feel that their

organizations don't support them. In a recent study conducted by Cejka Search and VITAL WorkLife, when asked if their organization did anything currently to help physicians deal more effectively with stress and/or burnout, 85% of the respondents said no (2014). Another study conducted by InCrowd showed similar findings reporting that 75% of surveyed physicians did not feel that their organization was doing anything to address burnout (Rappleye 2016). So, in an effort to better address the issue of physician stress and burnout, we need to (1) raise awareness, (2) motivate effective physician responses, and (3) have organizations take a more active role in providing support services to help physicians better adjust to the stress and pressures of today's health care environment.

Support can come from a variety of different directions and a variety of individual and organizational interventions demonstrate effectiveness (West et al. 2016). At one level the organization can provide training in stress management, time management, conflict management, business management, and other appropriate programs to teach basic skill sets on stress reduction. On a deeper level the organization can provide more personalized support services through Physician Wellness Programs, Wellness Committees, Physician EAPs (Employee Assistance Programs), or through individualized coaching or counseling. Some physicians may require more in-depth behavioral modification programs. Organizations need to approach these programs with greater empathy and understanding of the physician's world, show that they respect and value the physician's time and what physicians do, and reinforce the point that they are here to help. They need to make an effort to promote individualized support and be responsive to physician resistance, time constraints, and fears of confidentiality. To motivate physician action, the focus needs to be on the goal of helping the physician do what they want to do, which is to practice good medical care.

One excellent case example is the approach taken by the Center for Professionalism and Peer Support at Brigham and Woman's Hospital in Boston (Shapiro and Galowitz 2016). Recognizing the impact of physician burnout and the emotional stress it has on physicians and organizational culture, the hospital started its peer support program in 2008 in an effort to provide resources to support physician well-being and resilience. Through a multistep process that includes education, proactive outreach, peer training, peer support, and individualized coaching, the organization has led the way in developing programs that have now been replicated across the country. Many other examples from the Mayo Clinic, Stanford University, Case Western, and other hospital centers across the country provide a variety of different innovative approaches designed to reduce physician stress and burnout (Shulte 2015; Snowbeck 2016; Rovner 2016).

3.4   Consequences

Despite all the evidence and concern about physician behavioral turmoil, in many cases it goes unresolved. Depending on the circumstances, the combination of internal and external factors can result in inappropriate actions that lead to disruptive

Table 3.2 Reluctance and ramifications

Organizational reluctance	Risk of nonaction
Awareness/accountability/tolerance	Staff retention/recruitment/patient satisfaction
Financial	Staff/patient satisfaction
Hierarchy/boundaries/sacred saints	Reputation/social media
Physician autonomy	Quality/patient safety
Code of silence/fear of reporting	Medical errors/care efficiency
Conflicts of interest	Joint Commission accreditation standard
Structure?/skill set?/solutions?	Non-compliance/penalties/liability/litigation

behaviors. Unfortunately, many disruptive events either go unrecognized, go unreported, or are ignored for a variety of different reasons (MacDonald 2014). The problem with this personal and organizational reluctance is the potential for bad things to happen to patients and staff (see Table 3.2).

One of the issues raised earlier was the importance of defining what disruptive behavior is and holding individuals accountable for their actions. Many individuals who act "disruptively" are not aware that they are acting in an inappropriate nonprofessional manner. This is particularly true for physicians who are used to taking control and "giving orders." Under times of stress they may yell and intimidate others and not even realize they are doing it. Even if they are aware, they justify their behaviors as being necessary to direct patient care. The problem is that they are oblivious to the downstream negative consequences this may cause on care relationships, communication efficiency, task accountability, and patient care.

A second big concern is the issue of organizational tolerance. Many of the events involve very prominent physicians who bring a large number of patients and revenue into the organization. Many organizations are reluctant to address the issue in fear of antagonizing a physician to the point where they worry that the physician will not bring their patients into the facility. This is particularly true for smaller organizations where there may be a shortage in supply of certain specialties. There is also the concern about traditional hierarchy and crossing boundaries. Physicians work autonomously and in many organizational cultures physicians are viewed as "sacred saints" impeding the willingness to intervene. There is often a hidden "code of silence" where health care workers are reluctant to report disruptive behaviors (Boothman 2016). This lack of reporting is accentuated by potential conflicts of interest, concerns about lack of confidentiality, uncertainty about how to report problems, skepticism that the organization will respond, and/or fears of retaliation. Many who do report are frustrated by the lack of administrative support and the fact that despite reporting, the perception is that nothing ever changes, so why bother.

And lastly is the structure and skill set to deal with behavioral problems. Organizations have policies and procedures in place to address clinical competency but may not be well equipped to deal with behavioral problems. They need to have the right structure in place supported by individuals skilled in facilitation and negotiation techniques. Turning matters over to the Chief or Chairman of the

Department may not lead to an effective resolution. At one end individuals need to be trained, empowered, and feel comfortable in speaking up when they are involved in a disruptive event. These skills can be reinforced through assertiveness training or through training in how to conduct crucial conversations as taught by Vital Smarts (Patterson et al. 2002). At the other end is to develop appropriate skill sets in dealing effectively with conflict resolution (Rosenstein et al. 2014). The importance of speaking up and resolving conflict in a professional respectful manner is a crucial step for maintaining workplace integrity and assuring optimal care efficiency.

3.5   The Risks of Inaction

The risk of inaction can lead to dangerous downstream consequences that affect morale, culture, workplace atmosphere, and reputation, and/or lead to medical mishaps that have significant direct or indirect patient safety and quality defects with associated financial penalties (Rosenstein 2011) (see Tables 3.2 and 3.3).

On one level disruptive behaviors have been shown to have a significant negative impact on nurse satisfaction and retention (Rosenstein 2002). Replacing a nurse can cost the organization anywhere from $60,000 to $100,000 for recruitment, training, and secondary opportunity costs (Moss et al. 2016). When it occurs in a public arena disruptive events can also lead to patient dissatisfaction which can negatively impact Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores and other patient satisfaction pay for performance initiatives which can have a negative effect on reimbursement. Then there is the spillover effect on hospital reputation which may negatively impact market share and contracting negotiations.

Table 3.3 Economic consequences

1. Recruitment and retention—Nurse: $60,000–100,000/additional opportunity costs
2. Patient satisfaction/HCAHPS/reputation—Market share implications ($?)
3. Adverse events ("No pay" for adverse events initiatives)
• Medication error: $2000–5800 per case/>length of stay (LOS) 2.2–4.6 days
• Hospital acquired infection: $20,000–38,500
• Deep vein thrombosis: $36,000/>LOS 4.2 days
• Pressure ulcer: $22,000/>LOS 4.1 days
• Ventilator associated pneumonia: $49,000/>LOS 5.3 days
4. The Joint Commission Standard
5. Compliance issues ($?)
• Impact on documentation and coding
• Impact on utilization efficiency (LOS/resource efficiency/discharge planning)
• Impact on quality
• Impact on productivity and efficiency (down time/waste/delays)
• Communication inefficiencies ($4 million for a 500-bed hospital)
6. Risk management/malpractice: $521,560/lawsuits/fines: $25,000–100,000

From a patient care perspective, the biggest concern is safety and the occurrence of preventable medical errors or adverse events (The Joint Commission 2008; Dang et al. 2016; Rosenstein 2013). In addition to waste, duplication, and inefficiencies in management, lack of communication and collaboration can lead to task failures that result in medication errors, infections, delays in treatment, and other serious medical conditions, which can increase lengths of stay and accrue significant non-reimbursable costs of care. To illustrate the point a little more dramatically, listed below are some of the comments made as part of our survey linking disruptive behaviors to the occurrence of adverse patient outcomes (The Joint Commission 2008; Rosenstein and O'Daniel 2006) (see Table 3.4).

The Joint Commission states that more than 50% of adverse sentinel events can be traced back to human factor issues and/or failures in communication (http:// www.jointcommission.org/assets/1/18/Root_Causes_by_Event_Type_2004-2014. pdf). The relationship between human factor contributions and bad outcomes is a well-known cause of preventable medical errors (Rosenstein 2009a, 2016a). Communication problems are costly (Agarwal et al. 2010). In response to the concerns about the impact of disruptive behaviors on patient safety in 2010, The Joint Commission added a new leadership standard requiring hospitals to have a disruptive behavior policy in place and to supply support for its intent as part of the leadership accreditation standards (http://www.jointcommission.org/assets/1/6/Leadership_ standard_behaviors.pdf). In order for hospitals to receive Medicare reimbursements, they need to pass the accreditation survey requirements (Spok Inc. 2013).

From a compliance perspective, noncompliant behaviors that adversely impact process flow, coding and documentation requirements, non-adherence to case management utilization protocols, and/or not following best practice guidelines, policies, and procedures can all have a significant negative economic and quality impact on reported patient care outcomes.

Table 3.4 Selected survey comments

• Most nurses are afraid to call Dr. X when they need to, and frequently won't call. Their patient's medical safety is always in jeopardy because of this
• Cardiologist upset by phone calls and refused to come in. RN told it was not her job to think, just to follow orders. Rx delayed. MI extended
• Poor communication post-op because of disruptive reputation resulted in delayed treatment, aspiration and eventual demise
• MD was told twice that sponge count was off. She said "they will find it later." Patient had to be re-opened
• When patient brought to unit for GI bleeding patient saw MD yelling at nurses. Patient asked if that was his doctor. Yes. Patient refused treatment and was transferred to another hospital. I am retiring early and never recommend someone becoming a nurse
• "Are you aware of any specific adverse events ….?" Yes. Death as a result of disruptive behavior. Staff nurses advocated for better patient care but MD would not willing to listen to reason. As a result patient died. The doctor chose to undo all the help that various staff had been working on for weeks to get this patient the help so badly needed

RN Registered Nurse; *Rx* Treatment; *MI* myocardial infarction; *GI* gastrointestinal

From a risk management perspective issues can arise from not only the occurrence of medical errors or adverse events, but also to poor compliance, poor communication and collaboration, impeded information transfer, neglect, failure to respond, and/or poor patient satisfaction. It is estimated that the average yearly cost for a midsize hospital due to communication deficiencies is $400,000 (Agarwal et al. 2010).

More egregious cases can lead to litigation. Time, preparation, and malpractice awards can result in significant dollar amounts with average malpractice settlements averaging above a half-million dollars (Hickson and Entman 2008; Crico Strategies 2015; Hickson et al. 2002; Beaulieu-Volk 2013; Lindro 2013). In California there is the additional penalty of hospital fines (ranging from $25,000 to $100,000) for the occurrence of significant adverse events (Seipel 2015).

3.6 Addressing Disruptive Behaviors

Recognizing the multidimensional cause, nature, and extent of disruptive behaviors, it is clear that there is no one solution to resolve the problem. The ultimate objective is to prevent disruptive behaviors from occurring. If they do occur, the organization and staff need to take immediate action to lessen the likelihood of any adverse event on staff or patient care. Depending on the nature and frequency of events, further interventions may be required to prevent repeated incidents. Table 3.5 provides a list of recommended strategies. In addition to its focus on reducing the incidence of disruptive behaviors, this approach can also improve overall organizational culture, staff relationships, team collaboration, communication efficiency, physician engagement, and physician well-being.

3.6.1 Training Redesign

One of the earliest steps is to improve the process and criteria for medical school selection. As discussed earlier, many medical schools are looking for more "well-rounded," medical school applicants who majored in something other than pure science and mathematics (Schwartzstein 2015). The new MCAT (Medical College Admission Test) is now introducing more questions on humanities and social sciences (Schwartzstein et al. 2013). The goal is to look for individuals with more highly developed social and personal skills rather than only technical skill sets. Many medical schools in the USA, supported by large grants from the American Medical Association (AMA) and Robert Wood Johnson Foundation, are in the process of revising their curriculum to focus more on the importance of developing strong individual communication and team collaboration skills early in the education process (Frieden 2015; Vassar 2015).

3.6.2 Organizational Culture and Work Environment

From an organizational perspective, hiring and retaining the right people is key to success. Many organizations are recognizing the importance of the right

Table 3.5 Recommended strategies

1. Training re-design:
   - Applications/Medical College Admission Test (MCAT) testing
   - Revised curriculum
2. Organizational culture and work environment:
   - Hiring/on-boarding
   - Mutual alignment
   - Leadership commitment/structure and process
   - Encourage motivation/address barriers/set priorities
   - Engage champions/catalysts/role models
   - Recognition and rewards
3. Education:
   - Awareness, responsibility, and accountability
   - The business of health care
   - Expectations vs. reality
4. Relationship training:
   - Address factor influences: generation, gender, culture, and ethnicity
   - Diversity management/cultural competency/sensitivity training
   - Personality profiling
   - Customer satisfaction
   - Stress, conflict, and anger management
   - Emotional intelligence
5. Communication skills/team collaboration training
6. Behavioral policies and procedures
   - Definition/accountability/incident reporting and review
   - Risk management
7. Intervention:
   - Prevention
   - Tiered approach: informal/formal/disciplinary
8. Staff support:
   - Administrative/clinical/behavioral (EAP/wellness committees/coaching/counseling)
   - Behavioral modification programs
   - Career guidance
9. Physician well-being:
   - Awareness, reflection, self-care, and relaxation
   - Stress reduction
   - Quadruple aim
   - Mindfulness
   - Resilience
10. Physician engagement:
    - Input/empathy/responsiveness/alignment
    - Recognition and respect

EAP employee assistance program

"cultural fit" and are using more selective interviewing techniques to assure that new hires will work well with the mission and operational needs of the work environment (Byington 2013; Stark et al. 2014; White and Burroughs 2010). Once hired, there should be a comprehensive on-boarding process to first welcome the physician, explain organizational priorities and incentives working under the complexities of today's health care environment, and then

emphasize the support available to help physicians negotiate through the maze of medical requirements (Wagner 2014; Hobson 2016). Recognizing administrative concerns for financial viability, and clinical staff concerns about quality and safety, there needs to be discussions around the business side of medicine ending in a mutually agreed upon rallying point and alignment around best patient care.

Organizational culture sets the tone. Strong and supportive organizational cultures have been shown to significantly enhance staff morale, satisfaction, motivation, and engagement which leads to behaviors that result in the best patient care outcomes (Shanafelt et al. 2015b). Having a strong, committed, and respectful leadership, an effective structure and process in place covered by skilled individuals, a willingness to address and respond to individual concerns and barriers that pose a potential disturbance in the workforce, establishing priorities, and enlisting the help of key individuals who act as champions and catalysts to help promote a positive work environment are the key ingredients to a successful culture. In today's multitasking and pressure-filled "here's what you need to do world," always remember to take a step back and take time to involve, thank, and recognize physicians and staff for their efforts and a job well done.

3.6.3   Education

Another crucial step is to make an effort to educate staff about healthcare reform, what *we* need to do in response, and how it might impact individual roles and responsibilities. Providing educational sessions on the evolving healthcare environment, value-based care, system redesign, performance-based accountabilities, and the business implications of clinical practice will help set realistic expectations by giving physicians a better understanding of current trends and how it might affect their individual practice.

3.6.4   Relationship Training

Providing training to enhance relationship management is crucial. Under an umbrella of increasing complexity and accountability, more segmentation between specialty and discipline-specific tasks and responsibilities, and a greater focus on care responsibilities that extend across the entire spectrum of care, it is crucial for all members of the health care team to work well together to achieve best patient care outcomes. In order to accomplish this, we need to gain a better understanding of the factors affecting individual values, perceptions, and behaviors.

As discussed above, disruptive behaviors derive from a number of different internal and external factors influencing one's personality, mood, and demeanor. Providing specific training programs to address some of these specific factors are beneficial in gaining a better understanding of contributing circumstances and how

individuals can deal more effectively with complicated issues. These programs might include training in diversity management, cultural competency, emotional intelligence, generational values, personality assessments, and patient satisfaction. Additional programs on conflict management, anger management, and stress management may also be of value.

3.6.5 Communication and Team Collaboration

Beyond addressing disruptive behaviors is the need to improve overall communication and team collaboration skills. Physicians are typically not the best communicators. There are many barriers that get in the way (Rosenstein 2012b). First, many physicians approach patient management through a one-way dictatorial process. They are trained to work autonomously, to take control, and give orders. Communication gaps are further accentuated by a bureaucratic health care hierarchy; a teaching focus on gaining knowledge and technical competency rather than personal skill development; segmented, siloed, and discipline-specific priorities which focus more on the organ or disease rather than overall patient needs; and an overriding strong ego that resists outside advice, interference, or involvement. In today's complex healthcare world, improving communication skill sets should be a number one priority.

There are many different types of communication skills training programs available. At one level is the SBAR (Situation/Background/Assessment/Recommendation) script available to help nurses more effectively organize their thoughts in presenting patient information to the physician (De Meester et al. 2013). At a deeper level are the basic communication techniques taught by a number of different programs such as the AIDET, BAYER, and STARS programs. The focus is to get the physician more in synch with the values of two-way communication. Crucial points emphasized include a proper introduction and acknowledgement, making time and patience, exhibiting positive body language and verbal tone, enabling trust, avoiding distractions or conflict, reflective listening, being sensitive to the other's values, needs, and desires, providing clarification and understanding, and setting appropriate expectations. In a demanding hectic environment, taking the time to listen, understand, respond, discuss, and explain are the keys to gaining cooperation and a successful interaction and outcome (Joshi 2015; Wen and Kosowsky 2012).

A further extension of communication is to teach team collaboration. One of the most effective programs in health care is the TeamSTEPPS program (2016; Helfner et al. 2016). Based on the crew resource management techniques used by the aviation and race car industries, the focus of the training program is to teach team members how to (a) anticipate and assist, (b) build trust, respect, and commitment, (c) understand one's own role and the roles of others, (d) reinforce accountability and task responsibilities, (e) avoid/manage conflict or confusion, (f) be assertive and speak up, (g) have follow-up discussions, and (h) give thanks for a job well done.

Assertiveness training is a crucial part of the process reinforcing the need to speak up when there is a question of patient safety. In addition to the TeamStepps program is the training offered through the VitalSmarts Crucial Conversations program (Patterson et al. 2002).

3.6.6   Behavioral Policies and Procedures

In order to hold individuals accountable for their behaviors, the organization needs to have a code of conduct policy in place that outlines unprofessional behaviors and the ramifications of non-compliance (Rosenstein and O'Daniel 2005; Shapiro et al. 2014). The policy must be backed by an effective incident reporting system where each complaint is evaluated on its individual merits with recommendations given for appropriate follow-up action. In order for the program be effective, individuals need to be willing to report. Barriers to reporting include fear of whistleblower retaliation, a double standard of reluctance to apply consistent reprimands when it involves physicians, and the sense that people report and report and nothing ever changes. On the incident evaluation side, determinations need to be made by trained individuals functioning without personal bias or conflicts of interest, with recommendations passed on to an individual or committee who has the appropriate facilitation skills to foster accountability and resolution. When patient quality or safety is of concern, many of these issues fall under a risk management protocol.

3.6.7   Intervention

When it comes to intervention, the first intervention is prevention. As discussed previously, taking a proactive approach in trying to get a better understanding of behavioral characteristics, and teaching basic principles about behavioral management can certainly reduce the predilection for behavioral problems. For recurring issues, early intervention has a much greater potential for success than waiting until a bad incident occurs where the interactions take on more of a remedial tone (Rosenstein 2009b).

Interventions can occur at several different levels. In all cases it is crucial to intervene at the appropriate time and place with the intervention conducted by someone skilled in the arts of facilitation and conflict management.

The first intervention is real time. If somebody is acting inappropriately, the recipient needs to be assertive in addressing their concerns in a respectful professional manner. Assertiveness and Crucial Conversations training can help reinforce these capabilities. In some organizations they will call a "code white" or a "code lavender" where a group of trained individuals are paged to the scene in an effort to provide emotional support to diffuse a difficult situation (Advisory Board 2013).

The next series of interventions are post-event interactions. Hickson and his group at Vanderbilt University have come up with a four-phase process for

intervention that includes informal, awareness, authority, and disciplinary actions (Hickson et al. 2007). The informal interaction is often described as the "cup of coffee" approach where you take the physician aside, describe the series of events, and ask for their opinion. The usual response is that they were not aware of any problem and question how someone could think that they were acting in a disruptive manner. The next thought is justifying their need to take control during a period of uncertainty or crisis. Following that is rationalization and/or blaming someone or something else for their behavior without taking any responsibility for their own actions. A good facilitator will listen to what the physician has to say, ask if they thought that their action was appropriate and address their concerns; but then bring the focus back to their behaviors, reframe the issue to bring it into context, ask them to think about the impact it had on the other person(s) involved, and what they could have done differently to ease the angst of the situation. When the situation is addressed under the guise of raised awareness and care improvement, most physicians will self-correct.

For repeated offenders, or when the incident is of a serious nature, there needs to be a more formal intervention. The physician needs to recognize the ramifications of non-compliance with the code of behavioral standards and the organization needs to reinforce the importance of a zero tolerance policy with the potential of disciplinary action. In some cases, the recommendations may be made for anger management, stress management, conflict management, or diversity training, and in more serious cases the need for individualized counseling and/or coaching. Always keep in mind the underlying possibility of a psychiatric illness or a substance use disorder that may contribute to disruptive behaviors and require a psychiatric evaluation. Depending on the nature of the problem, some physicians may be required to attend an outside behavioral therapy program offered through state-sponsored physician health programs (PHPs) (see Chap. 12), university-sponsored programs and workshops or private outside resources (Vanderbilt University Medical Center 2017; UC San Diego PACE Program 2016; Boyd 2016).

In the more extreme cases where physicians are resistant to follow recommended actions, the only recourse may be sanctions or termination of privileges. Having served as an expert witness on both sides of the picture (representing hospitals, representing individual physicians) termination cases stir up a lot of legal entanglement and organizational aggravation. Most physicians will fight and appeal termination decisions based on failure of the hospital to follow due process, breach of contract, anti-trust issues, bad faith, malice or discrimination, defamation of character, or undue harassment and retaliation. In their defense hospitals need to have a clear line of documentation as to the issues, follow due process, adhere to the bylaws and Health Care Quality Improvement Act (HCQIA) requirements, be consistent with similar types of cases, document follow-up discussions, comply with the rights of the physician to be heard, provide specific recommendations designed to resolve problems, and state the ability to reapply once the issues are addressed and resolved. Hospitals win more than 80% of the appeals (Rosenstein et al. 2016).

3.6.8 Physician Support

When possible the focus of any intervention should be on trying to help the physician better adjust to the situation by offering assistance and career guidance rather than punishment. The primary focus should be on positive physician support.

As mentioned previously, physicians are overwhelmed by administrative requirements and time constraints and are being asked to take on more and more responsibilities that take them away from direct patient care. There are several ways in which the organization can help. From an administrative and logistical perspective, having the organization be more sensitive to on-call schedules, workflow dynamics, productivity requirements, and meeting or committee attendance will help reduce some of the administrative load. Offering administrative assistance by providing more help with documentation and compliance with electronic medical records through additional training, staff support staff, or "scribes" will help ease physician frustrations in this area (Schultz and Holmstrom 2015).

From a clinical perspective, using physician assistants, nurse practitioners, or case coordinators to help cover some basic medical necessities will free the physician to concentrate on more complex patient management issues.

From a behavioral perspective, providing services to help the physician better adjust to the pressures of medical practice, organizations can offer services through wellness committees, employee assistance programs, individualized coaching and counseling sessions, or other services offered though Human Resources, Medical Staff Services, or outside referral services.

3.6.9 Physician Well-Being

As mentioned previously, stress and burnout are a major problem affecting physician satisfaction and overall well-being (Rosenstein 2015c; Ariely and Lanier 2015). Both organizational support and individual resilience and wellness strategies are important. Unfortunately, motivation for change can be challenging and there is often a significant gap between intentions and action (Saddawi-Konefka et al. 2016). Achieving a proper balance between intrinsic and extrinsic motivators can be helpful in this regard (Judson et al. 2015).

Motivation for physician well-being needs to be linked with the physician's primary goal and aspirations to provide best practice care. They need to recognize, understand, and accept the fact that emotional and physical well-being affects their levels of energy and the joy of being a physician. Many recent studies have documented that emotional and physical wellness is a strong contributor to physician satisfaction, improved care relationships, and improved patient outcomes of care (West et al. 2014; Friedberg 2016). This all starts by understanding the importance of good health and the negative consequences of ill-health on performance that impacts family, friends, colleagues, staff, and ultimately patients. Physicians understand the importance of relaxation and recreation, adequate sleep, regular exercise, and good nutrition but have difficulty integrating such self-care activities into their

own lives. Avoiding stressful situations, setting limits, learning to comfortably say no, and willingness to accept outside advice are necessary components of well-being. Most importantly, teaching techniques to support self-awareness, reflection, and self-preservation as well as taking time off for relaxation and energy restoration help to achieve inner peace. Most physicians recognize that these activities are important, but they become a secondary priority to the daily grind. Currently, professional culture supports self-sacrifice in the interest of patients and organizational culture focuses on productivity and reimbursement. To aggressively promote and support the importance of physician well-being will require commitment at the individual, professional, and organizational levels (Rosenstein 2015d, 2016b).

There are now a growing number of different initiatives being introduced to support this point. From a health care policy perspective, the Institute of Healthcare Improvement (IHI), the AMA, and other health care societies are promoting the extension of the Triple Aim (enhancing the patient experience, improving population health, reducing costs) to the Quadruple Aim, adding to these goals the importance of improving the work life of health care providers (Bodenheimer and Sinsky 2014; Wallace and Lemaire 2009). Many organizations are introducing the concepts of mindfulness and meditation training programs for physicians as a way to promote self-refection, purpose, and fulfillment (Krasner et al. 2009; Beach et al. 2013). Mindfulness activities help to reinforce purpose and meaning by focusing on the benefits of the current activity or task. It incorporates many of the ideals of meditation and relaxation techniques with the goal of providing a more productive and fulfilling interaction. Many organizations have successfully used these techniques to improve overall physician satisfaction, well-being, and engagement (Beckman et al. 2012). The term resilience is used to describe the capacity to "bounce back" and respond to stressful situations in a successful manner (Epstein and Krasner 2013; Beckman 2015). Positive organizational and social support, mindfulness, relaxation, self-care, and setting limits can all help to facilitate resilience.

3.6.10 Physician Engagement

The final phase is to enhance physician engagement. The key steps include establishing an underlying culture of positive support for physician livelihood, giving physicians an opportunity for input and discussion, and responding to their needs and concerns (Rosenstein 2015e, 2015f, 2015g; Whitlock and Stark 2014; Lister et al. 2015; Henson 2016).

Physicians are a precious resource. All they really want to do is to practice good medical care. But growing frustrations arise from outside intrusions and other forces unidirectionally telling them what they need to do. Morale is at an all-time low (The Physicians Foundation 2016). Part of their frustration is the lack of physician input. Physicians want to have a voice particularly when it involves issues affecting patient care. Input can be gathered from several different sources. These include surveys, discussions at Town Hall or Department meetings, specialized task forces, or better yet, one-on-one conversations with administrative and clinical leaders. Allowing

input diffuses some of the frustrations particularly if there are expressions of empathy and understanding of the physician world. Input must be followed by responsiveness. This may include administrative, logistical, clinical, or behavioral support. Not every problem can be solved, but at least leaders can provide an explanation and coordinate next steps on achieving mutually aligned objectives. There is a strong correlation between physician engagement, physician alignment, physician well-being, physician satisfaction, physician motivation, improved relationships, and improved outcomes of care. At the end, always remember to visibly show respect and thank physicians for what they do. Physicians are a precious resource and excellent healthcare cannot do what it does without them.

3.7   Conclusion

Increasing complexities in today's healthcare environment have introduced a number of different factors distracting physicians from their primary goal to provide the best possible care. At times the resulting levels of frustration, dissatisfaction, stress, and burnout can affect their attitudes and behaviors to a point where they become disruptive and their actions can negatively impact relationships that adversely affect patient care outcomes. With this in mind, we need to do what we can to help physicians better adjust to the pressures of medical practice. To do this, we must first get a better understanding of the contributing factors that impact their world, give them an opportunity to discuss their concerns, and then provide proactive support to help them thrive. This will require a multistep process that includes raising levels of awareness and accountability; education; advanced training to enhance work relationships, improve communication, conflict, and stress management skills; and providing the necessary logistical, clinical, and behavioral support to help them deal with the day-to-day operations and distractions. In some cases more in-depth support needs to be provided to help reduce the effects of stress and burnout. More difficult cases may require more comprehensive individualized coaching or counseling. Many of these services can be provided through a physician wellness committee, a physician EAP, or other internal or outsourced professional resources. At the same time we need to support physician health and well-being by limiting their stress and providing appropriate relaxation, mindfulness, and coping skills to enhance their resilience and endurance. When more serious behavioral problems occur, the organization needs to take the necessary steps to address the issue head-on before it can compromise care. Organizations need to have the right policies and procedures in place, provide the necessary intervention protocols to hold the physician accountable for their actions, and implement the appropriate recommendations for improvement. To better motivate and engage physicians, we need to listen to their concerns, address the barriers, overcome resistance, and emphasize the value of change by buffering their reluctance from "what's in it for me." We need to provide a supportive culture that makes an effort to better understand their world and motivate engagement by giving them an opportunity for input and discussion and reminding them of the pride and joy of who they are and what they do. In the

end always treat them with respect and thank them for a job well done. Recognize that most physicians will not act on their own. We all need to take a proactive role in trying to help them better adjust to the pressures of today's medical world.

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Suicidal Behaviors in Physicians

4

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Contents

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Abstract

Physicians comprise an at-risk group for suicide and there is no evidence that an improvement or resolution is in sight. Nevertheless, there is now significant research into the internal and external forces that put doctors at risk of harming themselves. This chapter presents an overview of our understanding regarding suicidal behaviors in physicians and the centrality of early intervention, which includes both comprehensive assessment and broad-based treatments. By creating open discussions about a taboo subject and learning from loved ones of doctors who have died by suicide, we are chipping away at the pernicious stigma that prevents physicians from embracing life-saving psychiatric and psychological treatments.

Despite over 100 years of publications in the medical literature, a comprehensive exposition of physician suicide has been hindered by persistent notions of perfection and discomfort with vulnerability in physicians (Legha 2012). Having passed through an era (1900–1970) of suicidal physicians being judged as weak misfits or deviants, we now have made significant progress in situating suicidal thoughts and behaviors in a context of illness for the most part or at least, brokenness, and paralyzing susceptibility to overwhelming stress.

4.1   Scope of the Problem

There are several classifications of suicidal behaviors. For clarity, they will be described here as suicidal thinking or ideation, suicide attempts, and suicide. Research on suicidal behaviors in physicians and medical students is limited by the stigmatized nature of the subject (resulting in denial, and feelings of shame and failure), small sample sizes, differing study designs, limited response rates to questionnaire surveys, fears of negative consequences related to disclosure and breaches of confidentiality, and the ethnicity and cultural affiliation of the participants. Even in clinical situations, physician-patients will minimize, not disclose, or even lie about current or previous thoughts of suicide or attempted suicide. Health professionals can mitigate or ameliorate these behaviors only if a safe and trustworthy therapeutic alliance can be established over time.

4.1.1   Suicidal Thinking

Medical Students: In a systematic review and meta-analysis of 24 studies involving 21,000 medical students from 15 countries, prevalence estimates from single studies ranged from 4.9% to 35.6%, with an overall pooled crude prevalence of 11.1% (Rotenstein et al. 2016). Not included in the meta-analysis was a self-report study of medical students at one institution, which found that 4.4% of respondents endorsed experiencing suicidal ideation at some point in medical school (Schwenk et al. 2010). First- and second-year students less frequently reported suicidal

ideation (1.4%) than their third- and fourth-year counterparts (7.9%). Suicidal ideation was more prevalent in women medical students, but did not reach statistical significance.

Residents and Junior Doctors: Another study by Dyrbye et al. (2014) demonstrated that symptoms of depression and suicidal ideation were highest in medical students and then declined incrementally with each career stage. Suicidal ideation was found in 9.4% of medical students, 8.1% of residents and fellows, and 6.6% of early career physicians. A similar reduction in prevalence of suicidal ideation in residents was found by Goebert et al. (2009) who reported a 6.6% prevalence rate in medical students and a rate of 3.9% in residents, with no statistically significant difference by year of residency or gender. In contrast to these low rates, the past-year prevalence of suicidal thoughts among 234 residents in Sweden was 33.3% (Eneroth et al. 2014). Severe suicidal thoughts as indicated by seriously thinking about or making plans for suicide were reported by 6.4% of 439 of Norwegian physicians after recently graduating medical school (1–4 years) (Tyssen et al. 2004).

Practicing Physicians: Suicidal thinking beyond training has been less studied. In the study mentioned immediately above, the past-year prevalence of suicidal thoughts among 813 academic physician specialists in Sweden was 29.0%, which did not differ from residents recruited from the same university hospital (Eneroth et al. 2014). Among 326 Finnish anesthesiologists (ages 32 and over), 22.4% had thought about suicide and 2.1% had seriously planned it during their lifetime (Lindfors et al. 2009). Oskrochi et al. (2016) reviewed five studies of suicidal ideation among surgeons and reported rates ranging from 4% to 7.9%, with vascular surgeons having the highest rates and neurosurgeons the lowest. In a study of 7905 participating surgeons, Shanafelt et al. (2011) found that 501 (6.3%) reported suicidal ideation during the previous 12 months. Furthermore, they found that among individuals 45 years and older, suicidal ideation was 1.5–3.0 times more common among surgeons than the general population. Notably, only 130 surgeons (26.0%) with recent thoughts of suicide sought psychiatric or psychological help, while 301 (60.1%) were reluctant to pursue treatment due to concerns that this would adversely affect their medical license. A similar finding was noted by Fridner et al. (2009) in their study of academic physicians in Sweden and Italy. The vast majority (106) of the 155 physicians who reported recent thoughts of suicide had not sought mental health care, especially so for male academic physicians. A cross-sectional study of 1890 French general practitioners investigated correlates of a binary suicidal tendency index, which scored positive if thoughts, plans, or attempts were answered yes (Lheureux et al. 2016). Using linear regression analysis, four independent correlates were found: the burnout dimension of emotional exhaustion, lasting health problems, number of physical symptoms, and lower body mass index. Neither age nor gender was significant.

Current research about the frequency and types of suicidal thinking in doctors is generally believed to be an underestimate. A lot of shame exists in disclosing thoughts of self-harm, and some depressed physicians, like people in general, feel even more stigma for also feeling suicidal. Some doctors fear the consequences that they may be forced into a hospital against their wishes. Other physicians are comforted by thoughts of suicide, including a plan, which they see as a way of escaping the pain

should they not improve and can no longer cope with it. This fits with the physician persona of being in charge and in control with preservation of autonomy.

Although anecdotal, there are an increasing number of first person accounts of physicians who write about being diagnosed with a psychiatric illness, including those health professionals with suicidal ideation and attempts (Baxter 1998; Nuland 2003; Leslie 2015; Miller 2015; Fortescue 2015; Gask 2016).

4.1.2 Suicide Attempts

A suicide attempt is not only an identified risk factor for completing suicide, but it is now known to be more lethal than earlier believed, because one study found that 60% of deaths occurred on the first attempt (Bostwick et al. 2016). Moreover, post-mortem studies of physicians who have died by suicide are distinctive in that a history of attempted suicide is much less common than in the general public. This finding is supported by the common clinical observation that suicidal physicians are very serious about their intent and often obsessively research and rehearse a method that will ensure completion. They use a means that will not only relieve their suffering, but that is foolproof. Having treated suicidal patients who have sustained permanent injuries from botched attempts, clinicians want to consider that being a suicidal physician adds lethality as another level of risk.

The following is an interview that I had with a patient of mine, a surgeon, about an hour after she began to awaken from a near lethal suicide attempt by overdose:

- Me: "Do you know where you are?"
- She: "Yes, I'm in an ICU somewhere"
- Me: "Correct. Do you know what happened?"
- She: "I sure do. I took too many pills. I wanted to die. I mean…I want to die"
- Me: "I'm glad you didn't. I'm happy you survived"
- She: "You are? I'm so embarrassed. I feel ashamed of myself."
- Me: "Don't be. You're in a good place here. Nobody is judging you. The staff here just wants you to get better"
- She: "But I really blew it. What kind of a surgeon can't even kill herself properly?"
- Me: (taking a risk and attempting some humor) "I didn't realize that knowing how to kill yourself was a requirement of the American Board of Surgery."
- She: (smiling slightly) "Good one doc"
- Me: "Get a bit more rest. Then you and I got some work to do. Your depression is still there and it's got to be treated. We'll keep you safe here until you're feeling better"

Fortunately, this doctor lived. However, it is striking how she associated her "failed" suicide attempt with her competence as a doctor. In other words, she believed that if she was a good doctor and really deserved to practice medicine, she would not have survived, she would have "successfully" killed herself. What she was unable to see is how much her distorted decision-making regarding suicidality was due to her

untreated depression. I had treated her in the past for major depression which responded nicely to antidepressant medication and psychotherapy. However, after several months of feeling well again, she dropped out of treatment with me and self-discontinued her medication. This event led to a rapid descent into the pit of depression again that left her bereft of the insight she had acquired in treatment. I am grateful that I got the chance to help once more and work with her over time to make sure she understood that her susceptibility to recurrent episodes of depression.

Clinical experience shows that many physicians, because of shame, embarrassment, feelings of failure, and feared judgment, are deceptive in disclosing a history of previous suicidal action. Thus, it remains possible, even with a thorough psychological autopsy, that deceased physicians may have higher rates of previous suicide attempts than is reported. They have taken this secret with them to the grave.

There are few studies of attempted suicide in physicians. Frank and Dingle (1999) used the results of the Women Physicians' Health Study ($N = 4501$), a large nationally distributed questionnaire to assess the lifetime prevalence of self-identified depression and suicide attempts among US women physicians. They found that an estimated 1.5% ($N = 61$) of US women physicians had attempted suicide. In a 2013 study of 3039 female physicians from Hungary, 2.2% had attempted suicide (Győrffy et al. 2016), but no lifetime attempts were reported by the study of 326 Finnish anesthesiologists cited above (Lindfors et al. 2009). In a more recent study by Braquehais et al. (2016) comparing suicide attempts in physicians and nurses, the authors did a retrospective review of 493 medical records of physicians and nurses admitted to an inpatient unit. Of these health professionals, 36 patients (a mix of physicians and nurses) had a recent suicide attempt. Depression, cluster B and C personality disorders, and a history of previous suicide attempts were more prevalent. Drug overdose was the preferred method of suicide, and physicians made more lethal attempts than nurses.

Suicidal Behavior Disorder is included in DSM-5 under "Conditions for Further Study." Oquendo and Baca-Garcia (2014) make a strong and compelling argument for its inclusion as a comorbid condition. Clinicians generally associate suicidal ideation and attempts with a psychiatric disorder, especially major depressive disorder, bipolar illness, and borderline personality disorder. But what gets short shrift is that suicidal behavior also occurs in patients with schizophrenia, post-traumatic stress disorder, and substance use disorders, and puts these patients at risk for attempting and dying of suicide. We must also remember that approximately 10% of people who die by suicide each year have no identifiable mental disorder. It is quite possible that some physicians fit into this category and some may have had a prior history of suicidal behavior that was missed.

4.1.3 Suicide

My dad never really stuck to the treatment you provided for him, Dr. Myers. He just hated being a patient. He felt so ashamed. I tried hard too, but even my support wasn't enough.—Words spoken to me by the medical student son of my patient, a psychiatrist, at his memorial service

It is estimated that 300–400 physicians (and an unknown number of medical students) die by suicide each year in the United States (Eckleberry-Hunt and Lick 2015; Struggling in Silence DVD 2008). Put another way, we lose the equivalent of two classes of medical graduates each year. Potentially more gripping is that a doctor a day perishes by his/her own hand. Reframing the statistics in this way makes such a tragedy more real and palpable. If we conceptualize suicide as the endpoint of a suicidal continuum beginning with suicidal thinking, planning, and attempting, it is ironic that we seem to have more research on physicians who have died by suicide than other points on this continuum.

Schernhammer and Colditz's (2004) review and meta-analysis of 25 studies on physician suicide found that the aggregate suicide rate ratio for male physicians, compared to the general population, was 1.41. At 2.27, the ratio is much higher for women physicians. In terms of a percentage difference, the rate of death by suicide for male physicians is 40% higher than for all males and for female physicians is 130% higher than for all females (Silverman M, personal communication). Studies examining the medical specialty associated with suicide are now quite dated (the last US study was based on data from 1967 to 1972). Hawton et al. (2001) used a retrospective cohort study of 329 physicians in England and Wales who died by suicide from 1979 to 1995. The relative risk of suicide by specialty in diminishing rank was community health, anesthesia, radiotherapy, psychiatry, public health, general practice, radiology, OB/GYN, surgery, emergency medicine, and general medicine.

Hawton et al. (2000), using the same database noted above, analyzed methods according to gender, occupational status, and specialty of physicians. Self-poisoning with drugs was more common in the doctors than among suicides in the general population. Barbiturates were the most frequent drugs used. Half of the anesthetists who died used anesthetic agents. Self-cutting was also more frequently used as a method of suicide. Using data from the United States National Violent Death Reporting System from 17 states, Gold et al. (2013) noted the following information about methods used by the 203 physicians in the data set: firearms (48%), poisoning (23.5%), blunt trauma (14.5%), and asphyxia which included hanging (14%).

4.2 Contributing Factors

No single factor makes someone suicidal. The act of suicide is a complex phenomenon involving some convergence of genes, psychology, and psychosocial stressors that come together all at once in a perfect (albeit horrific) storm (Myers and Gabbard 2008a, p. 186). Risk factors for suicidal thoughts, attempts, and suicides overlap but also differ. In the studies below, these outcomes will be differentiated.

4.2.1 Stigma and Low Rates of Care-Seeking

Although low rates of care-seeking do not cause suicide, they provide an opportunity to prevent it by treating the causes of suicidal ideation and attempts. It is

estimated that 85–90% of individuals who die by suicide have been living with some type of psychiatric illness (usually depression), whether or not it is recognized, diagnosed, or treated. Physicians are no exception to this observation. The fact that doctors have some basic knowledge of mental disorders and should know how to recognize illness and seek professional care quickly is ironically not always a protective factor against suicide. This perceived protection is offset by the profound stigma felt in doctors about receiving mental health treatment (Center et al. 2003; Gold et al. 2016). Their insights are eclipsed by terror, isolation, and paralysis, putting them at risk for self-destruction. Shanafelt et al. (2011), for example, reported that only 26% of 501 surgeons with suicidal ideation in the past year had sought mental health care during that time. Likewise, Tyssen et al. (2004) found that only 10 (36%) of 28 physicians planning suicide had sought professional care. In a qualitative semi-structured interview study of family members of 39 physicians who killed themselves, Myers (2016) found that a significant minority of the decedents died without ever receiving an assessment or treatment by a health professional.

My husband took pills and scotch. The pills were self-prescribed, there was a bill from the pharmacy after he died. He did it in his office. Just like his father, he was a doctor too. But the family covered it up. They said it was cancer. He couldn't live in the real world. Problems with his kids weighed on him. He got depressed and refused to see a psychiatrist. He just withdrew into a dream world. Then he was gone.—The words of Mrs. Hill (pseudonym). Her husband killed himself in 1989.

4.2.2 Psychiatric Illness in Physicians

A good friend told me about her death. We didn't know right away that it was suicide. It was horrible to hear the truth. It came out that she had been struggling. Why is there so much stigma? Why is there that message of 'don't show any weakness' in the everyday world of medicine?—The words of Pam Swift, MD, author of "Doctor's Orders. One Physician's Journey Back to Self" interviewed by this chapter author about the loss of her doctor colleague to suicide.

Silverman (2000) has listed the following psychiatric disorders as most common in physicians: major depressive disorder, bipolar affective disorder, alcohol and/or other drug abuse, anxiety disorders (including panic disorder), and borderline personality disorder. Updating to present day, based on the anecdotal impressions of psychiatrists who treat a lot of physicians, the following would be added: severe burnout (although not in DSM-5, it is listed in ICD-10); comorbid conditions; unrelenting and progressive medical disorders; post-traumatic stress disorder; eating disorders; and narcissistic and antisocial personality disorders. Details on these specific disorders in physicians are discussed elsewhere in this volume (See Chaps. 1, 2, and 6–10).

The salient point is that the risk for suicidal behaviors is not determined solely by the presence of a psychiatric illness as summarized in the section below.

4.2.3   Suicide Risk Factors

- *Previous suicidal ideation and attempts*. As noted above, this may not be easily disclosed but may be a red flag.
- *Previous or current history of a depressive illness* that occurred in secondary school, college, medical school, or residency. Because some physicians may minimize or rationalize the episode or not fully grasp the significance of this information, detailed and persistent inquiry may be necessary. Treatment specifics are essential. Even if untreated, data about onset, triggers, symptoms, duration, and resolution are key.
- *Family history*. Mood disorders in family members, especially with evidence of suicidal thinking, attempts, or suicide.
- *Perfectionism*. This can be a double-edged sword. It is perfectionism in part that gets applicants into medical school and later keeps physicians on top of their game. But perfectionism can be extreme in those individuals who berate themselves and who have little capacity for self-forgiveness. Because perfectionism is a risk factor for both mood disorders and for suicide, it must be taken very seriously in physicians.
- *Isolation*. This factor may take many forms, all of which might enhance risk. Separateness or alienation from medical colleagues can occur in physicians who are of minority culture or ethnicity, including women in some male-dominant medical settings, or lesbian, gay, bisexual, and transgender (LGBT) physicians in mainstream groups. Even physicians who are new to a medical community may feel apart and vulnerable. Some may pull away because of illness and a sense of being a misfit. Some physicians may be highly integrated into their professional communities but are very isolated in their personal lives. Others' personalities may be toward the introverted end of a spectrum, a characteristic that is lifelong. These physicians lack the support that can be a protective factor when one's mood is low.
- *Lawsuits and medical license investigations*. It is well known that being sued for malpractice or defending complaints to a medical licensing board about one's competence, safety, professionalism, or ethics is very traumatic (Iannelli et al. 2014; Charles 2001).
- *Poor treatment adherence and self-medication*. Whatever the reason—poor fit with one's psychiatrist, denial, shame, self-neglect, overwork—not embracing or cooperating with life-saving treatment is dangerous. Suicide rates as high as 3.5% were associated with treatment noncompliance among physicians participating in a physician health program or referred for a fitness-for-duty evaluation (Iannelli et al. 2014; Finlayson et al. 2016). Resorting to suicide is even more enhanced in those physicians who self-medicate with alcohol and other drugs or who have substance-related problems. Suicidal thoughts in the preceding 12 months were reported more frequently by physicians who screened positive for alcohol abuse or dependence (8.8%) than in those who screened negative (6.0%, $p = 0.004$). In addition, those who screened positive for depression were more likely to screen positive for an alcohol use disorder (Oreskovich et al. 2015).

- *Treatment refractory psychiatric illness.* Like patients in general, these physicians may become worn down and demoralized, including their families. Second opinions from psychopharmacologists and other experts (even if travel is involved for rural physicians) are mandatory to offset the heightened suicidality. Too frequently these physicians blame themselves for not responding to conventional treatment. An unwavering attitude of hopefulness in the treating psychiatrist is essential, including constancy and not abandoning the patient.

4.3 Models of Suicide

4.3.1 The Stress-Diathesis Model

Mann et al. (1999) proposed this model, which is helpful in understanding why physicians kill themselves. Some but not all patients have a diathesis or vulnerability to become suicidal due to genetics and family history, lifetime experiences (such as childhood trauma), psychiatric diagnoses, and various personality traits. These factors tend to be distal, meaning they are well established prior to a suicide attempt. When they are present, there is a tendency to experience more suicidal ideation and a movement toward more impulsivity, especially when stress is perceived as overwhelming. What results is a dangerous likelihood of acting on one's suicidal feelings.

4.3.2 The Interpersonal-Psychological Theory of Suicidal Behavior in Physicians

Joiner's (2005) conceptualization of what drives individuals to kill themselves is also helpful in understanding suicidal behavior in physicians. There are three components. The first two, "perceived burdensomeness" (a sense that one is a burden on others) and "thwarted belongingness" (a sense that one does not belong to a valued social group), are necessary for developing suicidal thinking, and the third, "learned fearlessness" (the acquired ability to enact lethal self-injury), is necessary for a suicidal attempt. Cornette et al. (2009) have examined this triad in its applicability to medical trainees and physicians:

1. Perceived Burden: academic failure, burnout, financial indebtedness, excessive responsibility in caring for patients, work-family conflict, the emotional toll of depressive symptoms, and not wanting to burden peers or colleagues by taking time off for treatment.
2. Thwarted Belongingness: social isolation and reluctance to seek professional help coupled with inadequate support from family. A high need for both power and intimacy can lead to self-doubt, depression, and fatalistic thinking; students and physicians on medical leave quickly feel alienated from their medical peers. In addition, workplace harassment and inadequate social support at work have

been associated with suicidal ideation and increase risk for suicidal behaviors (Fridner et al. 2009, 2011).

3. Acquired Ability: exposure to death, pain, and self-injury in their patients may lead to habituation and less fear of death; accumulation of knowledge about potentially lethal medications and chemicals; access to means of enacting suicidal action.

More recently, Fink-Miller (2015), in a quantitative online survey study of 419 physicians on various components of the interpersonal theory of suicidal behavior (IPTS), found the following: physician scores on IPTS were comparable to other groups with increased suicidality (e.g., military populations, prior attempters); perceived burdensomeness was a significant predictor of suicidal ideation, while thwarted belongingness predicted prior suicide attempts; and acquired capability did not distinguish between prior attempters and nonattempters. These are preliminary findings, but nonetheless may be very useful in predicting suicidal behaviors in physicians.

4.4   Developmental Issues

All my mind does today is play over and over again what Kaitlyn was doing on this day last year and that was preparing for her death. I know each step she took by investigating the things she left behind; the notes, the lists, the receipts and all. And though I didn't see it, I play it over and over in my mind. My mind never rests. And it will not rest until this problem is brought more to the forefront. No one knows brilliant people can go around wanting to die. They need to know, parents need to know, and the young people need to know that they are not the only one so they will actually seek help.

• Excerpts of an email to me on 4/10/14 from Rhonda Elkins, mother of third year medical student Kaitlyn Elkins, who died by suicide 1 year earlier. She is the author of "My Bright Shining Star: A Mother's True Story of Brilliance, Love and Suicide". Tragically, Rhonda Elkins killed herself 4 months after this email.

Although suicide ranks as the tenth leading cause of death in the United States, it is second in those aged 15–34 years (CDC 2015). The mean age of students entering medical school is 24. This means that one of the factors contributing to suicide deaths in medical students, especially the youngest ones, is simply their age. Furthermore, the prevalence of mental disorders has increased on college campuses, including a finding of 6% seriously considering making a suicide attempt and 1% actually attempting (Kisch et al. 2005). Czyz et al. (2013) looked at the barriers to seeking help in college students who were at heightened risk for suicide and found that stigma, although present, was not as prevalent as expected. What was more pronounced was a perception that treatment was not needed, there was not enough time to seek help, and a preference for self-management. In addition, some of these

graduating college students, after matriculating to medical school, carry with them many of these attitudes, which put them at risk for increased morbidity (worsening depression, heightened anxiety and trauma symptoms, and problem alcohol and other drug use) and mortality by suicidal action. Paradoxically, stigma attached to mental illness seems to increase in medical school which can make their situation even more precarious (Dyrbye et al. 2015; Schwenk 2010).

Erikson and Erikson's (1998) lifelong model of human psychological growth and the eight stages of psychosocial development are helpful here in thinking about possible psychosocial stressors contributing to suicide in medical students. Stage 5, Identity versus Role Confusion, is applicable to those students who despite their chronological age are lagging behind their peers in consolidating a comfortable personal sense of self in the world. They are unsure of what they want and need and may feel like a misfit with their medical student peers. This can happen with ethnic and religious minority students with strict and conservative values who are still living at home and their parents fight against their wishing to live away or espousing more progressive and inclusive ideas. Occasionally a first- or second-year medical student struggles with their decision to attend medical school and realizes, often with therapy, that their heart is not in becoming a physician. Other medical students are dealing with Stage 6, Intimacy versus Isolation, as they experiment with the challenges of a committed relationship and even marriage. A sizeable number of their peers are thwarted in their efforts to negotiate intimacy with others or strategically avoid relationships and make their studies ascendant. The downside of this may be loneliness, aloneness, and perhaps depression. LGBT students, known to be an at-risk group for suicidal behaviors, may have challenges in both stages during medical school (Haas et al. 2010).

What about developmental issues during residency and fellowship? Although the ages of residents and fellows vary greatly, their mean age is 30. Erikson's Stage 6 is the norm for this phase of training and some of the psychosocial stressors for this cohort include: coping with marital upsets and divorce; pregnancy and new parenthood; fertility struggles and effects of reproductive technology; geographical moves to accommodate training of self or partner or spouse; separation from supports of friends and family; financial strain; illness or death of a parent; meeting the six core competencies of training. The recent spate of deaths by suicide of residents in New York City (and beyond) has had a huge impact, including an initiative by the Accreditation Council for Graduate Medical Education (ACGME) to examine this trend and implement change (Brigham 2016). This includes not only looking at the personal life challenges of today's trainees, but studying workplace issues as well—duty hour violations, bullying and other forms of harassment, sleep deprivation, orientation to new rotations, availability and quality of mental health resources, yoga and mindfulness meditation, proper food, creating a caring community, milestones, and so forth.

Developmental issues for physicians who are early-career to middle-career in life stage are distinctive. Regarding leading causes of death in this cohort, US data from 2014 revealed that suicide is the second leading cause of death in the 25–34-year-old age group, fourth among persons aged 35–44, fourth in those aged

45–54, and eighth in those aged 55–64 (CDC 2014). Moreover, in 2014, adults aged 45–54 accounted for the largest proportion of suicides. The psychosocial issues here span both Erikson's Stage 6 as outlined above and Stage 7, Adulthood and Generativity versus Stagnation. This is when physicians establish their careers and derive happiness and satisfaction from the same, settle into a comfortable and healthy relationship and having children, and derive pleasure from volunteerism and giving back to society. Given the high level of professional angst and incidence of burnout in doctors today coupled with the challenges of marital breakdown, divorce, remarriage, and blended families, it is not difficult to understand the psychosocial stressors that affect the well-being of physicians during this developmental cycle.

Finally, what about retired physicians? Erikson's Ego Integrity versus Despair (Stage 8) applies here. Ideally, retired physicians still have reasonable health and bring their energy, curiosity, and ambition into pursuing avocations and emotional involvement with grandchildren (if they have them) and other individuals and causes. Wisdom is the buzz word in this group and enables retired physicians to feel fulfilled, content, and at peace. It also means being able to face death with courage and inevitability. The most common at-risk factor for suicide in retired physicians is loss—loss of mental and physical health, including cognitive decline; loss of one's spouse for those in enduring marriages; emotional or geographical separation from other family and loved ones; death of long-standing friends; and simple, but profound, loneliness and existential despair.

Before leaving this section on developmental issues, there needs to be some recognition of the lived experience of suicidal physicians. More focused, what can we learn from physicians who have made suicide attempts and are now sharing this information with others? Here are two examples:

> We need to talk about it… people like myself who are psychiatrists and who have had depression…not just huddle away and not want people to know about it and be ashamed of it… –(Dr. Janine O'Kane) Myers (1998)

> "Following my spinal cord injury, I encountered frequent relapses of depression typically triggered by weddings…old familiar faces that reminded me of where I was before and what I could have been. It was painful because now all seemed lost, my dreams all destroyed. I used to cry almost every day wishing I were not alive. But it is amazing that today I have transformed from that earlier state and while no one would choose to be in my circumstances, I still feel strangely lucky to be alive. I no longer am consumed by self-hatred or the feeling that I am defective. It is a remarkable transformation, one that should give hope to others who are suffering.
>
> My hope is that through the telling of my story, it will encourage others battling depression to realize that relief and success is possible for them as it was for me despite the direst of circumstances and the most severe and recalcitrant of depressions. The core belief that you are defective is one of the hardest to overcome, but it is possible and there is hope through intensive work with a clinical psychologist and optimization of antidepressant therapy by an experienced psychiatrist."

Excerpts from an interview on 4/3/2015 that I conducted with Dr. B who attempted suicide by jumping from his sixth-floor apartment in 2006 when he was a resident.

4.5 Assessment and Treatment

Assessment of physicians may occur in many different settings and contexts. This may be in one's private office, in the emergency department (ED), inpatient medical or surgical units, or even curbside when a distressed colleague reaches out to a trusted psychiatrist colleague in the hallway of a medical center. The physician may come voluntarily or may have been certified against his/her wishes, awaiting comprehensive evaluation. Some assessments are completed as part of an independent medical evaluation that has been requested by a medical facility, state physician health program, or state medical licensing board to determine impairment, fitness for duty, medical competence, and so forth.

4.5.1 The Suicidal Physician: Presentation Dynamics

- Denial and minimization of symptoms suggestive of serious illness
- Resistance to accepting patient role—underlying terror, shame, failure, weakness, guilt
- Mistrust of the treating clinician
- Multiple fears—losing autonomy, privacy, and confidentiality; being prescribed medication with coercion or against one's wishes; being detained in the ED or hospitalized in an inpatient setting voluntarily or involuntarily; losing one's position (especially trainees) or job; losing one's medical license or having restrictions placed on same
- Regarding suicidality—fear of the consequences of honest disclosure of thoughts, feelings, urges, plans, means, and behaviors; lying is not uncommon, including a history of previous suicide attempts
- Ambivalence about or resistance to permitting collateral information from significant others like family, colleagues, employers (depending on the setting and context); similar anxiety about signing release papers for previous medical records or contact with previous treating professionals

4.5.2 Additional Risk Considerations for Treating Clinicians to Keep in Mind

- Assess carefully for undiagnosed (and untreated) bipolar illness in a physician with recurrent major depressive disorder that is not responding to conventional treatment
- If the physician has bipolar illness, watch for rapid cycling

- Search for subtle comorbid illnesses that are complicating the assessment and course of treatment
- Inquire about impulsivity via detailed history taking
- Watch for unrecognized emergent psychosis in high functioning physicians that can put them at risk of acting on suicidal thinking
- Do a serious appraisal of the physician-patient's sleep looking for severe sleep deprivation and circadian rhythm disruption (especially in residents on busy rotations and frequent on-call or moonlighting schedules; emergency physicians with shift rotations; academic physicians who travel frequently to international medical meetings crossing multiple time zones).
- Look for acute suicidal affective disturbance, a new and very dangerous suicidal disorder (Tucker et al. 2016)

4.5.3   Interview Imperatives

- Consider the dyadic context of one clinician assessing another clinician, especially if both are physicians
- Reflect upon transference and countertransference dynamics when one clinician treats another—identification, blurring of boundaries, underdiagnosing, overdiagnosing, competition, intimidation, and intellectualization
- A warm, compassionate, empathic, and nonjudgmental style is essential
- Be comprehensive and thorough; rigor signifies a commitment to excellence, a high standard, a quest to understand, and heartfelt caring
- Pay attention to one's gut feelings in the face of discordance of presenting picture and suicidal appraisal—err on the side of caution
- One's doubts, uncertainty, and mistrust should give pause—and perhaps drive a request for a second opinion
- ALWAYS assess suicidality in physicians from a biopsychosocial construct

4.5.4   Risk Assessment and Risk Formulation

Berman and Silverman (2014), both suicidologists, have proposed a very helpful and dynamic way of more fully appreciating the suicidality of patients. They define and describe risk assessment as the process of collecting data from the patient regarding the presence versus absence of criteria we associate with suicide, so-called risk factors, and pairing this with protective factors, akin to "ingredients." Risk formulation is more extensive and detailed. It involves understanding how risk factors combine, interact, fuel, and are either buffered by protective factors or otherwise form "a recipe" for heightened risk for suicidal behavior. Risk formulation involves clinical judgment and intuition on the part of the clinician assessing and/or treating the patient. These notions are helpful in more accurately and safely evaluating suicidal physicians who not only have a higher risk of suicide as a group, but also have a propensity to thwart (and fool) the well-meaning intentions of less well-trained or experienced clinicians.

4.5.5 Other Caveats to Remember

When assessing suicidal physicians, do not rely solely on the patient's self-report. Do not assume that if there is no suicidal thinking there is no risk of self-harm. The majority of patients who die by suicide deny having suicidal ideation when last subjected to a suicide risk assessment prior to their death. There is no research evidence to support the notion (or common belief) that active suicidal ideation predicts greater risk for death by suicide than does passive suicidal ideation. There is no substitute for a very detailed mental status examination, collateral information, clinical intuition, experience, and consultation with others (Berman 2015).

4.5.6 Another Word About Stigma

Stigma is ubiquitous. Enacted stigma is exterior and refers to discrimination against people with a psychiatric illness because of their perceived unacceptability or inferiority. Unfortunately, vestiges of this kind of stigma still exist in the house of medicine. Examples include blanket questions on medical licensing applications or hospital credentialing applications; micro- and macro-inequities in the medical workplace; unspoken attitudes in some employers of physicians; and behind closed-door discussions about physician applicants for jobs. Felt stigma is interior and refers to both the fear of enacted stigma and a feeling of shame associated with having a mental illness, especially one that includes suicidal behaviors (another layer of stigma). Both types of stigma can be at play when a symptomatic physician seeks help. Both types of stigma threaten self-esteem, security, identity, and life chances in doctors. To illustrate the magnitude of stigma, in a recent survey of women physicians, Gold et al. (2016) found that 50% of respondents reported that they had met criteria for mental illness but had not sought treatment, and only 6% with a formal diagnosis or treatment history reported this to their state medical licensing board. Gunter (2016) has carefully reviewed the many barriers to physician health that confront physicians systemically when facing credentialing and licensing (see also Chap. 5). She offers a template for advancing best practices applicable to employers, educational institutions, physician peer support groups, and other stakeholders that should help to prevent suicide in doctors.

4.5.7 Tips for Treating Suicidal Physicians

> *If you're given the opportunity to look after a physician, you should double your efforts… and your skepticism* (Dr. "Mark")—Myers (1998)

- Suspect suicidal thinking, planning, and rehearsal.
- Conduct an artful, thorough, and dynamic suicide risk assessment and formulation in the context of trust and mutual respect.

- Document, document, and document. Not only is this good medical practice but it can be essential in one's deposition should the clinician lose his/her physician-patient to suicide and there is a lawsuit.
- Do a very detailed inquiry of means and methods. This includes asking about stockpiled medications, self-prescribed medications, Internet ordering of medications (and/or toxic chemicals like cyanide, helium), medications stolen or diverted from the workplace (potassium chloride, narcotics, insulin), and firearms.
- Hospitalize for safety. This should be judicious and in consultation with others. Settings that maximize privacy, confidentiality, and preserve boundaries are best (Myers and Gabbard 2008b, p. 196). Inappropriate or unnecessary hospitalization (especially involuntary) of a physician may adversely and permanently affect his/her willingness to accept treatment in the future.
- Very close follow-up after discharge. There is increasing evidence of at-risk suicidality in all patients within days and early weeks of admission and release (Olfson et al. 2016).
- Always obtain old records of treatment and if unavailable, speak to previous treating professionals.
- Push for collaborative information. Recent qualitative postvention research cites numerous examples of physician suicides whose loved ones emphasize the importance of this piece (Myers 2016).
- Second and third opinions with challenging suicidal physician-patients, especially a psychopharmacologist comfortable with doctor-patients.
- Work closely with state physician health programs, if the patient is their client.
- Many suicidal patients can be safely treated on an ambulatory basis. Gabbard and Allison (2006) have described a step-by-step approach rooted in psychodynamic principles that can be very effective with physician-patients. Guille et al. (2015) have described an effective preventive tool using web-based cognitive behavior therapy (CBT) to prevent and treat suicidal thinking in house officers. Ey and colleagues (2016) have reported on a decade-long outpatient comprehensive wellness and treatment experience with suicidal residents and practicing physicians. Goldman et al. (2015) have made sage systemic and therapeutic suggestions to diminish suicide deaths in trainees.
- If working in a collaborative, split-treatment model, insure regular contact with the patient's psychotherapist, document all communication, and record any change in status, medication, or psychotherapy modality.
- Watch for emerging or masked bipolar illness in treatment-resistant depressed physicians.
- Insure that any comorbid substance use disorder is properly treated.
- Always remember that the patient is a hurting individual who just happens to be a physician. Do not lower the standard of care and do not be seduced into taking shortcuts in care.
- Refer for evidence-based psychotherapies—CBT, Dialectical Behavior Therapy (DBT), and Collaborative Assessment and Management of Suicidality (CAMS) (Jobes et al. 2015). These are stand-alone therapies that have proven effectiveness in treating suicidality directly (especially when not in the context of a

DSM-5 mental disorder) or in combination with conventional pharmacological treatment of a mental illness.

- Watch for dangerous symptoms—intractable sleep disturbance, rapid cycling, agitation, and emerging subtle psychotic symptoms—and act fast and appropriately.
- Be kind, compassionate, thorough, clear, firm, and "physicianly"—never forget the terror, desperation, and shame that lurk behind symptomatic behavior in severely ill physicians.

4.6 Key Points

- Suicidal thinking, attempts, and completion are elevated in medical students and physicians compared to the general population
- Physicians are not only subject to the same risk factors as others in their cohort or reference group but also are additionally vulnerable by slightly higher rates of mood disorders and substance use disorders, elevated levels of perfectionism and self-critical personality traits, stigma (both external and internal) about mental illness and its implications, and expert knowledge about lethal means of suicide
- When assessing and treating suicidal physicians the mental health professional must never compromise his/her standard of care because the patient is a doctor. A detailed and comprehensive biopsychosocial approach is key and this must include collateral information from family members and other involved people
- There are now suicide-specific forms of treatment, largely psychotherapies, that are evidence-based and very effective in relieving suffering and restoring health in ailing physicians
- Insights gleaned from physicians who speak or write openly about having been suicidal and from family members who have lost a physician loved one to suicide are advancing our understanding and helping toward preventing suicide in doctors

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Physician Impairment and Safety to Practice Medicine

5

Tracy D. Gunter

Contents

Abstract

Physicians have a responsibility to treat their patients in a safe manner. When unable to do so based on a health condition, physicians may become "impaired." As a fluid concept, the term impairment warrants better guidelines that support the medical community in identifying *who* is impaired and *what steps* should be taken to identify, report, and address impairment. Uniform regulations should be put in place in the United States to protect and support physicians. In addition, a regulated reporting system has the potential to safeguard both physicians and their patients. An evaluation system independent from—yet recognized by—medical boards, physician health

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organizations, credentialing agencies, and insurance companies could offer guidance in the process of identifying, evaluating, and treating impaired physicians.

5.1   Introduction

Physicians have an ethical obligation to maintain the ability to perform patient care tasks in a safe manner and are deemed to be "impaired physicians" or "impaired providers" when unable to do so on the basis of physical or mental disorder, or injury (American Medical Association 2016; American Psychiatric Association Council on Psychiatry and Law, and Corresponding Committee on Physician Health, Illness and Impairment 2004). Yet, no clear definitions of what constitutes competence to practice are readily available in the literature (Struckmann 2015). Complicating the matter further is that legal and regulatory practices treat the distinction between impaired and unimpaired as binary; yet symptoms of illness and the potential impact of those symptoms on functional abilities exist on a spectrum.

Historically, disabilities have been barriers to becoming a physician and practicing medicine. This is at least in part due to recognition of the inherent difficulty in physician duties. In recent years, medical schools have come under increasing pressure to define core technical standards and competencies in the service of decreasing discrimination against qualified students who may have disabilities. If these initiatives are effective then one would anticipate a rise in the number of practicing physicians with disabilities of all types (DeLisa and Thomas 2005) that are not impairing. This increased diversity in the physician workforce will doubtless improve medicine, but the current regulatory system will also be challenged to make distinctions between disabilities that produce impairment and those that do not.

With the understanding then, that having an illness or condition is not synonymous with having an impairment in one's ability to practice medicine safely and competently, we turn to physician behaviors that may raise concern about fitness to practice medicine safely. These behaviors include boundary violations, unethical or illegal behavior, medical errors, neglect of practice or documentation, and unexplained changes in relationships, appearance, work schedule, and work quality. These behaviors may result in complaints about the physician from patients and coworkers. A concept related to physician impairment is "disruptive physician behavior" (Brown et al. 2009), which may be defined as "a practice pattern of personality traits that interferes with the physician's effective clinical performance" (Reynolds 2012). Disruptive physician behaviors include hostility, temper outbursts, demeaning comments, abusive behavior, and intimidating behavior. The American Medical Association, The Joint Commission, and the Federation of State Medical Boards have prioritized identifying and addressing disruptive physician behaviors as a matter of patient safety. For the purposes of this chapter, disruptive behavior will be considered one of the many possible indicators of physician impairment (see also Chap. 3).

When questions about a physician's ability to practice medicine safely and competently are raised, a fitness-for-duty evaluation may be requested. The particular

questions for the evaluation will vary depending on the referral source, but at the most basic level, credentialing bodies may request such an evaluation when they receive "a credible report that a physician's clinical conduct or performance is adversely affected by [the physician's] mental state" (Meyer and Price 2012).

5.2   The Problem of Physician Impairment

Although the actual number of impaired physicians practicing in the United States is unknown, estimates suggest that 15–33% of physicians will be impaired at some point in their careers (Boisaubin 2009; Boisaubin and Levine 2001; Leape and Fromson 2006). Statistics concerning disruptive physician behaviors are even less precise, but some sources suggest that 3–5% of physicians display disruptive behaviors, and that physicians who engage in disruptive behavior tend to do so repeatedly (Reynolds 2012).

5.3   Causes of Physician Impairment

Substance use disorders have been the most frequently studied and reported causes of physician impairment, likely related to early reports of the elevated frequency of alcohol or other substance use disorders among physicians, as well as the impaired insight that tends to accompany these disorders (see Chap. 8; Center et al. 2003; Federation of State Medical Boards 2011; Myers and Gabbard 2009). Physicians appear well aware of the risks of practicing with problematic substance use and were more likely to report colleagues impaired by substance use disorders than other mental impairments (Farber et al. 2005). Like substance use disorders, depression is also common in the general population and in physicians, and an association between depression, substance use disorder, and suicide has been described in the literature on physician health for several decades. In addition to depression, bipolar affective and other mood disorders may be associated with impairment. Additional mental health diagnoses associated with impairment include neurocognitive disorders, anxiety and trauma-related disorders (see Chaps. 2 and 6), psychotic disorders, eating disorders, and mental disorders due to other medical conditions. Diagnosable mental health disorders may occur singly or be comorbid.

According to a report issued by one physician health program, approximately one-third of physicians under contract for behavioral issues had mental health impairments, another third had "substance abuse issues," an additional quarter had dual disorders, and the remainder had physical impairments (State of Iowa, Iowa Board of Medicine 2009). A somewhat different pattern was seen in another state in which two-thirds of referrals involved substance use disorders, 10% involved other mental health disorders, 4% physical disorders, 2% involved cognitive disorders, and the remaining 18% of the referrals were reports of disruptive behavior (Texas Medical Association Committee on Physician Health and Rehabilitation 2008). These numbers may be changing, as current studies are difficult to find.

Like the rest of the US population, physicians are aging and practicing longer than ever before. In 2014, over one half of US physicians were 50 years of age or older (Young et al. 2015) and 23% of physicians in the United States were 65 years of age and older (http://www.cppph.org/cppph/wp-content/uploads/2016/02/AMA-Council-on-Medical-Education-Aging-Physician-Report-2015.pdf). Additionally, the average retirement age in physicians has increased from 65 to 68 in recent years and more than 99,500 physicians are still practicing into their 70s (http://www.interimphysicians.com/dr-kens-corner-mandatory-retirement-age-doctors-horizon/). Since increasing age is a risk factor for cognitive impairment that could lead to impairment in the ability to safely practice medicine, and older age is more commonly associated with impairment among those referred for assessment, some systems have implemented mandatory fitness evaluations beginning at a certain age (Schenarts and Cemaj 2016).

Studies have been undertaken to examine the relationship between age, cognitive abilities, and the safe practice of medicine (usually defined by the use of evidence-based practices). Some data suggest that older physicians perform some practice tasks less well than their younger colleagues, raising concern about possible age-related cognitive impairments (LoboPrabhu et al. 2009; Lunsford 1981; Williams and Flanders 2016; http://www.cppph.org/cppph/wp-content/uploads/2016/02/AMA-Council-on-Medical-Education-Aging-Physician-Report-2015.pdf). However, when examining a group of cognitively impaired physicians presenting to a physician health program, no association was found between age and cognitive impairment (Brooks et al. 2016), adding to the literature suggesting that health, independent of age, is an important contributing factor to the occupational performance of older physicians (Williams and Flanders 2016). These data support the recommendation for further evaluation of cognition in circumstances where practice problems have been both identified and recalcitrant to remediation as opposed to age-triggered evaluations (for a full discussion see http://www.cppph.org/cppph/wp-content/uploads/2016/02/AMA-Council-on-Medical-Education-Aging-Physician-Report-2015.pdf).

Many physical illnesses (e.g., paraplegias, orthopedic disorders, diabetes mellitus, or congestive heart failure) may be intermittently or chronically impairing in some contexts. However, these disorders are less frequently represented in physician health programs than mental health disorders and not generally associated with the loss of insight that characterizes many mental health disorders. Returning to the examples from Iowa and Texas, 12% and 4%, respectively, of the physicians under contract with these state physician health programs suffered from physical disorders that were identified as the condition impairing the physician.

Adjustment reactions occurring in response to a variety of stressful life circumstances such as financial insolvency, marital discord, and loss of a loved one may be sufficiently severe to leave the physician distracted or exhausted to such a degree that his or her capacity for safe patient care is reduced. In addition, not all impairing conditions are recognized medical disorders. Chronic occupational stressors

resulting in burnout, prolonged exposure to trauma, and chronic sleep deprivation are some of the areas of concern.

In their seminal work, Maslach and Jackson (1981) defined the characteristics of burnout: emotional exhaustion, depersonalization, and a diminished sense of personal accomplishment (see also Chap. 1). Burnout conceptualized in this fashion was associated with poorer job performance, higher job turnover, absenteeism, low morale, personal distress, physical exhaustion, sleep problems, alcohol and drug use, and social problems outside the workplace (Maslach and Jackson 1981). These symptoms are caused by chronic and excessive stress resulting from incongruity between occupational demands and the worker's beliefs, values, availability, and internal resources. Job demands associated with burnout include long work hours punctuated with insufficient periods of rest and recovery as well as isolation, inequity, lack of control, and lack of reward. When the physician is able to identify the signs of burnout and the factors contributing to it, he or she may be able to effect change in the workplace or find another position more in keeping with his or her needs and expectations.

Although the relationship of burnout to anxiety and depression in physicians is wholly unclear, they at least co-occur frequently (Brown et al. 2009). Physicians who are distressed, anxious, or depressed may engage in behaviors such as overwork and be more willing to accept positions that are suboptimal matches for their abilities than nondistressed peers. Similarly, physicians who experience their work lives as stressful may develop symptoms of depression and anxiety before they have identified the incongruity between their abilities and pressing occupational demands. Differentiating mental illness from burnout is difficult (Ahola et al. 2014; Bianchi et al. 2016; Weiss et al. 2014; Wurm et al. 2016). In general, burnout is about the work environment and can be traced to workplace factors. Relationships outside the workplace are generally affected only as burnout becomes prolonged. Symptoms of mental illness usually impact multiple life areas rather indiscriminately and are not significantly relieved by changes in one's work life alone. In the physician health literature, for instance, many authors note that the ill physician's social relationships suffer long before the physician's performance in his or her profession.

Issues related to the negative impact of sleep deprivation on cognition and potential impairment (e.g., Eddy 2005) have prompted a number of fatigue-monitoring efforts, usually in combination with burnout mitigation among trainees (Weiss et al. 2014), but no similar standards exist for attending physicians. This is particularly disturbing because the effects of sleep deprivation may be more pronounced as the individual ages. In one study of 3222 anesthesiologists over the age of 50, escaping call responsibilities was the most frequently cited reason for retirement planning (Orkin et al. 2012). Regardless of age, there is a significant relationship between sleep deprivation and medical error causing at least one author to speculate: "Ensuring adequate sleep may one day be as readily accepted for physicians as hand washing" (Eddy 2005, p 179).

5.4   Identifying the Impaired Physician

Symptoms of many medical conditions (including mental health disorders) and reactions to stressful life circumstances contribute to a wide variety of behaviors that may suggest or contribute to impairment in a physician's ability to safely practice medicine. These symptoms may wax and wane over time, as may signs of impairment. Any single symptom or behavior may arise from a host of acute and chronic factors and may or may not be of sufficient severity or chronicity to cause impairment. While the physician has the first responsibility for maintaining his or her health and monitoring his or her ability to practice (American Medical Association 2016; Kuhn and Flanagan 2017), physician colleagues also share in the responsibility to monitor each other. This monitoring may take place informally in the context of a group practice or professional friendship, or through supervisory relationships, peer review activities, licensing board committees, physician health programs, or other organizations. Knowing when to intervene and how to do so can be challenging for everyone involved.

5.4.1   Self-Identification

Physicians themselves have the first obligation for ensuring safe and competent medical practice, both as individual practitioners and as leaders of the healthcare team. However, there are many reasons for which they may not discharge this responsibility. Physicians may underestimate their risk for developing mental health symptoms (Hassan et al. 2016) and fail to prioritize their own health by avoiding or denying the presence of symptoms (Gundersen 2001; Huang et al. 2015; Kay et al. 2008). Physicians may be fearful of the patient role owing to loss of control (Kay et al. 2008) or attribute their physical or mental health symptoms to transient and expected occupational stress (Huang et al. 2015).

Systems issues may also serve as barriers to self-identification of impairment. Physicians report having worked when acutely ill, because they were unaware of any parameters for judging their function relative to their symptoms, and may embrace a strong cultural norm to work through illness (Tanksley et al. 2016). (See also discussion of "presenteeism" in Chap. 11 and Sendén et al. (2016). Ill practitioners may wish to avoid disappointing patients, interrupting patient care, inconveniencing staff, or burdening colleagues (Tanksley et al. 2016). They may work in systems that actively or passively disincentivize self-care by imposing draconian productivity measures or limiting access to cross-coverage by qualified colleagues. In addition to these sociocultural and occupational concerns, the potentially disabling symptoms of illness may be insidious in onset and include a lack of insight into the nature of the illness and the impact of physician behavior on others. Because of the high value most physicians place on their jobs and careers, they will often only demonstrate work impairment after family and personal relationships have been affected (Wettstein 2005).

Fear and stigma may also contribute to physician reluctance to seek treatment. Although some authors suggested that this barrier to self-care may be decreasing (Hassan et al. 2009, 2016), a recent study surveying female physicians reported that 50% of the respondents believed they had met criteria for mental illness but had not sought treatment due to concerns about the implications of seeking care for licensing and a sense of shame (Gold et al. 2016). This sense of shame and the overall denial of problems generally may derive in part from personality features common among physicians that interfere with help-seeking behavior (e.g., Setness 2003; Myers and Gabbard 2009).

Embarrassment as a barrier to treatment-seeking behavior in physicians is not limited to stigma associated with mental health conditions. Physicians may feel like failures for not successfully diagnosing and treating their own conditions and feel like burdens to already busy peers (Kay et al. 2008). Moreover, the fear of medical malpractice litigation related to errors may also hinder the physician from admitting any weakness or imperfection because he or she fears that this would be used against him or her if a patient ever brought suit (Roland et al. 2011). Indeed, physicians appear more likely to seek treatment in situations in which high quality and confidential care is available (Hassan et al. 2016). Results from this treatment appear to be at least as successful than those in general population settings (Sudan and Seymour 2016).

Physicians have several opportunities to disclose a wide variety of health-related symptoms and diagnoses to licensing boards, malpractice insurers, and healthcare credentialing bodies. The extent and scope of the disclosures required by these various stakeholders are varied. At the broadest end of the spectrum are questions asking physicians to disclose whether they have ever been diagnosed with or considered, referred, or treated for any mental health or other medical condition. Questions of this breadth may constitute discrimination as defined by the Americans with Disabilities Act (1990). Some agencies have changed their practices over time to focus only on current or recent health conditions that have caused occupational disability or require ongoing treatment to prevent occupational disability. Still other approaches to inquiries requiring physicians to self-report health concerns focus on specific diagnoses such as cognitive disorders, psychotic disorders, mania, impulse control disorders, paraphilias, and substance use disorders.

The possible responses from agencies receiving these reports are equally broad and range from no action to limited monitoring, to disciplinary action, reprimand, or restriction in practice. Since agencies rarely, if ever, notify physicians of the consequences of their self-reports, many trainees and physicians simply decline to seek care for anything that they fear might trigger a reporting responsibility, practice restriction, monitoring program, or denial of license, privileges, or insurance. The great variance in the kinds of questions asked and possible responses to disclosures likely fuel the reticence of physicians to self-identify difficulties (Gunter 2016).

5.4.2   Peer Identification of Impairment

Physicians have ethical, and usually legal, obligations to monitor each other for signs of impairment (Mossman 2011). Just as physicians are expected to have a personal physician and address health issues that may impact their abilities to practice, they also have an obligation to intervene with colleagues when they become aware of impairment. Despite the fact that most physicians are aware of the obligation to report impaired colleagues (Magnavita 2007), many feel unprepared to deal with an impaired colleague, think that someone else will address the issue, fear retaliation from the colleague for reporting his or her incapacity, or believe that the response from the person or agency to whom they report would be inappropriate (i.e., either nothing would happen with the report or that the colleague would be excessively punished) (DesRoches et al. 2010; Sanfey et al. 2015). Farber et al. (2005) found that only one-third of their sample knew of guidelines regarding when to report an impaired physician, and knowledge of guidelines was associated with a greater likelihood of having reported an impaired colleague. Many physicians, in fact, have failed to report an impaired colleague on one or more occasions despite direct knowledge of impairment (Campbell et al. 2004; DesRoches et al. 2010; Sanfey et al. 2015) and one physician recently disclosed lying about a colleague's impairment to assist the colleague in winning a medical malpractice case (Crane 2016). Failure to report known impairment appeared greatest among physicians in private practice and when the impaired colleague was not a part of the concerned colleague's immediate professional environment (Weenink et al. 2015).

5.5   Possible Peer Responses to Suspected Physician Impairment in a Colleague

As the practice of medicine has increasingly moved from an individualistic practice to a collaborative team-based model, physician behavior has come under increasing scrutiny because of its impact on the healthcare system (Iannelli et al. 2014). Recognizing both the need for teamwork and the reticence of physicians to report impaired colleagues, The Joint Commission issued medical staff standards that charged healthcare systems with defining, monitoring, and managing disruptive physician behaviors that may present a risk to patient safety (https://www.jointcommission.org/assets/1/18/SEA_40.PDF).

These steps raised the level of observation of physician behavior without providing much specific guidance on how to intervene with a colleague about whom a physician or staff member may be concerned. There is a wide range of possible interventions for the physician displaying concerning behaviors that might reasonably precede reporting the physician to the licensing board. These include (Boisaubin and Levine 2001; Magnavita 2007; Sudan and Seymour 2016):

1. Speaking directly to the physician and expressing one's concerns about specific behaviors in a compassionate manner, while avoiding labeling or diagnosing one's colleague;
2. Offering assistance to the colleague or pointing the colleague to sources of support;
3. Speaking with the physician's coworkers to better understand the concerning behavior and the pervasiveness of the behavior;
4. Involving the physician wellness committee of the applicable medical society or the medical staff office of the facility or healthcare system in which the physician may work;
5. Consulting with state Physician Health Programs (PHPs).

Once one proceeds beyond the first two of these options, a number of variables may complicate the equation. Since most physicians fear disclosure of difficulties and value being respected and feeling in control, knowledge that a peer is asking others about him or her may undermine any previously made offer of assistance. Family relationships will most likely have suffered before work relationships, so the physician may feel that he or she has lost the safe refuge of work. Peer review bodies, physician wellness programs, and PHPs all focus on particular areas of a physician's professional life, and operate under a variety of rules, each having varying capacities for offering assistance in a confidential and voluntary manner. Each program also defines physician problems differently and has a different menu of services to offer the physician. Not infrequently, the services offered are designed specifically for individuals meeting the admission criteria to the program without much regard for individual variation in symptoms, behaviors, and responses to interventions.

In recent years, several physicians have also stepped forward to address challenges they have experienced when dealing with PHPs. The challenges they faced may hinder the desire of others to seek help through PHPs, but point to some important issues. For instance, the author of the blog *Disrupted Physician*, Dr. Michael Langan, asserts that PHPs "leave physicians without rights, depersonalized and dehumanized." Others have characterized their experiences of these programs as a "Kafkaesque nightmare," unfair, and highly bureaucratic (Anderson 2015). Still others have suggested PHPs have power over physicians that is "not necessarily wielded appropriately," indicating that physicians may take litigious action against the PHP to contest a recommendation (Boyd 2015; Boyd and Knight 2012). While not without their challenges, when studied, PHPs are effective in leveraging physicians' overall strengths to help them save their professional identities, and sometimes their lives (Chesanow 2015). Further, despite their detractors, data indicate that involuntary and voluntary treatments have similar rates of efficacy. There is no doubt that well-functioning and adequately staffed PHPs can help physicians with performance problems, but they can also be made better with consistent transparency, predictable processes, and oversight (Boyd and Knight 2012).

Given the inconsistency and sometimes narrowness of mission and rigidity in physician programs, it is imperative that physicians who might consider identifying a colleague as impaired have knowledge of local standards and consequences for reporting as well as the knowledge to identify the most appropriate referral (Boyd 2015; Candilis 2016). The same impairing (or potentially) impairing condition or troubling behavior may not be of interest to a licensing board or physician health program in one state, but may trigger some kind of surveillance or qualify as grounds for sanction with other state boards (Walker 2004).

5.6   Peer Review and Licensing Board Adjudication

If a physician colleague continues to practice in an unsafe manner due to "organic illness, mental or emotional disorders, deterioration through aging, or loss of motor skills… or abuse of drugs, narcotics, chemicals or other similar types of material," (Council on Mental Health 1973) despite reasonable offers of assistance, the concerned colleague may report the physician to a peer review organization or state medical licensing board (Meyer and Price 2012).

Peer review processes typically begin because of a complaint received by one of the organizations to which the physician may belong or by which he or she may be employed. This complaint may arise from a patient, staff member, physician colleague, or other person directly observing behavior that he or she believes to be possibly indicative of impairment. When such a complaint is received, a review of the alleged incident will occur using the organization's code of conduct. This code will serve as the standard by which physician behavior is judged, since the physician is deemed to have voluntarily subscribed to the code of conduct by virtue of membership. Peer review may involve review of the current incident and that of prior incidents, and require guesses about future conduct. Peers may impose conditions on practice such as clinical supervision, limitations in credentialing, cognitive interventions, and medical treatments.

The processes of peer review organizations and boards are generally protected from disclosure and the peer reviewers will generally be protected from civil liability arising from their actions, so long as due process is accorded the identified physician or respondent in the matter (Murray 2012). Findings of peer review processes may be reportable to other members of the organization, third party payers, the National Practitioner Database, and/or the relevant state medical board without the benefit of a full hearing or physician-respondent representation (Meyer and Price 2012).

State boards vary in structure and function from one jurisdiction to another. In general, medical boards have been staffed by physicians and served to limit the numbers of physicians practicing to those of recognized credentials and exceptional moral standing and physical fitness (Federation of State Medical Boards of the United States 2014; Hamowy 1979). The shift from punishing physicians for violations of medical practice attributable to treatable medical condition to a remedial and preventive approach is sometimes termed the impaired physician or sick doctor

movement (Nesbitt 1970; Stimson 1985). The first "sick doctor" statutes were passed in Florida and Texas in 1969 and 1971 and allowed medical boards to intervene in situations in which there was alleged physician impairment, but before there had been a specific overt act that violated the medical practice act or injured a patient. Many states followed suit (Mossman 2011). Although these laws were a step forward in preventing harm to patients and in diverting ill physicians into treatment as opposed to applying disciplinary actions (Magnavita 2007; Sudan and Seymour 2016), some authors express concern that the move away from punitive sanctions to rehabilitative sanctions has been less than successful due to high rates of repeat sanctions (Grant and Alfred 2007). Advocates for physicians also express concern about these laws because physicians have given implied consent for both a nonconfidential, coerced evaluation and the release of all of the physician's personal healthcare records to the medical board upon a finding of "probable cause" of impairment (Council on Mental Health 1973).

Once a showing is made that probable cause exists for an objective investigator to conclude that a physician is impaired (i.e., incapable of practicing medicine safely and competently owing to physical or mental illness or injury), the physician may be required to submit to a diagnostic physical, medical, or psychiatric evaluation (Federation of State Medical Boards of the United States 2014). The scope of the diagnostic evaluation and the qualifications of the practitioner performing such an evaluation vary greatly across practice situations and jurisdictions in which this kind of referral might occur. The level of confidentiality afforded the evaluation process, and potential consequences of findings, are highly variable and range from helpful to punitive. This variability contributes substantially to the reticence of physicians to identify and address impairment in themselves and their colleagues (Boisaubin and Levine 2001; Gunter 2016).

5.7   Fitness to Practice or Fitness for Duty Evaluations

This section outlines the process of the fitness for duty evaluation of physicians in a manner consistent with the American Psychiatric Association Resource Document Guidelines for Psychiatric "Fitness for Duty" Evaluations of Physicians (2004) supplemented by additional research (Anfang et al. 2005; Anfang and Wall 2006; Meyer and Price 2012; Wall 2005; Wettstein 2005; Williams and Flanders 2016) and author experience and opinion.

Although some regulatory processes treat a health diagnosis as synonymous with actual or threatened impairment, the two concepts are quite different. Ill physicians may be quite able to function early in the courses of their illnesses, may maintain function through the use of ancillary services and other accommodations, and may recover function through treatment even if impairment occurs (American Academy of Addiction Psychiatry 2008; Boisaubin and Levine 2001; Federation of State Physician Health Programs 2008). It is therefore imperative for the evaluator to have sufficient information about the alleged impairment and to directly correlate symptoms of illness with functional impairment.

The evaluator should not agree to conduct a fitness for duty evaluation involving a physician with whom he or she has had current or past personal or job-related involvement and should avoid assuming the dual role of treatment provider and forensic evaluator (Anfang and Wall 2006). Any questions related to areas of potential (actual or perceived) bias or conflict of interest should be addressed early in the retention process.

The evaluator should be circumspect about accepting any physician self-referrals for matters that may involve credentialing or licensure, yet self-initiated evaluations may also provide the opportunity for the physician seeking evaluation to learn more about his or her own strengths and weaknesses. It may also facilitate engagement in treatment and appropriate long-term planning (Williams and Flanders 2016) that might forestall a more intrusive disciplinary proceeding or prevent harm to the physician or his or her patient. If a physician presents for treatment with a licensure or regulatory concern then the physician healthcare provider might well decide, with the physician-patient, to limit the service provided to clinical care and recommend that the physician-patient seek answers to legal or regulatory questions with the assistance of a retained attorney.

A request for a fitness for duty evaluation may come from a supervising physician, hospital medical staff office, physician peer review committee, a physician wellness program, an insurance company, a licensing board, or an attorney. The purpose of the evaluation will vary by referral source. In some situations, the requesting party may have as a goal to identify strategies to improve performance of an alleged impaired provider in the workplace and forestall future problems with patient safety. In other situations, the requesting party may be attempting to determine whether sufficient evidence of impairment exists to consider disability benefits for the physician, or deny the physician licensure, privileges, insurance coverage, or credentialing.

The scope of the report will vary depending on the questions asked. The level of privacy protection offered to the report of the evaluation will depend on its intended use. Regardless of referral source, typical questions for fitness for duty evaluations include whether the physician:

1. exhibits signs or symptoms of a physical or mental disorder that render him or her unable to perform the essential duties of his or her occupation in a safe and consistent manner,
2. poses a risk of harm to him or herself or others either through action or neglect of action,
3. is in need of treatment (or receiving adequate treatment) or monitoring to enhance or preserve his or her ability to work, and
4. could work safely with or without restrictions or accommodations.

Additionally, individuals or agencies requesting fitness for duty evaluations may have questions about the type of treatment most likely to remediate documented functional impairments as well as the individual's warning signs for relapse. Some referral

sources may ask for the full evaluation to be included in the report that also addresses specific questions, while other agencies may request brief summative responses only to very specific questions. In either circumstance, the physician being evaluated should be notified of the anticipated extent of disclosure at the time of the evaluation.

After receiving a written request from the referring source or agency detailing the particular questions to be addressed, expected timeframe of the evaluation, anticipated use of the evaluation, and payment details, an evaluating physician should ensure that he or she has the objectivity, skills, and time necessary to complete a fitness for duty evaluation. The evaluation process may become complex or time-intensive if there are needs for multiple evaluation sessions or additional consultations. Additionally, report writing may be time-consuming if a comprehensive report has been requested. Regardless of length, the report must be well documented and focused on the referral questions. The report should disclose the information necessary to answer the questions and support the reasoning used to reach these answers but disclose no more protected health information than is needed to accomplish these tasks. In the case of a brief report, it should be noted that a complete evaluation was undertaken but disclosure will be limited to the questions for consultation, and indicate the role of the person who made that request.

The questions asked, frame of reference for the evaluation, and level of confidentiality protections in place will vary by referral source. State medical board investigators may be individuals who do not know the physician alleged to be impaired, yet are part of a process of considering whether action is taken against an individual's license or whether the individual has complied with mandated treatment. The evaluation and report are typically quite detailed in medical board investigations. Although technically peer review activities, the primary concern of those involved in this process is protection of the public from the impaired physician. The confidentiality protections for these reports vary greatly by jurisdiction, but they generally enjoy a higher level of protection than other kinds of fitness for duty evaluations. On the other hand, hospital medical staff offices, physician health committees, and peer review committees may be comprised of people who know the individual well. In the usual situation, these entities are more interested in the health of the medical staff member and remediation of any performance difficulties as opposed to seeking public reprimand, sanction, or exclusion from the practice of medicine. There are, however, fewer confidentiality protections and due process rights than in the more formal medical board matters, and the referral source may be more interested in having a list of potential remedial actions aimed at keeping the provider in the workplace safely.

Ideally, the evaluator would have experience in the evaluation and treatment of physicians so that he or she could refrain from a natural tendency to overidentify with the physician evaluee, or become distracted by the sometimes antagonist style physicians alleged to have an impairing condition may bring to the evaluation situation (Wettstein 2005). The evaluator should consider using a written informed

consent process that would include the information provided to the physician being evaluated about the scope and use of the evaluation. Both recordings of evaluations and third party observers should generally be avoided in evaluations of this type, unless agreed upon in advance, as these may adversely affect the evaluation process (Anfang and Wall 2006). Regardless of the ultimate decision made, documentation of consent or refusal of observers and recordings should be made on the consent forms used for the evaluation process.

Since the evaluee may be motivated to minimize symptoms or signs of impairment, or may suffer from a condition characterized by limited insight, the evaluator will necessarily rely on collateral information in trying to reach an objective and reliable opinion. The evaluator should clarify with the referral source the expectations and process for the gathering of collateral information not provided by the referral source or contained within the planned evaluation sessions. The clinician assessing fitness for duty may request additional health records, training records, hospital peer review proceedings, professional liability insurance claims, prior patient or staff complaints, actions by state medical boards, actions by specialty associations, and/or complaints of others in the practice environment. The evaluator may also ask for information from those who work closely with the physician being evaluated or know him or her well. Ideally, these records would be provided by the retaining agency. When considering independent collection of this information, evaluating physicians should obtain the consent of both the evaluee and the retaining agency prior to gathering records or conducting collateral interviews.

At the outset of the evaluation process, the evaluator should inform the evaluee of the nature and purpose of the evaluation, relationship with the retaining agency, nonconfidentiality of the evaluation, and indeterminacies that might exist about how the evaluation might be used. The evaluator should explain that he or she is not providing medical care to the evaluee and is providing only the service of evaluating the individual on the questions to be addressed. Ideally this statement of a very limited doctor-patient relationship should be offered in writing and signed by the evaluee. In such a document, the evaluator may also state explicitly that he or she will not be offering treatment, and that the evaluation is not a substitute for adequate medical or mental health care. The evaluee should further be told that his or her participation in the evaluation is voluntary (though the evaluation itself may have been coerced in the view of the physician being evaluated), that he or she is not required to answer all questions or provide information, and that he or she may take breaks at any time. The evaluator should detail the anticipated scope of the evaluation and report and the way in which refusals to provide information will be handled by the evaluator. The evaluator should also reflect that he or she will assess the medical issues inherent in the questions asked, but that final decisions concerning employment, privileging, licensure, insurance coverage, or other matters that might be influenced by the information contained in the evaluation are in the hands of the retaining agency.

In addition to completing a thorough review of the available record, a complete evaluation would include a careful history specifically related to work history and occupational performance problems. The evaluator should pay particular attention

to the nature of the complaint and the situation in which the complaint arose, paying special care to the potential value judgements inherent in the complaint and the physician response to it. Next, a thorough evaluation of the applicable body systems should then be undertaken. Laboratory assessment or other inquiries about an eval-uee physician's medical condition may be helpful in clarifying issues related to substance use disorders or metabolic issues that may impact functional perfor-mance. Neuropsychological screening is strongly recommended, as previous research suggests that physicians referred for issues related to impairment have a higher frequency of cognitive dysfunction than those not referred (Korinek et al. 2009). Structured assessments of personality function, symptomatology, distress, or impairment may also usefully add to the evaluation by providing objective data not reliant on the physician's engagement in the interview. The utility of this approach will vary and be somewhat dependent on the questions being asked. The use of structured assessment might also provide a way to follow the individual's progress through the process of treatment.

A detailed suicide risk assessment should be performed as part of the fitness for duty process involving physicians, as referral alone has been associated with a greater risk of death by suicide and may be heightened by a finding of incapacity (Iannelli et al. 2014). While traditional demographic tools failed to differentiate those who died by suicide from those who did not, poor compliance with treatment and benzodiazepine dependence appeared to be predictive in this group (Iannelli et al. 2014). Importantly, physicians who had been on medical leaves frequently described feelings of emptiness, a sense of feeling like a failure, and fearfulness about loss of income, in addition to feeling at a loss for how to spend their time, and isolated from their colleagues and friends (Henderson et al. 2012). They described spending their entire lives training and practicing medicine and not having a core sense of self apart from their occupation (Henderson et al. 2012).

If there is a finding of a symptomatic disorder impacting the physician's ability to perform his or her duties safely, the evaluator may be asked to comment on whether the current treatment offered to the physician being evaluated is adequate to improve or preserve his or her ability to practice. The evaluator may also be asked to outline the general prongs of a treatment plan to remediate the disabling symptoms. The evaluator may further be asked to form opinions on full versus lim-ited duty, specific limitations, or accommodations that might allow the physician to function safely in the work environment. Should the evaluator determine that the physician lacks the ability to practice safely owing to inadequate knowledge, train-ing, or skill (not impairment), he or she may suggest that the retaining agency refer those physicians for educational evaluations and remediation.

When considering recommendations for treatment and return to duty, the evaluator should not underestimate the challenges facing a physician attempting to return to work after a period of disability or incapacity (Henderson et al. 2012). As recognition of impairment occurs earlier and treatments become more effective, one could reasonably anticipate that the number of physicians with complex condi-tions will return to work more rapidly. Therefore, it is imperative to address both real and perceived barriers to returning to practice after a period of illness or

impairment. One such impediment is the sense of invincibility that has been a prominent part of the professional identity of many physicians. Other impediments include difficult work conditions that do not allow for a gradual return to increasing levels of duty, a threshold view of impairment that does not allow for notions of partial impairment, and overcoming a culture of working while ill that caused physicians to presuppose their colleagues would react negatively to their time away from duties. Addressing these additional issues will be key for the development and maintenance of the physician workforce. Evidence-based strategies facilitating physician return to work include competent and compassionate care, physician insight and desire to return to work, clear channels of communication, clear pathways for skills remediation where necessary, a full range of support services, and flexibility or accommodations in duties during the transition to return to work (Cohen et al. 2015).

Lastly, and perhaps more importantly, the physician advocacy, credentialing, peer review, licensure, and physician health organizations must work together to promulgate consistent and transparent standards and procedures for addressing concerns about physician health as related to practice. The evaluation process should operate in a context in which the physician feels supported while also fulfilling the purpose of objectively assessing the physician's abilities and limitations (Howe 2016). Individual physicians, and those regulating physician behavior, should anticipate periods of incapacity and minimize barriers both to its recognition and remediation. Peer review organizations, state licensing boards, and/or medical malpractice carriers could identify and pair physician peers with those being investigated to answer questions and provide professional support to their colleague before, during, and after a finding of impairment. This is an area ripe for the collaboration of physician advocacy organizations, occupational health professionals, and physician employers.

5.8   Conclusion

Physicians are responsible—ethically and legally—to ensure that patient care is provided in a safe manner. Additionally, health systems have an affirmative obligation to provide for the identification of impaired physicians and referral to treatment if necessary. When a physician is not able to deliver patient care safely due to poor mental or physical health, the physician may be impaired. There are several challenges when dealing with physician impairment, including the manner in which impairment is identified, reported, and handled. Physician evaluations to assess fitness for duty ought to be conducted by experienced providers familiar with the struggles medical professionals face, but independent of both the individual physician's collegial network and the investigating agency. The goals of the evaluation include an assessment of the health of the physician evaluee as it relates to his or her ability to practice medicine safely in the specific situation in which he or she works. If workplace modifications could assist the physician, then those recommendations

should be made, in addition to any treatment recommendations that the individual physician may need. If a leave is recommended, then the evaluator should anticipate the difficulties inherent in both leaving and returning to the workplace after a leave from practice when making recommendations.

5.9   Key Points

1. Physicians have a responsibility to maintain their abilities to practice medicine in a safe and competent fashion and to manage potential sources of incapacity.
2. Physicians have a responsibility to patients and to the profession to intervene in situations in which they believe themselves or their peers are impaired.
3. Medical boards, peer review organizations, physician health programs, credentialing agencies, and liability insurance companies could improve physician health by adopting uniform definitions of health conditions of concern and providing advance notice of the range of likely responses to the reporting of those. It follows that methods of reporting concerns and evaluating physicians' ability to safely practice medicine should also be uniform and confidential, not anonymous.
4. States should provide access to confidential and voluntary services to the physician workforce to address physician concerns for their own health and the health of their peers.
5. Evaluations of physicians facing complaints and allegations of impairment should be sensitively performed by knowledgeable and experienced practitioners understanding the nature and frame of the complaint as well as the physician's symptomatology, the evaluee's strengths and weaknesses, and the strengths and weaknesses of the practice settings. Appropriate interventions then flow from this formulation and are individualized and practical.

Glossary

Disability A physical or mental disorder that limits one or more major life activities. The Americans with Disabilities Act (ADA) makes it unlawful to discriminate against a person who meets job requirements and can perform the essential functions of a job with or without reasonable accommodation.
Disruptive physician behavior A practice pattern—frequently resulting from maladaptive coping skills or personality traits—that interferes with a physician's effective clinical performance, namely hostility, temper outbursts, demeaning comments, abusive behavior, and intimidating behavior. Such behaviors may also result from a mental health or substance use disorder (see also Chap. 3).
Fitness for duty Ability to do essential job functions.

Impaired Physician (also Impaired Provider or Malfunctioning Doctor) A physician who is unable to perform patient care tasks in a safe manner due to a physical or mental disorder, including substance use disorders.

Peer review Process by which physicians review the work of physician peers who have been identified as having a practice problem or about whom a complaint has been filed.

Physician burnout Emotional exhaustion, depersonalization, and diminished sense of personal accomplishments resulting from chronic exposure to workplace stressors, which may affect physicians at any point during their careers (see also Chap. 1).

Physician Health Programs (PHPs) Programs that, operating independently in each state, may offer monitoring services and/or treatment referrals to physicians. The scope of practice, role, and regulations of PHPs differ from state to state (see also Chap. 12).

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Part II

Underlying Clinical Problems

Physician Mental Health: Depression and Anxiety

6

Kathryn Baker, Ricks Warren, James L. Abelson, and Srijan Sen

Contents

Abstract

In this chapter, the common and often comorbid illnesses of depression and anxiety in physicians throughout their professional trajectory are discussed, through a consolidated review of the literature and through a clinical lens. The epidemiology is discussed in detail, as physicians are known to have elevated rates of depression and anxiety as compared to the general population, with particularly alarming differences during medical school and residency. Additionally, several unique features of these illnesses in the physician population are discussed, such as the psychological contributors, barriers to accessing treatment, impact on the provision of healthcare, and impact on career satisfaction and quality of life.

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Next, the relevant developmental concerns related to physician depression and anxiety are discussed, particularly highlighting the high-risk period of medical training. And finally, treatment interventions that address physician depression and anxiety are explored, both at individual and programmatic levels, along with potential future directions for ongoing efforts to reduce the negative footprint that physician depression and anxiety otherwise have on this field and its practitioners.

6.1   Epidemiology

Depression and anxiety are among the most common mental illnesses in adults. They are especially common in physicians, particularly during their training, when physician rates of depression increase substantially, and easily exceed those of age-matched controls (Brazeau et al. 2014; Dyrbye et al. 2006, 2014; Mata et al. 2015; Rotenstein et al. 2016). Physician depression has been more extensively studied than anxiety, though both entities are common and significant in the lives of physicians. Furthermore, despite high rates of symptoms and disorders, coupled with above average medical knowledge about standards of care, physicians' rates of treatment seeking are relatively low, creating problems for the profession.

Much of the data on physician depression focuses on medical students and resident physicians. Relative to their peers (US college graduates aged 22–32), medical students ($n = 4402$) show higher prevalence of emotional exhaustion, depersonalization, burnout, and fatigue (Dyrbye et al. 2014), and are more likely to exhibit symptoms of depression (Dyrbye et al. 2014; Rotenstein et al. 2016). Psychological distress, often in the forms of anxiety and depression, is also a very common experience for medical trainees, affecting 42% of them in another study (Matheson et al. 2016). As in the general population, females are more affected than males (Dyrbye et al. 2006; Matheson et al. 2016; Baldassin et al. 2008). A comprehensive review and meta-analysis ($n = 129,123$ medical students in 47 countries) has shown depression to be a very common problem (27.7% screening positive), with rates well above population norms. Importantly, the depression rate rises dramatically with the onset of medical school, suggesting that the training, rather than characteristics particular to physicians, is the driving factor behind the high depression rates (Rotenstein et al. 2016).

As they move on to residency and fellowships, medical trainees continue to screen positive for depression at high rates, and are also more likely to report higher levels of fatigue, emotional exhaustion, depersonalization, and burnout (Dyrbye et al. 2014). Rates rise dramatically from the relatively low-stress period at the end of medical school (3.9%), reaching an average of 25.3% during the internship year (Sen et al. 2010). Meta-analytic review confirms the high rates of resident depression (28.8%; $n = 17,560$), with similar rates across specialties, postgraduate year, and country of practice (Mata et al. 2015). It is clear that physicians in training, both

in medical school and residency, face significant mental health challenges as they ascend the ranks.

Compared to physicians in training, depression rates between practicing physicians and appropriate population control samples are similar; however, early-career physicians continue to report a higher prevalence of emotional exhaustion, depersonalization, and burnout than their peers (Dyrbye et al. 2014). Given this conflicting information, more data are needed to better understand the nuances of emotional well-being and mental health in practicing physicians as they move through their career trajectory.

Anxiety has been less well studied than depression in physicians, though it is often folded into reports on "psychological distress." This provides information that is less diagnostically precise, but is still useful. A review of 40 studies looking at psychological distress in medical students revealed increased rates of both trait anxiety and symptoms of anxiety as measured by other scales in this population when compared to the general population (Dyrbye et al. 2006). It also suggests higher rates of anxiety in female compared to male medical students (Lloyd and Gartrell 1984; Hojat et al. 1999). Though the original reports of these gender differences are dated, they are consistent with the gender differences seen in the general population (Mclean and Anderson 2009; Mclean et al. 2011).

The problem of imprecision in researching anxiety diagnoses is well illustrated by a review article examining English-speaking medical students outside of North America (Hope and Henderson 2014). Though anxiety prevalence was examined in 11 studies, 7 different anxiety assessment tools were used, with wide-ranging prevalence rates of 7.7–65.5%. With one notable exception (Samaranayake and Fernando 2011), specific anxiety disorders were not formally examined, and often symptoms and diagnostic entities (e.g., generalized anxiety disorder) were not differentiated, making cross-study comparisons or summaries quite difficult. Higher quality studies generally showed lower prevalence rates for both depression and anxiety, but a deeper understanding of anxiety disorders among physicians awaits more well-structured research.

Suicidal ideation and behaviors are also a serious problem among physicians and physicians in training. These are covered in greater detail in Chap. 4 of this book, but their importance and close connection to depression warrant mention here. Suicide rates are substantially elevated in physicians relative to their peers, and most dramatically in female physicians, who take their lives at a rate that is 130% higher than nonphysician women. For males, the rate is 40% greater among physicians than nonphysicians (Schernhammer and Colditz 2004; Schernhammer 2005). Medical students and residents endorse the presence of suicidal ideation at alarming 12-month rates (9.4–11.2% of US medical students and 8.1% of residents) (Dyrbye et al. 2008, 2014). The largest review and meta-analysis to date reports that 11.1% of the medical student population endorses suicidal thoughts during medical school, even though rates of treatment seeking are low (Rotenstein et al. 2016). Rates of suicidal ideation are even high among practicing surgeons (lifetime prevalence of 14.9%), where treatment seeking is also rare (Shanafelt et al. 2011) (barriers to treatment are discussed later).

The problem of suicidal ideation in physicians transcends national boundaries. In Norway, 51.1% of practicing physicians reported feeling that "life is not worth living" on one or more occasions, with 10.4% seriously considering suicide and 1.6% making at least one attempt (Hem et al. 2000). These rates are similar in Germany, suggesting that elevations are not primarily shaped by geographical and cultural determinants (Rosta and Aasland 2013). Risk factors include being female, living alone, having symptoms of depression (Hem et al. 2000), plus low subjective well-being, poor self-rated health, and high psychosocial work stress (Rosta and Aasland 2013). Given that rates of reported depression decline and quality of life improves as trainees move into practice (Dyrbye et al. 2014), persistent high rates of suicidal ideation, attempts, and completed suicide, and low rates of treatment seeking, are surprising and concerning. These problems among trainees are attracting increasing attention (Rotenstein et al. 2016), but efforts to identify causes and preventive interventions among practicing doctors are also needed.

In summary, the epidemiological data suggest that rates of anxiety, depression, and suicidal ideation are high for doctors at all levels, from early training to established practice. These rate elevations may be partially related to the challenges of medical training and practice, as high rates of depression and suicidal ideation begin in medical school (Rotenstein et al. 2016), and persist through residency years (Mata et al. 2015). Though depression rates are less strikingly elevated in practicing physicians, who also endorse a better quality of life (Dyrbye et al. 2014), the persistence of elevated rates of physician suicidal ideation, attempts, and completion into practice years is concerning (Schernhammer and Colditz 2004; Schernhammer 2005; Shanafelt et al. 2011; Hem et al. 2000; Rosta and Aasland 2013). These data indicate that although there are fluctuations along a physician's career trajectory, there are also general factors contributing to the persistent presence of depression and anxiety across all levels of experience and specialty.

6.2 Unique Aspects of Physician Depression and Anxiety

While the symptoms of depression and anxiety in physicians are no different than in the general population, there are aspects of these illnesses that uniquely impact diagnosis and treatment of the physician population, and the populations they treat. These include psychological contributors to the development of depression and anxiety, barriers to accessing effective treatments, and impacts on the provision of health care.

6.2.1 Psychological Contributors

High levels of drive, dedication, and self-discipline are needed to complete training in medicine. These capacities are often associated with high loading of character traits such as neuroticism, perfectionism, and self-criticism. While these traits can have adaptive value in a profession where performance expectations are extremely

high, they are often problematic at extreme levels (Peters and King 2012). Neuroticism, characterized by elevated stress reactivity and frequent experience of negative emotions, is a well-established risk factor for psychopathology rooted in developmental gene-environment interactions (Barlow et al. 2014). When people with these characteristics are placed in high demand, high-stress environments, depression, and anxiety are predictable outcomes; and, in fact, there is growing evidence that neuroticism, perfectionism, and self-criticism are significant contributing factors to the development of symptoms of depression and anxiety in physicians (Sen et al. 2010; Brewin and Firth-Cozens 1997; Tyssen and Vaglum 2002; Gramstad et al. 2013; Fried et al. 2014).

Neuroticism is associated with and predictive of diverse forms of psychopathology (Kotov et al. 2010; Zinbarg et al. 2016), so it is not surprising that it is associated with depression in medical interns and residents (Sen et al. 2010; Gramstad et al. 2013; Fried et al. 2014; Tyssen et al. 2001) and in practicing doctors who are 2, 10 (Brewin and Firth-Cozens 1997), 12 (McManus et al. 2004), and 15 years out of training (Grotmol et al. 2013). Components of this include maladaptive perfectionism and self-criticism (Dunkley et al. 2006; Enns et al. 2001; Clara et al. 2003; Costa and McRae 1992), which also contribute significantly to the development of depression and anxiety in physicians across medical specialties (Brewin and Firth-Cozens 1997; Firth-Cozens 1998; Grotmol et al. 2010; Blatt 1995).

Given the ability of self-criticism to predict subsequent depression, and its associated potential as a preventive target for intervention, its origins warrant consideration, though much of the existing discussion of this has been psychological and theoretical in nature. The general theme of the discussion links this trait to critical parenting (Brewin and Firth-Cozens 1997; Fried et al. 2014; Kotov et al. 2010; Zinbarg et al. 2016), which developmentally shapes self-critical attitudes and is associated with unrealistically high standards for achievement, hypersensitivity to negative evaluation, and chronic fears of external disapproval, criticism, and loss of acceptance (Blatt and Zuroff 1992; Zuroff et al. 1995). These attitudes and fears may later be reactivated by the demanding and sometimes harsh, humiliating approach used in medical training (Firth-Cozens 1992, 1998; Allen 1988; Baldwin et al. 1991).

These characteristics likely resonate with many physicians who have struggled with both anxiety and depression. The self-critical physician may be particularly vulnerable to perceptions of not living up to high, internalized standards of performance, or to expectations of colleagues and senior physicians. In response to perceived failures, the self-critic may react defensively with guilt or shame, and rather than seeking social support may instead withdraw into anxious and depressive states. Physicians in general (not just those selected for high self-criticism) report feelings of guilt, self-criticism, depression, fear, and diminished self-worth following medical errors (Waterman et al. 2007), and the inevitability of at least an occasional medical error is likely to be particularly devastating to self-critics, who are very fearful of mistakes and of the potential disapproval of others.

The perfectionistic variant of obsessive-compulsive personality disorder and obsessive-compulsive disorder may have uniquely negative consequences on

physician well-being, given the sacred Hippocratic oath to "first do no harm." Though this has not yet been empirically examined, mistakes in medicine do inevitably occur, and many physicians feel compelled to deploy a series of safety strategies in an effort to ensure that these errors are never made. This may include obsessional thinking about having "missed" something that could place a patient in harm's way, associated with compensatory behaviors such as compulsive, repetitive checking of orders from home, difficulty acting when it is clear there is not one "right" medical decision, and assuming primary and excessive responsibility when a system-based error occurs. Many physicians expect that they should know everything about every single patient, despite high patient loads and complexity of medical care in 2017. Furthermore, with the advent of electronic records and the increased accessibility to and scrutiny of physician notes, obsessive-perfectionistic traits can contribute to increased anxiety about medical documentation, with physicians who are unable to keep up with record-keeping expectations due to their time-consuming drive to write "perfect" notes. Cognitive-behavioral and exposure-based therapies appear to be helpful in treating this problem, but may not be readily available to most physicians. Scientific investigation into this phenomenon may well be warranted.

In summary, there are relevant psychological contributors to the subsequent development of depression and anxiety in physicians, such as self-criticism, perfectionism, and neuroticism, and these are important factors to explore and address when treating this population.

6.2.2   Access and Barriers to Treatment

One of the most striking features of depression and anxiety in physicians is that, despite high prevalence rates and growing awareness that these illnesses create substantial impairment, the rates of treatment seeking among physicians are remarkably low. Barriers to seeking treatment include practical concerns such as time limitations and lack of convenient access (Guille et al. 2010), as well as psychologically mediated fears related to perceived stigma of mental illness in this population (Kay et al. 2008; Davidson and Schattner 2003), and its impact on medical licensure (Gold et al. 2016). To improve these rates, the multiple barriers to accessing care must be addressed, though we will focus our attention on the psychologically mediated fears here.

6.2.2.1 Stigma
The impact of perceived stigma is perhaps most strikingly manifest in the tendency among physicians to avoid formal treatment, using informal avenues when they do seek help. A review of 26 articles on the topic of physician health (23 surveys and 3 qualitative studies) across the UK, North America, Australia, and Europe showed that informal or "curbside" consultations are common among physicians, with over a third of physicians utilizing this form of care (Kay et al. 2008). Many others obtain prescription medications from colleagues (Campbell and Delva 2003), while others

self-diagnose and self-treat (Davidson and Schattner 2003; Montgomery et al. 2011), the latter group avoiding both formal and informal discussion of mental health issues with another physician altogether (Davidson and Schattner 2003).

To offer an explanation for why physicians seem to avoid reasonable standards of care related to their own mental health, embarrassment (Kay et al. 2008) and anxiety about confidentiality (Guille et al. 2010; Davidson and Schattner 2003) are prominent for mental health problems, and doctors are often reluctant to seek help for "less defined" ailments, such as stress, sexual difficulties, and "drinking too much" (Kay et al. 2008). Avoidance may also be related to difficulty relinquishing control and accepting the patient role. Furthermore, the severity of illness seems to be inversely correlated with treatment seeking, as physicians with moderate to severe depression are 2–3 times more likely to self-diagnose and self-treat than those with mild to moderate depression, with a corresponding difference in concern about confidentiality (50.7% concerned in the more severe group versus 17.3% in the less severe group) (Schwenk et al. 2008). If those with more severe illness are more concerned about confidentiality and more likely to self-treat, this strongly suggests that a sense of stigma associated with having a "serious" depression is playing a role in the avoidance of appropriately pursuing outside help.

6.2.2.2 Medical Licensure

Concerns about the potential impact of mental health diagnoses and treatment on medical licensure and credentialing applications also weigh heavily on the minds of many physicians (Gold et al. 2016). Unfortunately, this concern is sometimes valid, with questions pertaining to the mental health of applicants appearing on 86% of state licensing board applications, creating a sense of risk in acknowledging their presence. Some of these applications arguably violate the Americans with Disabilities Act (Appelbaum 2015; Schroeder et al. 2009; Miles 1998), and there is substantial inconsistency across state medical boards about mental health reporting expectations; furthermore, a substantial percentage of physicians are not well informed about their states' requirements in the first place (Gold et al. 2016).

Beyond posing the questions, what actions states subsequently take with mental health information varies, and this also creates uncertainty and anxiety for physicians. If a physician discloses depression or anxiety to his/her licensing board, he/she may be required to submit a letter from the treating provider that documents fitness to practice, to appear before state board examiners, to provide medical records, to enroll in a Physician Health Program, to pay for inpatient or outpatient treatment followed by long-term monitoring, or to agree to restrictions of practice (Gold et al. 2016). Clearly, there are risks in both disclosure and non-disclosure, so avoiding evaluation and treatment may seem like the most viable path to many.

There is a potential conflict in values in this instance, since licensing authorities are obligated to protect the public from impaired professionals, and public policy objectives do not permit discrimination against those with disabilities, including psychiatric disabilities (Appelbaum 2015). Ultimately, if the consequence of the current system is that physicians fail to seek treatment when struggling with

depression or anxiety, neither objective can be met. Efforts to reduce these types of barriers may well be helpful to both the physicians involved and the patients they serve.

6.2.3 Impact on the Provision of Health Care

6.2.3.1 Medical Errors and Doctor–Patient Relationships

The prevalence of physician depression has led to concerns about its impact on patient care, particularly with regard to rates of medical errors. Data are limited on practicing physicians, but there is evidence among residents that depression is associated with increased frequency of medical errors, both self-reported and objectively measured (Sen et al. 2010; Prins et al. 2009; Shanafelt et al. 2010; West et al. 2011; Fahrenkopf et al. 2008). For example, on active surveillance of pediatrics and internal medicine-pediatrics residents, those who were depressed made more than six times as many medication errors as their nondepressed peers. In contrast, overnight call frequency, practice setting, compensation, and work hours have not been linked to errors (Shanafelt et al. 2010), nor has fatigue (West et al. 2011). Burnout has been linked to self-reported errors (Shanafelt et al. 2010), but not objectively verified ones (Fahrenkopf et al. 2008). This information strongly suggests that recognizing depression among physicians and reducing barriers to treatment are likely critical to enhancing the quality of care that they deliver to their patients.

Depression and anxiety also have potential to negatively impact doctor-patient relationships, and this can undermine health care provision even in the absence of objective errors. Depression in medical residents is, in fact, associated with problematic relationships with patients (Firth-Cozens 1998), as well as with colleagues (Garelick and Fagin 2004). An associated phenomenon is compassion fatigue, which is characterized by depressed mood, feelings of fatigue, disillusionment, and worthlessness (Figley et al. 1995). Health care professionals are particularly vulnerable to stress overload and compassion fatigue due to the often emotionally exhausting environment in which they work, and compassion fatigue among caregivers in turn has been associated with less effective delivery of care (Raab 2014). This phenomenon, in addition to medical errors, warrants ongoing study in efforts to improve the clinical care doctors are able to deliver.

6.2.3.2 Career Satisfaction and Quality of Life

Physician career satisfaction and general quality of life are affected by such variables as gender, specialty choice, and practice environment, but not surprisingly, they are also impacted by burnout, depression, and anxiety (Rizvi et al. 2012; Shanafelt et al. 2009; Roberts et al. 2014). In a survey of US surgeons of varying specialties, 30% screened positive for symptoms of depression and 40% screened positive for burnout. Of all the variables, high burnout was the single greatest predictor of surgeons' dissatisfaction with career and specialty choice (Shanafelt et al. 2009). Furthermore, current depression in physicians has been shown to be associated with the development of negative attitudes toward the medical profession (Mata et al. 2015).

High rates of burnout and depression are also associated with quality-of-life changes not strictly circumscribed to the workplace. Overall quality of life was rated "as bad as it can be" or "somewhat bad" by about 15% of US internal medicine residents (West et al. 2011). Over a quarter of US surgeons have described a general mental quality of life greater than 1/2 standard deviation below the population norm, with over 60% of surgeons asserting that their work schedule did not leave enough time for personal/family life (Shanafelt et al. 2010). In a recent qualitative study, residents who screened positive for depression complained of having no work-life balance at twice the rate of their nondepressed counterparts (Mata et al. 2016). Intimate relationships suffer particularly, with diminishing frequency of sexual activity and quality of partner relationships during residency, irrespective of gender, specialty, or year of training (Sangi-Haghpeykar et al. 2009).

6.2.4   Unique Factors: Summary

There are factors particular to the medical profession that contribute to the high rates of depression, anxiety, burnout, and suicidal ideation among its trainees and practitioners. Aspects of perfectionism and self-criticism are trait factors that may be adaptive for some doctors, but at more extreme levels can also come at a cost of increased stress reactivity and emotional vulnerability. Perhaps interventions could be designed to attack their detrimental consequences, without undermining their value, as a way to reduce rates of depression and distress. Getting physicians to utilize such interventions, however, will require ongoing efforts to reduce stigma and regulatory concerns that likely contribute to the clear underutilization of help that is pervasive among physicians. These efforts are essential because of the costs of untreated depression and emotional distress among physicians, as reflected in potential for medical errors, less effective relationships with patients, reduced career satisfaction, and lower quality of life.

6.3   Developmental Issues

Though physicians of all developmental stages face job-related stress, medical trainees are at particular risk for depression and anxiety. At the beginning of their graduate education, medical students have lower rates of depression and burnout, and a higher overall quality of life relative to age-similar college graduates (Brazeau et al. 2014). However, once immersed in their studies, medical students consistently demonstrate higher overall psychological distress, burnout, and depression than the general population and age-matched peers (Dyrbye et al. 2006, 2014), indicating that the educational experience itself, and not simply preexisting vulnerabilities, generates emotional distress. The largest systematic review and meta-analysis to date reveals a 27.7% rate of positive depression screens among 122,356 medical students, with only 15.7% seeking treatment (Rotenstein et al. 2016), indicating both high illness rates and low treatment rates in this population, which is a particularly concerning combination.

Anxiety has been less thoroughly studied, and the literature on anxiety in medical students is limited by inconsistent measurement tools and variables, as well as a lack of disorder-specific assessments (Hope and Henderson 2014). However, as noted above, medical students do show both increased trait anxiety and increased symptoms of anxiety relative to the general population (Dyrbye et al. 2006), and these rates are higher in female students than their male counterparts (Lloyd and Gartrell 1984; Hojat et al. 1999). More research is clearly needed to further delineate the specific forms anxiety can take throughout medical education.

Factors contributing to medical student psychological distress (which usually involves measures of both depression and anxiety) include academic pressures, financial burdens, student mistreatment, and developing professional cynicism (Dyrbye et al. 2006; Matheson et al. 2016; Stewart et al. 1999; Maida et al. 2003; Woloschuk et al. 2004). Here, too, gender plays a role, with females registering higher levels of psychological distress than males (Matheson et al. 2016). The negative impact of this growing psychological distress appears to be further exacerbated during postgraduate training, with peak levels of emotional distress seen during internship (Sen et al. 2010; Tyssen et al. 2001; Joules et al. 2014). Elevated rates of burnout and depression, relative to age-matched controls, persist during the residency years (Dyrbye et al. 2014).

The persistence and magnitude of elevated depression rates during residency are well documented in a large meta-analysis that shows an overall prevalence of depression or depressive symptoms in 28.8% of 17,560 resident physicians—with similar rates across specialties, postgraduate year, and country of practice (Mata et al. 2015). The impact of the internship year is highlighted by a 15.8% median increase in depressive symptoms within 1 year of beginning training in 4255 resident physicians (Mata et al. 2015). These data further support the hypothesis that medical training is fundamentally stressful for most, and "depressogenic" for a significant proportion of trainees.

Contributors to high levels of depression and burnout in residency include long hours, overnight shifts, debt, lifestyle and job dissatisfaction, and lack of autonomy (Barrack et al. 2006; Block et al. 2013; West et al. 2009; Hoonpongsimanont et al. 2014; Kimo Takayesu et al. 2014). Trainees also have little time to develop aspects of identity unrelated to medicine that could contribute to a solidly grounded sense of self (Perry and Osborne 2003). The potential protection of a secure base of social support is also undermined by diminished quality of relationships (Sangi-Haghpeykar et al. 2009).

These factors, in helping to generate high rates of depression, anxiety, and burnout, also contribute to high rates of suicide. Physicians in general kill themselves at higher rates than the general population (Schernhammer and Colditz 2004). Depression is the most common disorder-related "cause" of suicide (Harwood et al. 2001; Conwell et al. 1996), and the rates of both depression and suicide risk begin to escalate during training. As many as a quarter of medical students report having experienced suicidal ideation at some point in their lives, with 11.2% considering suicide at some point in the past year, as compared to 6.9% of individuals in the general population (Dyrbye et al. 2008; Crosby et al. 1999). The most recent review

and meta-analysis calculated an overall pooled prevalence of suicidal ideation of 11.1% (Rotenstein et al. 2016).

Elevated suicidal ideation persists beyond the training years—specialists in academic medicine show rates that are similar to those seen in residents—but contributing factors may change (Eneroth et al. 2014). Lack of autonomy and experience of disrespect, abuse, and humiliation at work may increase suicidal thinking in physicians (Fridner et al. 2011), and might contribute to the elevated vulnerability seen in residents. The diminished control experienced by residents, relative to established specialists, has not been directly linked to their suicidal thoughts (Fridner et al. 2011), but having an empowering leadership position is a protective factor among residents (Fridner et al. 2011). Further study of contributing factors and their evolution over training and during subsequent career development is important in efforts to find the most fruitful targets for preventive interventions.

In summary, given the high rates of anxiety, burnout, and depression among our trainees, and their impact on elevated rates of suicidal ideation and behavior that persist into the practice years, attention is clearly needed to both the individual and organizational barriers that diminish access to assessment and appropriate treatment during the medical training years. Earlier attention to these issues might not only help trainees as they journey through medical school and residency, but may also reduce downstream elevations in burnout, compassion fatigue, and suicidality that have been documented in physicians in practice, and their associated negative impacts on clinical care.

6.4   Treatment Interventions

With growing awareness of the particular challenges of medical training and the medical profession, and the high rates of depression, burnout, and anxiety among physicians, prevention and intervention programs are increasingly being called for and developed (Mata et al. 2016; Baker and Sen 2016; Regehr et al. 2014). These range from larger organizational programs to brief cognitive-behavioral programs targeting stress management skills. In this section, we highlight the research that has been done in this arena, and suggest possible future directions for helping this at-risk population.

6.4.1   Comprehensive Wellness/Resilience Programs

As Hu et al. (2015) note, "The word 'resilience' originates from the Latin verb *resilire*, or 'to leap back' and connotes the ability to cope adaptively with adversity" (p. 18). Trait resilience is, not surprisingly, negatively correlated with depression, anxiety, and negative affect, and is positively associated with indicators of good mental health, such as life satisfaction and positive affect (Hu et al. 2015). It may also be a key component of well-being and success in medical training (Eley et al. 2013) and practice, where it is associated with self-directedness and persistence,

and negatively associated with harm avoidance, which reflects a temperament prone to anxiety and worry. Therefore, building resilience may be a useful place to start in efforts to reduce vulnerability to the challenges and adversity of medical training.

In this vein, the Vanderbilt Medical Student Wellness Program (Drolet and Rodgers 2010) serves as a good example of a comprehensive organization-wide program. Faculty and students are jointly involved with activities ranging from physical exercise to academic and psychological wellness enhancement. "The mission … is to promote a healthy balance of responsibility and recreation to foster well-being throughout the community," broadly defining wellness as, "reaching full potential and optimal function in five comprehensive aspects of life: physical, psychological (emotional and spiritual), intellectual, social (interpersonal), and environmental" (p. 107). Anecdotal evidence, including feedback from students, suggests that the program improves student lives, though research to assess for impact on depression and anxiety has not yet been published.

Health care providers in practice have also taken notice of the toll taken by emotionally laden aspects of patient care (such as exposure to traumatic experiences and death), and there are increasing efforts to bring these out of the shadows and discuss them in various forums. One example is the Schwartz Rounds Program, which now takes place in more than 500 health care institutions across the United States and the UK, offering health care providers scheduled time to openly discuss the social and emotional issues they face in caring for patients and families, with focus on the humanistic elements of medicine, as opposed to traditional rounds which focus on the science of patient care (Lown and Manning 2010). Folding programs like these into the fabric of health care provision, in addition to programs for medical trainees, may be another way to promote resilience in physicians.

6.4.2 Evidence-Based, Physician-Tailored Interventions

In addition to institutional programs to promote resilience, empirically established treatment approaches are also being adapted to "fit" medical settings and physician-patients, with programs being developed to enhance medical trainee access to evidence-based interventions for anxiety and depression (Baker and Sen 2016). Further efforts to address the barriers that reduce physician utilization of standard treatments are likely to be helpful, but adaptation of these treatments, with newly evolving approaches to the particular context of medical trainees and practitioners, may further extend their impact.

6.4.2.1 Mindfulness-Based Stress Reduction

Mindfulness-based stress reduction (MBSR) is one of the most frequently evaluated and implemented interventions that specifically target stress reduction, theoretically lending itself well to the physician population. Originally developed by Jon Kabat-Zinn to help patients with chronic pain, mindfulness involves the ability to pay attention, on purpose, to the present experience, with a nonjudgmental attitude. MBSR has been shown to reduce stress, anxiety, and depression, and

increase mindfulness and self-compassion, with documented ability to enhance coping in a variety of clinical conditions (Khoury et al. 2015), with particularly robust effects in individuals with anxiety and depression (effect sizes of 0.97 and 0.95 respectively) (Hofmann et al. 2010). When applied to healthy individuals, it produces modest effects on anxiety and depression, though it is important to note that the group benefiting the most was health care professionals (Khoury et al. 2015).

Additional research has shown that MBSR can specifically reduce perceived stress, burnout, and rumination—while increasing empathy and self-compassion—in health care providers, including nurses, medical students, medical residents, and practicing physicians (Regehr et al. 2014; Khoury et al. 2015; Irving et al. 2009; Shiralkar et al. 2013). It may also enhance professional performance. In a randomized, double-blind, controlled study, psychotherapists in training who practiced mindfulness meditation before treating their clients were rated by clients as higher in the areas of therapeutic relationship, ability to solve problems, and clarity of communication during sessions. Those clients, in turn, reported greater symptom reductions (Irving et al. 2009; Grepmair et al. 2007). The evidence would suggest that MBSR may be a particularly useful approach to reducing symptoms and distress, and enhancing professional functioning, in physicians and physicians in training.

6.4.2.2 Other Mindfulness Interventions

Given the time constraints and demands on doctors, fuller utilization of effective interventions may require them to be specifically tailored to this population, to maximize impact while optimizing efficiency. To this end, flexible mindfulness and cognitive behavioral interventions are under development. For example, an abbreviated version of MBSR has been tested in a small sample ($n = 30$) of primary care physicians, with significant reductions seen and maintained (at 9-month follow-up) in stress, anxiety, depression, and burnout (Fortney et al. 2013). Another modified (8-week) mindfulness-based program has been tested in a small sample of physicians ($n = 23$), using an efficient combination of in-person and online tools that allowed participants to access training materials at their own convenience and as frequently as needed (Pflugeisen et al. 2016). It, too, successfully reduced stress and emotional exhaustion while increasing personal accomplishment and mindfulness skills. One larger ($n = 66$), well-controlled trial (8-week, multicenter, single-blind, randomized controlled trial using intention-to-treat analysis) utilized a self-directed mindfulness program (guided mindfulness practices via audio compact disc) for stress management in senior medical students (Warnecke et al. 2011). Compared to a wait-list control, this intervention led to significantly greater reductions in perceived stress and anxiety, and gains were maintained at 8-week follow-up. These studies provide encouraging results for further development of physician-focused, mindfulness-based interventions, adapted to the specific constraints and barriers faced by trainees and practicing doctors. However, much larger studies are still needed, with active control groups and psychiatric outcome measures.

6.4.2.3 Brief Cognitive Interventions

In addition to mindfulness-based approaches, cognitive interventions for physicians have also been tested on a relatively small scale. The Stress Management and Resiliency Training (SMART) program conducted by department of medicine physicians at the Mayo Clinic (Sood et al. 2011) was assessed in a randomized controlled trial comparing SMART ($N = 20$) with a waiting list control group ($N = 12$). Interestingly, the intervention was a single 90-min individual session adapted from attention and interpretation therapy, where participants were taught to pay more attention to nonthreatening aspects of the world, such as novelty, and to shift interpretations involving fixed prejudices to a "more flexible disposition while cultivating skills such as gratitude, compassion, acceptance, forgiveness, and higher meaning" (p. 859). In addition to the attentional and cognitive foci, participants were also taught paced diaphragmatic breathing and asked to practice for 5 or 15 min once or twice a day. Despite the brevity of this intervention, results showed a large effect size, with significant improvements in resilience, perceived stress, anxiety, and overall quality of life (Sood et al. 2011). Positive results were also seen with a group-delivered format provided to radiology physicians, though the effect was smaller, and the authors note that a more intensive, individualized intervention might be needed instead (Sood et al. 2014). Further concretizing the best balance between efficiency, reach, cost, and effect will be an important area for future research.

Web-based delivery may also have advantages among the next generation of physicians in training. One Cognitive Behavioral Therapy (CBT) program has been adapted for delivery via four 30-min sessions on the Web (wCBT) (Guille et al. 2015), and tested in a reasonably large randomized controlled trial (MoodGym, $N = 100$). This trial focused on prevention of suicidal ideation and yielded a 60% reduction in such ideation compared to an attention control group during internship year, with a large effect size (1.97). Follow-up is needed in other settings and with assessment of depressive symptoms and actual suicide or suicidal behavior.

Interventions specifically designed to reduce stress, anxiety, and burnout in physicians and medical trainees have been summarized in a meta-analytic review (Regehr et al. 2014) that included 12 studies and 1034 participants receiving cognitive, behavioral, and/or mindfulness-based interventions. Overall, the interventions were effective in reducing anxiety and burnout, though depression as a distinct condition was not examined in this particular review. Nevertheless, these data support the value of additional efforts to find the optimal and most efficient approaches to addressing burnout, depression, and anxiety, and to promoting dissemination and uptake within the targeted populations.

6.4.2.4 Self-Compassion Interventions

The concept of self-compassion has been attracting increasing attention, within the growing field of positive psychology (Ford et al. 2016; López et al. 2016) and more recently in approaches to mental health treatment (Warren et al. 2016). High self-compassion has been shown to be associated with lower levels of depression and anxiety, perfectionism, fear of failure, and rumination, as well as with positive mental health attributes such as happiness, optimism, wisdom, altruism, and healthy

relationships (Warren et al. 2016; Neff and Germer 2013). Training in self-compassion has shown benefits in both clinical and nonclinical populations (Warren et al. 2016), and can reduce both depression and anxiety, with results maintained at 6-month and 1-year follow-ups (Neff and Germer 2013).

In health care providers specifically, self-compassion is associated with resilience (Kemper et al. 2015; Olson et al. 2015), adaptive emotional regulation (Kemper et al. 2015; Olson et al. 2015), and reduced sleep disturbances (Kemper et al. 2015), and is inversely associated with burnout (Olson et al. 2015). Given evidence that self-criticism is a vulnerability factor for depression in medical trainees and practicing physicians (Brewin and Firth-Cozens 1997; Tyssen and Vaglum 2002; Firth-Cozens 1998), self-compassion training may be useful in providing some protection from anxiety, depression, and general psychological distress in this population, though larger scale, controlled trials are needed to further determine its value.

6.4.3   Summary and Future Directions

To adequately combat the toll taken on individual physicians and health care delivery systems by high rates of anxiety, depression, and other types of psychological distress, extensive efforts to address the needs of physicians in training and in practice are needed. These efforts should include reducing barriers involving both stigma and logistics, creating institutional-level programs that will facilitate access to treatment, enhancing utilization of traditional pharmacological and psychotherapeutic treatments, and further developing and optimizing physician-tailored interventions. Additional program and intervention development is needed, as are larger, well-controlled, longer-term studies to better determine their efficacy. Ultimately, full-scale, prospective implementation and dissemination studies will be needed to find the most impactful, efficient, and cost-effective way to utilize developed approaches to enhance the mental health of physicians at all stages of development.

6.5   Key Points

- Rates of depression and anxiety among physicians are high.
- Elevated rates of depression and anxiety, as compared to population control samples, begin in medical school and continue through residency.
- Medical trainees are among the most well studied along the life span of a physician, and appear to be at particular risk for depression and anxiety.
- Practicing physicians have similar rates of depression compared to population controls, though rates of suicidal ideation and attempts remain higher.
- Anxiety has been less well researched in physicians as compared to depression, though is not altogether missing from the literature.
- Neuroticism, maladaptive perfectionism, and self-criticism are significant psychological contributors in the development of depression and anxiety for many physicians.

- Physicians face many barriers to accessing treatment, such as concerns about licensure and stigma.
- Physician depression and anxiety significantly impact patient care, vis-à-vis medical errors and the doctor-patient relationship.
- While comprehensive wellness/resilience programs may help reduce rates of depression in medical residents and practicing physicians, these programs still await empirical evaluation for effectiveness and have not been tested as prevention programs.
- Mindfulness-based stress reduction (MBSR) and cognitive behavioral therapy (CBT) interventions, on a small scale, have led to improvements in mental health in physicians, though long-term follow-up assessments are not available, and few studies compare treatment groups to active controls.
- Given the evidence that self-criticism is a vulnerability factor for the development of depression in medical trainees and practicing physicians, self-compassion training may be an appropriate target for future depression prevention programs.
- Anxiety and depression are real and serious problems among physicians, undermining their lives and the quality of care they provide; concerted, evidence-based efforts to prevent, treat, and reduce the negative consequences of these illnesses are sorely needed.

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Manic and Hypomanic States

7

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Contents

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Abstract

Manic or hypomanic doctors tend to draw attention. From the gregarious physician sought by her colleagues for her enthusiasm and drive to the doctor who has impulsively purchased his fourth sports car by leveraging his home and office, the terms mania and hypomania imply a broad spectrum of personal and institutional problems. This chapter views the problem of manic behavior among physicians from multiple perspectives at various stages in a physician's career. Key points include thresholds for initial intervention, the impact of mania on a physician's personal development, understanding early versus late recovery, awareness of suicide risk, and the management of a return to work that respects the safety-sensitive nature of medical practice. Composite case vignettes are used and any resemblance to a specific person is not intended.

7.1   Epidemiology and Diagnosis

A recent graduate in internal medicine was identified because nurses reported smelling alcohol on his breath while he was working in the hospital. His Chief of Staff requested that he take a leave of absence to have this issue appropriately dealt with. In accordance with mandatory requirements, the Chief of Staff also made a report to the regulatory authority. The young man was assessed and found to have a significant problem with alcohol. Following discussions with his personal doctor and family, he agreed to attend and successfully completed a residential treatment program. After a few months of good recovery, he returned to work.

Six months later, further problems arose at work. He was described as behaving in an unprofessional manner within his team. His communication style was abrupt and sometimes irritable, and he responded inconsistently to calls from the ward. After a discussion with his Chief of Staff, he was again requested to provide accountability regarding his health status. The unspoken apprehension was that he was drinking again. The physician was understandably stressed by this additional interruption of his work, and the inconvenience to him as well as his colleagues, and he reluctantly agreed to get the requested information. He was now worried about the potential negative impact on his work record.

Evaluation of his recovery from an alcohol use disorder found no evidence of relapse, though the addiction specialist remarked that he was difficult and made inappropriate comments while interacting with members of his therapy group. Thus, he was assessed by a psychiatrist who diagnosed him with type 2 bipolar disorder after carefully reviewing his history and gathering collateral information from family members and the workplace. Ongoing treatment helped him to develop relapse prevention skills both for managing his mood fluctuations and maintaining sobriety. Once stable, he successfully returned to work with the support of his Chief of Staff and departmental chief. Looking back, he was surprised and disappointed that neither he nor anyone else had suspected a comorbid mood disorder.

Conditions with manic or hypomanic symptoms can be roughly divided into bipolar disorders (types I and II and subthreshold conditions) along with a

heterogeneous group of other medical-induced or substance-related conditions. Hypomania or mania related to substance intoxication or withdrawal is important, because it often points to a significant substance use disorder with a high risk of impairment.

Bipolar disorder, defined according to the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5), is a descriptive diagnosis (American Psychiatric Association 2013). No consensus exists on whether it is more helpful to think about this family of conditions as a spectrum or as a group of discrete entities, each with preferred treatment strategies (Angst and Sellaro 2000; Phillips and Kupfer 2013). The DSM-5 subdivides people with bipolar disorder into bipolar I disorder (signifying a history of at least one manic episode), bipolar II disorder (signifying hypomanic and major depressive episodes), cyclothymia (chronic cycles of subthreshold symptoms), and symptom clusters attributable to medications, substances, or a medical condition. The terms, "rapid cycling" and "mixed features", in DSM-5 are illness specifiers. Psychotic symptoms, when present in mania, are typically though not always mood congruent (Fountoulakis 2015).

Incidence and prevalence estimates for bipolar spectrum disorders in the United States range from 3 to 6%, reflecting heterogeneity in survey methods and sample populations (Angst et al. 2002; Judd and Akiskal 2003; Kessler et al. 2006). The 12-month and lifetime prevalences of bipolar I disorder in the United States are 0.6% and 1.0%, respectively (Merikangas et al. 2007). The lifetime prevalence for bipolar II disorder is 1.1% and for cyclothymic disorder it is between 0.4 and 1.0% (Merikangas et al. 2007; Merikangas and Lamers 2012).

There are no definitive studies regarding the prevalence of bipolar disorders among doctors; however, like many health conditions it is reasonable to consider a prevalence somewhat lower than the general population based on the assumption that medical training tends to select out people with more severe forms of disability (Goldberg 1980). That said, some physicians manage to channel subthreshold hypomanic symptoms into functional work activity. Moreover, several reports describe high rates of depressive symptoms (including suicidal ideation) among medical students and residents, and this group is likely at elevated risk for a future diagnosis of mood disorders, including bipolar disorder (Tyssen and Vaglum 2002; Center et al. 2003; Dyrbye et al. 2006; Myers and Gabbard 2008; Goldman et al. 2015). A recent systematic review and meta-analysis estimated rates of moderate depression in residents at 20.9–43.2% (Mata et al. 2015).

Among people diagnosed with bipolar disorder, recurrence is the rule. In the general population, the 1-year recurrence rate is approximately 37 and 58% after 2 years (typically a depressive episode) (Geddes and Miklowitz 2013; Fountoulakis 2015). Among bipolar patients followed in the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD) study, 48.5% had recurrence within 2 years with twice as many being depressive episodes (Perlis et al. 2006). Practicing physicians diagnosed with a recurrent mood disorder (50% bipolar I and II) who were enrolled in a Canadian professional workplace monitoring program had a 36% recurrence rate leading to work interruption at 2 years (Albuquerque et al. 2009).

Prior to the publication of DSM-5 in 2013, a history of at least one major depressive episode was required to diagnose both bipolar type I and II. Now, bipolar type I is diagnosed with the occurrence of one manic episode, and though a history of recurrent depression is common, it is not necessary.

A specialist organized her life around episodes of low energy. She would describe these periods as "running out of gas" and she would seclude herself and sleep for a week or so before coming back to work. The doctor went for years with this pattern and was good at finding ways to use the "downtime" as vacation or grant writing time. It was not until her "downtimes" started to be longer and darker with suicidal ideation that she sought help.

Because the syndrome waxes and wanes with symptom patterns often taking shape in adolescence, a valid diagnosis is often not reached for years (Phillips and Kupfer 2013). In one retrospective study of doctors with bipolar disorder, the average time between symptom onset and diagnosis was 10 years (Albuquerque et al. 2009). Physicians exhibiting irritability and problems at work need a careful workup so as not to miss the diagnosis. Doctors typically rationalize their behavior; "I have had a tough week of challenging cases and on-call;" "I am working towards my vacation and know I am a burning out."

7.1.1 Differential Diagnosis

When doing an evaluation, the value of collateral information cannot be overemphasized, because physician-patients with bipolar disorders may lack insight and/or minimize their symptoms. Roughly two-thirds of people eventually diagnosed with bipolar disorder are initially misdiagnosed with unipolar major depressive disorder (Phillips and Kupfer 2013). Delayed diagnosis has also been attributed to comorbidities like substance use disorder, attentional problems, and anxiety states. Further complicating the diagnosis, some medications, for example antidepressants, may intensify rather than relieve the frequency and intensity of symptoms, so that people with bipolar disorder may present to specialist care with treatment-resistant depression.

The differential diagnosis for hypomanic and manic states, summarized in Table 7.1, includes a number of psychiatric conditions, medications, and substances (American Psychiatric Association 2013).

The DSM-5 includes categories for substance- or medication-induced mania or hypomania (substance/medication-induced bipolar and related disorder) and mania attributed to a medical condition (bipolar and related disorder due to another medical condition). These categories require evidence of a substance or medication, either during intoxication or withdrawal, that directly precedes a manic or hypomanic episode. The diagnosis requires that the substance or medication has known links to causing these symptoms. The prevalence of substance-related mania is unknown; however, the lifetime prevalence of substance use disorders among physicians is 10–15%, similar to the general American population (Domino et al. 2005; Brewster et al. 2008). However, the lifetime prevalences of substance use disorders

Table 7.1 Differential diagnosis of manic and hypomanic states

Psychiatric disorders	Medical conditions	Prescribed medication effects/side effects	Nonprescribed medication effects/side effects/ withdrawal
Bipolar disorders	Endocrine disorders (e.g., Cushing syndrome, hyperthyroidism)	Antidepressant-induced	Cocaine, crack
Cyclothymia	Epilepsy	Steroid-induced	PCP
Subthreshold conditions	Infectious diseases (e.g., syphilis, HIV)	Antibiotics (acyclovir, chloroquine, interferon, sulfonamides, etc.)	MDMA
MDD	Renal failure	Chemotherapeutics	Hallucinogens
Schizophrenia or schizoaffective disorder	Diabetes	Ketamine	Ketamine
Psychotic disorders (e.g., brief reactive psychosis, delusional disorder)	Autoimmune/inflammatory conditions (systemic lupus erythematosus, multiple sclerosis)	Medical marijuana where legal	Heroin
Anxiety disorders (GAD)	Space-occupying lesions (brain tumors)	Biologics	Alcohol intoxication
ADHD	Cardiovascular (stroke) ➔ organic mood disorder	Stimulant	Stimulant–amphetamines
Borderline personality disorder	Delirium		Over the counter
Intoxicated states—alcohol		Dopamine	Medications, supplements
Withdrawal states—alcohol, sedative, antidepressants			
Severe anxiety states			
Early dementia (frontal lobe, Pick's disease)			

ADHD attention-deficit/hyperactivity disorder; *GAD* generalized anxiety disorder; *MDD* major depressive disorder; *PCP* phencyclidine; *MDMA* methylenedioxymethamphetamine

in patients with bipolar disorder, types I and II, in the general US population are 60% and 40%, respectively (Merikangas et al. 2007). It makes sense that a minority of doctors will present with psychosis during intoxication, withdrawal, or treatment of a substance use disorder (e.g., alcohol, cocaine, stimulants). This group is typically admitted to a hospital for acute stabilization. Little is known about the long-term prognosis of this small group of physicians.

7.2   Unique Aspects of Manic and Hypomanic States in Physicians

A family physician in her early 50s had received antidepressants on and off for 15 years for recurrent mild-to-moderate depressions. She never required time away from work and she had never been hospitalized. She was twice divorced with grown children from her first marriage. While on a trip to the United States she was noted to be acting unusually more energetic, more emotional than usual and not sleeping well. Her usual alcohol intake had increased to nearly a bottle of wine daily in the last couple of months. Her family expressed concern about her drinking but she laughed it off. In the United States there was an altercation in a restaurant, the police were called, and she was transferred from the police department to a hospital. She was admitted with a diagnosis of mania and treated with antipsychotic medications before being transferred back to Canada. This was her first episode of mania and of psychosis.

In retrospect it was possible to identify some periods of time when she was more energetic than usual, even obsessed with how her clinic should be run, which medical record system to use, and how to develop it, while having enough energy to take a dance class and remain actively involved with her extended family. People around her enjoyed working with her immensely and felt that she was a terrific doctor who cared deeply for her patients. They would later admit that sometimes they wondered who would arrive at work today: the "lovely doctor," the "withdrawn doctor," or the "irritable doctor"?

She had a family history of mood problems, alcohol problems, and one suicide. After a full workup she was diagnosed with bipolar disorder and started on lithium. She struggled with her new diagnosis and began to feel overwhelmingly guilty about all the trouble she had caused. She worried that the regulatory body would be notified and that she would no longer be allowed to practice medicine.

A month after discharge she returned to work with no overnight-call duties but otherwise managed her own workload. Two weeks later she was found unconscious at home after an overdose, leading to hospitalization. In the hospital, she began to divulge her anxieties and suicidal thinking. She was diagnosed with severe depression with mixed features and responded well to augmentation strategies added to the mood stabilizer.

On discharge, a structured aftercare program was recommended which included family involvement. She and her psychiatrist also worked to firm up their respective roles.

She agreed not to make decisions regarding medications and would continue to report her symptoms and worries. They agreed to use a daily mood monitoring chart and to include self-report mood scales into their work together. Four months later she negotiated a safe return to work with a good coworker friend and the clinic director. She let them both know her diagnosis of bipolar disorder, and confided what her early warning signs for relapse might look like. She asked them to please feel free to reach out to her and her treating psychiatrist or family doctor if they were concerned or heard about any concerns about her behavior.

7.2.1   Confidentiality

One of the most common anxieties among doctors and trainees going through a mental health crisis surrounds the confidentiality of their health information (Myers 1994; Gardner and Ogden 2004). Not only can physicians exhibiting unusual or bizarre behavior become targets of media attention, but they may also be involuntarily detained and treated at the same hospital where they work. This is especially a concern in rural or remote areas. Even if care is delivered away from their workplace, contact with colleagues will raise worries about how they are perceived and potential effects on their future career trajectory. One doctor referred to bipolar disorder as "a professional death sentence," fearing that their expert judgement would always be perceived as impaired or somehow inferior. In the future, any strong expression of emotion might be medicalized as another "episode" of illness, undermining the self-confidence essential to functioning as an expert in a medical team.

Consider a physician with mania being picked up by the police during a Medical Committee meeting or medical conference. The police will need to transport the physician to the nearest emergency room for a psychiatric evaluation, and in many jurisdictions, police are mandated to report severe impairment to medical regulators. After heavy sedation, the physician awakens in the hospital not only with embarrassing and potentially traumatic memories of events leading to admission, but also to worries about regulatory requirements and accountability at work.

7.2.2   Self-Treatment

It has been documented that physicians tend to seek help later than the general population, often at the urging of family, friends, or colleagues (Myers and Gabbard 2008; Center et al. 2003; Gendel et al. 2012; Frank et al. 1998). It would not be unusual for a doctor, recently diagnosed with bipolar disorder, to disclose years of struggle ("white-knuckling") and self-prescribing medications to try to manage his or her health in order to continue working. Self-treatment, as a tradition, has a long history in the profession of medicine, and while it is still common, it is generally not recommended except in urgent situations. Physicians are more likely than the general population to misuse prescription medications (Merlo et al. 2013; Knight et al. 2002; Hughes et al. 1992). This is in part due to the fact that many doctors do not have a primary care physician, and if they have one they often feel it necessary to filter the personal information they provide (Schneider et al. 2007; Stoudemire and Rhoads 1983; Center et al. 2003; Gross et al. 2000). Often the primary care physician is seen as a colleague and perhaps a friend. The doctor-patient may not want to burden their physician with mental health concerns, due to anxieties about regulatory intervention and a loss of standing in their colleague's eyes. These anxieties can be magnified in rural practices, where personal and professional roles can be closely interwoven (Gendel et al. 2012). When a physician feels it is unsafe to disclose his or her mental health issues, for either personal or private reasons, he or she may choose to treat himself or herself.

7.2.3 Denial and the Problem of Objectivity

Any serious health issue can challenge the way a person thinks about themselves and imagines their futures (Martin 2007; Frank 2002). When a physician's judgement has been temporarily altered, their identity as a responsible, rational citizen will have been shaken. It is worth considering how that identity threat can play out not only for the physician experiencing impairment but also for the physician whose job it is to provide an objective medical assessment. The psychiatrist, Glen Gabbard, has written that … "doubt, guilt feelings and an exaggerated sense of responsibility form a compulsive triad in the personality of the physician (Gabbard 1985)." A typical example might be a family doctor in solo practice, seeing patients daily and sometimes on Saturday, working evening hours to be available for patients. These same traits, when threatened, may lead doctors to strongly deny early signs of illness or disability (Myers 1994; Stoudemire and Rhoads 1983; Wallace et al. 2009; Gardner and Ogden 2004).

Among people dealing with substance use disorders, denial is a core tendency; doctors with addiction problems often deny that they use substances or are intoxicated until there is incontrovertible evidence. Taking what a doctor reports at face value when there is a plausible risk of a substance use problem is not optimal at best and potentially dangerous at worst (Domino et al. 2005; Brewster et al. 2008; DuPont et al. 2009).

Denial, when threatened by the formality of an emergency psychiatric assessment, can derail objectivity. Evaluators may downplay or ignore warning signals like rapid speech or implausible schemes. Instead, they may take grandiose claims uncritically, preferring to assuage their own discomfort with mental illness rather than viewing a colleague's problems through a medical lens. In many ways, this is understandable, given the stigma of mental illness, which has been described since the mid-1960s, notably in the work of the sociologist, Irving Goffman (1963). Difficulties seeing a colleague's behavior as a psychiatric illness can be amplified when the patient is known to the assessor as a supervisor or consultant. Yet failure to diagnose and treat an impaired physician can not only prolong the suffering of the individual and potentially endanger the public but may also represent a missed opportunity to fully assess that physician's suicide risk. The doctor with an untreated substance use disorder takes substances to deal with pain, fatigue, concentration problems, and low mood in an effort to continue to serve his or her patients.

The entangled problems of objectivity, denial, and overidentification with the physician-patient represent opportunities to modify medical education. Educators may wish to rehearse this type of clinical encounter during medical training. Some have argued that failing to address personal vulnerabilities, including mental health, is a recipe for perpetuating not only stigma against physicians who suffer from mental illness, but also a view that a physician's health is not as important as their patients' (Myers and Gabbard 2008; Myers 1994; Wallace et al. 2009; Abbey et al. 2011; Wallace 2010). Taken a step further it unwittingly

upholds the profession's difficulty seeing doctors as vulnerable, which in turn leads those who need help to manage their problems quietly, if not silently, and on their own (Gold et al. 2016). It is gratifying that across North America, programs to counter a culture of denial are gaining momentum; however, it is essential that discrimination within the profession continues to be addressed at all levels.

A number of doctors who have bipolar disorder have been courageous to share their stories at least in part so that someone else who is struggling with symptoms might feel less alone and less hopeless (Nielson 2016; Miles 1998; Ely 2016; Fiala 2004).

> *But stigma is not solely the domain of others. As professionals we need to be conscious of our own stigma-prone behaviours or the internalized stigma we may perpetuate* (Dr. Manon Charbonneau) (Canada 2007).

7.2.4 Suicide

Bipolar disorder is associated with a high suicide rate, 15 times the general population (DSM-5). Likewise, physicians have a higher rate of suicide than the general population which makes careful assessment of doctors with bipolar disorder even more critical (Schernhammer and Colditz 2004; Myers 1994). Doctors who are manic and possibly psychotic may die as a result of judgment issues, although it is more likely that a doctor dies from accidental overdose or while in a depressed state. Any doctor who discloses thoughts of suicide must be taken seriously, especially if the doctor has recently experienced acute stressors such as a marital rupture, patient complaint, or regulatory investigation.

7.2.5 Shifting Relationships with Colleagues

A clinician with a physician-patient takes on a dual role. Not only must they care for their patient but they are also implicated to some degree in occupational risk management, since medicine is a safety-sensitive profession. Physicians have multiple motivations to return to work, and treatment providers may find themselves pressured to certify a functional recovery, often too soon. While treating clinicians may have had some working and even collegial relationship with their patient, once they are in a treatment relationship, this role shift needs to be made clear. And when the doctor-patient is ready to return to the workplace, it is incumbent upon the treating physician to carefully assess the plan and ensure that the institutional ingredients for success are in place. This may include coaching the physician to prepare for workplace conversations and/or communicating directly with relevant leaders and colleagues after obtaining written informed consent. Doctors returning to work frequently feel both grateful and responsible for having been ill, for placing a burden on their colleagues, and for any impact they may have had on their patients. Early in the return-to-work process, physicians tend to

agree to workplace suggestions and requests rather than considering them carefully in the context of their ongoing recovery. This may include taking extra shifts, seeing difficult patients, and seeking out ways to "show" the team that they are making up for lost time (Myers and Gabbard 2008). Providing clear-stepped return-to-work plans for physicians is prudent, and there is a confluence of evidence that facilitated peer groups can add meaningfully to the recovery and return to work process (Sanchez et al. 2016). Treating clinicians are in a good position to educate their physician-patient, the family, and to some extent where possible the workplace.

7.2.6 Monitoring and Risk Management

A physician is impaired when he or she is unable to practice medicine with acceptable skill and safety as a result of a health problem, including a psychiatric illness or a substance use problem (Health 1973; Anfang et al. 2005). To ensure that physicians with health problems are not working while impaired, all states and provinces in North America have some form of physician monitoring program. For physicians identified by regulators with substance use disorders, treatment and monitoring have been associated with good recovery, with around 70% successfully returning to work (Lefebvre and Kaufmann 2017; Brewster et al. 2008; Domino et al. 2005). Of those returning to work and monitored for 5 or more years, 75–85% have maintained remission from their substance use disorder.

Similarly, physicians identified with mental health disorders enter monitoring agreements when there is a request for ongoing accountability regarding their health and stability. Few studies have reported on mental health conditions or comorbid conditions among physicians in monitoring programs. Knight and colleagues evaluated the Massachusetts physician health services program after it began to monitor doctors with mental health issues. While they did not provide a diagnostic breakdown of their group of 58 doctors, 74% completed the 2-year monitoring program successfully (Knight et al. 2007). Albuquerque and her colleagues looked at 50 doctors enrolled in the Ontario physician health program who had recurrent MDD or bipolar disorder, all of whom were stabilized and returned to work (Albuquerque et al. 2009). Of these, approximately 64% had completed 2 years without a clinical relapse.

A fulsome risk assessment is most relevant in the return-to-work process, where full sustained recovery is the goal. For the purposes of an occupational risk assessment, it is helpful to think in terms of three spheres; individual symptoms including severity, duration, and past history; functioning at home and in social (nonoccupational) circumstances; and finally workplace functioning (Lefebvre and Kaufmann 2017; Harrison 2008; Anfang et al. 2005).

7.3   Developmental Issues

7.3.1   Early Career

Meg was a 23-year-old who had moved from her rural home to the city to attend medical school. She found the adjustment difficult and in the first few months, she relied heavily on her family and friends back home. Once she had settled and made some friends in her class she felt much better. There were so many possibilities available to her, ranging from political advocacy groups and public health education to focused study groups. She was seen as energetic, enthusiastic, and up for anything and others wondered how she found the time to do it all. Meg's roommates worried that she was keeping them up late into the night. In the morning they would often find meals partly cooked, laundry left unfinished, and Meg seemingly oblivious to their concerns. The roommates, also in medical school, tried to refocus back to their own studies, which was easier to do as Meg started spending more time out of their home. She was rarely at school, and when she attended, she was animated and energetic. One day, Meg came to lectures dressed in flamboyant clothing and bright red lipstick with her eyebrows heavily penciled. She was speaking so quickly that students and staff could not follow. She was sneering and condescending to all who tried to calm her down stating that she alone had access to the answers. The undergraduate office was notified as well as the wellness liaison physician. Fortunately, Meg was in the building and the wellness doctor was able to guide her to the ER onsite where Meg was admitted.

Bipolar disorder often presents in late adolescence or early adulthood. It is conceivable that a medical student can enter training already diagnosed with a bipolar disorder; however, it is more typical for them to present with a history of depression. Often a diagnosis of bipolar disorder leads the student to consider whether the choice of medicine is still what they want and perhaps they might reconsider the viability of living a healthy life as a medical doctor. Is Meg's constitution able to manage the stress and strain of medical training and practice? Will a medical career be hazardous to her? The individual needs a safe place to explore these serious issues before making a decision to return. Most choose to return to medical training with some adjustments in their trajectory. For instance, a resident in a surgical program was diagnosed with bipolar disorder and he decided to switch residency programs with support from his family and academic advisor.

Often, learners will need to request some accommodations as a result of their condition, for example a period of reduced overnight-call duties. This can be a real challenge as this age group is developmentally concerned with peer identification and acceptance; being "different" is often not valued. With few exceptions most learners want to manage their health and do the work ("like everyone else"). This can be a challenge as medical students and residents often do rotations in sites far from home, increasing stress, making it more challenging to have normal feedback from friends and family, and being distant from their health care providers. Some learners will have to stay closer to home as a result of health issues, which increases

their fears and uncertainties as the stressful residency matching process and other career decisions unfold.

Those who have their first manic episode while in training may incorporate other colleagues and staff into their fantastical beliefs. It can be a challenge for medical schools and residency programs to effectively help the individual experiencing mania, since they often lack insight and feel perfectly in control. *If an emergency assessment is initiated from medical school, like Meg in the example, the student will in effect have revealed aspects about her health, out of her control, which can have a ripple effect through her class and school. The administration may want to debrief, once the medical student is safely in care, to assist any fellow students or staff who might be distressed from the experiences and to discuss strategies to limit stigma against the affected student. As Meg begins to stabilize she will face a tough reality as she remembers how she behaved while psychotic and recalibrates her identity to a new diagnosis, placing her in an exquisitely fragile state*. It is helpful for universities to have a dedicated person (often from a wellness office) to contact the afflicted learner and help manage the flow of information. The small efforts of reaching out and caring are experienced by people going through disabling illness as exceptionally important. Too often people, institutions, and systems get caught up in risk management and miss the human suffering at hand.

Illnesses such as substance use and mood disorders have an insidious effect on learning. Some residents will remark on the relief of having been "caught" and that they knew it was impacting all aspects of their life even if they were still capable of passing exams while severely depressed or high on cocaine, for example. Once in recovery, they frequently immerse themselves in learning the materials they missed. Medical training programs are challenged to ensure that students and residents have met standardized learning goals if they have needed extended time off for treatment.

An initial return to an educational setting is less about work and more about managing all the potentially stressful encounters, some well meaning and others perhaps less so. Often early-career physicians will seek workplaces that value mentoring junior staff, which provides an additional safety net for them as they return to work and build their confidence. While stigma and discrimination are problematic at all stages of a medical career, for medical students, residents, and early-career doctors, anxieties often center around failing to achieve a chosen career and life path. Central to this stage is anxiety about the impact of a mental health diagnosis, including a substance use disorder, on relationships.

7.3.2 Mid-Career

The mid-career is a time where most doctors are at their prime in professional confidence, knowledge, and clinical skill. It is a time when many doctors find that they are enjoying the richness of their practice and academic interests and have equally rich lives outside of medicine, often with family experiences and time to invest into hobbies. From an Eriksonian point of view the mid-career doctor is engaged in generativity and building or creating something that possibly is life-defining. Having

a manic episode abruptly halts work and leaves the doctor in a place where the path ahead is no longer as clear; the existential crisis has an impact on career trajectory and relationships. Many in these moments find that the challenge runs deep to the core of their identity as a physician. Consider the research scientist who has a psychotic/manic episode related to substance use. Effective treatment takes time, learning to live a better life in recovery, which means practicing skills before this doctor can effectively return to the workplace. Consider another example of a physician who has a recurrent mood disorder that has become increasingly prone to relapses. Here the challenges are different, having to accept that the illness is likely chronic and unstable, and one cannot depend on the powers of medicine to completely heal one's own body. In essence it is akin to slowing down before the person had planned (well before in all likelihood). This can lead to financial issues and more for affected families.

A missed diagnosis, especially bipolar II, is common in mid-career individuals. *John is an energetic, keen specialist who aspired to be a field leader. Despite his ambition, he was perceived by colleagues as chronically incapable of working effectively in groups. He was seen to take over and often antagonized others who weren't onside with him. People around him had polarized opinions; they either loved him or they resented him. Then John was arrested for shoplifting, which required disclosure to his regulatory body. His legal counsel suggested an expert psychiatric opinion, which led to a diagnosis of bipolar disorder type II with hypomanic episodes. Considering his behavior and emotions from the perspective of a mood disorder was a revelation for John, and he began to have more insight into his behavioral problems over time. But the wear and tear on his medical department and colleagues had eroded their good will and, in the end, John decided to find new employment. His treating clinicians had much to deal with; John had to come to terms with his diagnosis, its impact over time, and his need for new skills and behaviors as well as to deal with regrets (shared by his treatment team) that the diagnosis had not been made earlier.*

Having to reduce work hours can raise concerns about the fairness of work distribution and underlying prejudices toward people who have experienced mental health disabilities. Some workplaces would like all colleagues to contribute equally, "We have always done it this way, we all agreed to this principle and we are not going to change." What is unsaid is that we are not going to change for this doctor, in this moment, because of his problems; but this response also typifies an entrenched workplace culture that stigmatizes mental illness. There is no blanket solution for this, and each request for permanent accommodation will raise its own specific challenges. A physician with a substance use problem who had denied the issue (often repeatedly lying to colleagues) has an opportunity to rebuild trust following successful rehabilitation; colleagues are often happy to provide support such as clinical coverage when the doctor needs to give a urine sample for monitoring or attend an AA meeting. The culture of a workplace or a medical department is highly influenced by its leadership and it is important that physician leaders appreciate the complexity of these situations. In some cases, it is helpful for the whole team to hear from the returning physician, who has the opportunity then of perhaps apologizing

and asserting his commitment to the joint work of medical care, while inviting people to let him know when they are unhappy or concerned. Similarly, leadership needs to be perceived as making decisions based on the facts from all sides, communicating that neither discrimination against the returning physician nor impairment in the workplace will be tolerated.

7.3.3 Late Career

An increasing number of physicians are moving into the category of late career, and medical associations across North America are making a priority of supporting this population. As the Australian psychiatrist Carmelle Peisah puts it, "[I]n the absence of an objective ideal, successful ageing can, and should be, person-specific and individually defined, specific to one's bio-psycho-social and occupational circumstances, and importantly, reserves. There can be no one-size-fits-all solution" (Peisah 2016). Specific issues range from finances to novel ways to help senior physicians remain engaged through teaching and mentorship. Physicians can and do continue to work into their 70s and some well into their 80s. Regulators differ across North America on when and what screening interventions are needed based on age (see Chap. 9). Williams and Flanders (2016) argue that while health issues may increase with aging, performance decrements are more related to health than age. Nevertheless, when questions about mental health arise in this group, regulators understandably and often request, in addition to reviewing the doctor's practice, formal cognitive evaluation for fitness with neurocognitive testing and often forensic psychiatric assessment (Moutier et al. 2013). Because a history of manic symptoms in a late-career physician is almost always a recurrent problem, new-onset behavioral changes raise questions of substance use or a comorbid medical problem, especially early dementia, which can present with symptoms resembling hypomania (Table 7.1). This in turn raises important questions of patient safety and mandatory retirement.

Some physicians will use health issues as a signal to slow down or stop work. *One surgeon with a bipolar disorder that had become more difficult to stabilize decided to take the necessary time off to get well, and during this time away, made the decision to retire. A year later, after enjoying his time in retirement, the doctor decided to return to work part-time as a surgical assistant, a role that allowed him to remain part of a medical team, use his skills, and transition into planned retirement several years later.*

7.4 Assessment and Treatment

After a diagnostic assessment, the treatment of mania and hypomania is typically divided into an acute stabilization phase and a maintenance phase where optimizing health and addressing any persisting symptoms occur; the latter includes education

around relapse management skills. Most doctors will want to return to work as soon as possible, yet the ingredients for a successful return to work need to be in place first. Merely achieving symptom-free status is not enough. For physicians and others returning to safety-sensitive work, it is especially important to lay the institutional groundwork for communication about signs and symptoms of early relapse. This will require developing a shared language between key people (treatment providers, perhaps an identified person in the workplace) and the individual physician as he or she recovers.

7.4.1   Assessment

Evaluation requires careful psychiatric and physical assessments. A detailed clinical history should identify times of irritability, lability of mood, impulsivity, compulsivity, insomnia or a reduced need for sleep, relationship issues (outside and inside work), professional complaints, and a detailed substance use history. The latter should include an exhaustive list of prescription as well as nonprescription medications, over-the-counter medication, and use of pharmaceutical sample products. Every assessment should include a urine toxicology screen and confirmation test. A thorough evaluation includes a detailed background history including developmental history (including a life mood chart) and may be enhanced with the use of screening tools such as the 13-item Mood Disorders Questionnaire (self-assessment) (Hirschfeld 2005). Collateral information from family, friends, and colleagues is essential; however there are limitations since others may not be aware of self-administered medications, either prescription or nonprescription drugs; and some family members may minimize symptoms to protect the physician's work and income. Laboratory tests can help rule out mania due to medical issues (Table 7.1). If this is a first episode of manic symptoms, the workup may extend to imaging and other investigations. One algorithm for assessing and treating physicians with symptoms of mania comes from the Canadian Network for Mood and Anxiety Treatments (CANMET) (Yatham et al. 2013).

By definition a doctor who is manic is impaired and cannot work. The hypomanic physician is more of a challenge for the evaluating clinician and having a multidisciplinary team is helpful. When evaluating any physician, it is important to consider a history of job instability. This includes reports from regulators in all relevant jurisdictions. Is the physician currently working? If not, how long has the person been off work and how many times might there have been workplace interruptions? Have there been any issues raised about the physician's health or wellness by anyone (family, friends, workplace colleagues, hospital administration)? Are there any accountability issues, for example, complaints? A hospital's chief of staff or department head may be helpful in this regard. Is the doctor's regulatory body aware of any health issue? Current information about concerns in the workplace or increased accountability may be very useful in helping guide decisions about whether an interruption of work would be prudent while treatment ensues. Table 7.2 describes the practical intersection between typical symptoms of mania and hypomania and risks specific to the assessment and management of practicing physicians (DSM-5).

Table 7.2 Presentation of manic and hypomanic symptoms among physicians

	Mania	Hypomania
Appearance	Prone to excesses (jewelry, makeup) Severe states—dishevelled, inappropriate (to temperature) or even unclothed *At this stage may need emergent help*	Often unchanged *Making it difficult to notice in the workplace*
Behavior	Can be cheerful. Typically, over-excited and marked disinhibition *Can present as requiring urgent care.* *At other times can upset people, with complaints and increased negative views.*	Increased sociability Some disinhibition *Unless disinhibition is excessive (typically if combined with substances) these qualities are enjoyed and appreciated in the workplace. If overdone can start to engender negative views*
Speech	Pressured speech and possibly flight of ideas *Usually quite a change from baseline. People will try to reason and the doctor-patient will try to explain but often thinking is not clear or is becoming psychotic. Typically, a shock to the workplace. Need for urgent care.*	Typically, talkative *Might be challenging to be around when not able to slow down, though most doctors can refocus at times of need*
Mood	Usually elated, euphoric but can be irritable or quick to anger *This will quickly be identified as problematic in the workplace by staff, colleagues, and patients*	Mild elevation of mood, can fluctuate with irritability. *Elevated mood is generally not seen as abnormal. Irritability or fluctuating moods can be seen as a problem*
Sleep	Reduced need for sleep and no fatigue *Together with other issues regarding judgment, these doctor-patients can be seen to be working at all hours*	Reduced need for sleep, good energy *Can be very productive which can be encouraged, unless irritability or disinhibition impacts judgment*
Activity	Marked increase in goal directed activities and increased energy *Initially can be seen as extremely productive, but quickly the difficulties in managing so many goals and commitments starts to show, or judgement issues become prominent*	Increase in goal-directed activities and increased energy *Typically encouraged and appreciated because the person takes on a lot of work and does it well. Fraying at the edges with irritability/impulsivity.*

<div align="right">(continued)</div>

Table 7.2 (continued)

	Mania	Hypomania
Judgement	Risk-taking behaviors, sexual indiscretions, and other behaviors with high potential for harmful consequences *Usually frankly impaired in the workplace*	Risk-taking behaviors, sexual indiscretions, and other behaviors with a potential for negative consequences. *Problematic e-mails sent at all hours, rambling, upset.* *Problematic behaviors in meetings.* *Often seen as disruptive and engenders ill will in the workplace*
Insight	Fluctuating to nil *This is important as without some external action this person will continue to be manic with all the risks associated*	Preserved at times but not full insight *Often a doctor can control symptoms when given feedback for a time. Because the doctor typically feels good and/or is productive, this is not considered to be a problem by the doctor and coworkers, unless problems emerge in other domains*
Psychotic symptoms	Grandiosity with delusions is common. *Usually quite obvious and most recognize this as an emergent situation*	Typically, not present Grandiose flavor does not rise to level of psychosis *If grandiosity is present it can rub people in the workplace the wrong way, garnering ill will. May interfere with job promotions or advancement*

7.4.2 Phase 1: Acute Stabilization

Safety, including awareness and assessment of elevated suicide risk, is priority one, and this may include involuntary hospitalization. The highest risk is in depressed and mixed phases. Additional red flags include the experience of acute financial strain, litigation stress, marital breakdown, and a history of accidental overdose in addictive disorders (Center et al. 2003; Schernhammer and Colditz 2004; Hawton et al. 2001; Lindeman et al. 1996; Gagne et al. 2011).

Dr. W related her experience during her recent hospitalization, which included a discharge and quick readmission due to a serious suicide attempt. She recalls not feeling so bad while in the hospital. When the staff suggested a weekend pass, she was agreeable and in the end they chose to discharge her from the hospital instead. It was left to Dr. W to make a follow-up appointment with her psychiatrist which, at the time, she felt was quite reasonable. Once discharged however, she noticed very quickly how challenging life was; she was expected by her family to take up some of her typical duties; and she inevitably started worrying about work, couldn't sleep, and was agitated most of the day. The suicidal thoughts intruded with force. Her husband came home from work unexpectedly and found her in the car planning to end her life.

This scenario illustrates how physicians may not appreciate their level of disability in the early recovery phase. The capacity to compartmentalize and rationalize is

a strength that in this case led a treatment team to see a stronger recovery than their patient had achieved.

Whenever possible, family should be part of the process of care, which can extend to providing information to help with the management of professional responsibilities. Physicians have a duty to ensure that they have mechanisms to take care of their office, have coverage for patients, and notify hospital chiefs so that no patient is unduly affected by their sudden absence. For instance, in a family practice, a voice message would need to be left at the clinic notifying patients of their doctor's absence. Most regulatory bodies detail the requirements under such circumstances and typically it is family or a trusted colleague who assists. Financial competence should be considered in all cases of manic behavior.

The acute stabilization of hypomania and mania is primarily one of pharmacological intervention, to help decrease and control agitation, aggression, and impulsivity. This is a stressful time for the doctor-patient and often quite challenging for family. If possible, having the person in a quiet location with diminished stimulation can be helpful.

Treatment guidelines recommend mood stabilizers or atypical antipsychotic medications for the management of acute mania. Selection is informed by a patient's past response, preferences, and need for sedation. Medication interactions also need to be taken into consideration (Hirschfeld 2005; Yatham et al. 2013; Goodwin and Psychopharmacology 2009; Geddes and Miklowitz 2013).

Generally, a good response with adequate dosing and therapeutic blood levels occurs within 10–14 days of treatment. Should severe symptoms not resolve, guidelines recommend adding another mood stabilizer or antipsychotic medication (or changing the antipsychotic medication if already prescribed). Treatment-resistant illnesses will require more specialized interventions.

Depressive disorders are addressed more fully in Chap. 6. Bipolar depression will be mentioned here, because it is very common in the bipolar spectrum conditions and relapses over time are more likely to be depressive in nature. A diagnosis of bipolar depression is made when a person with bipolar disorder meets criteria for MDD (DSM-5). Bipolar depression is generally more resistant to treatment than unipolar depression or mania (Geddes and Miklowitz 2013). Despite concerns about inducing hypomania or mania, antidepressants are often used cautiously in an attempt to alleviate suffering; however, care should be taken to ensure that this is done in conjunction with mood stabilizers or atypical antipsychotic medication. Some antidepressants, such as tricyclics and venlafaxine, are generally not used because of a higher potential to induce hypomania or mania (Yatham et al. 2013; Fountoulakis 2015). Clinicians should assess for mixed symptoms (the presence of both manic and depressive symptoms) and rapid cycling between mania or hypomania and depression. If either is present, the pharmacologic treatment would not include antidepressant medications alone. Unlike treatment of unipolar depression, which includes an extended treatment phase, guidelines recommend limiting long-term antidepressant exposure in people diagnosed with bipolar disorder to 6–8 weeks following resolution of depressive symptoms (Yatham et al. 2013).

7.4.3   Phase II: Maintenance

The term "maintenance" is deceptive. It is often taken to mean little more than compliance with medications for a period of over 6 months (Yatham et al. 2013). However, in the context of a physician's recovery and return to professional life, maintenance is best considered as a new way of life involving increased self-awareness and an ability to appreciate the difference between normal and pathological states within oneself well before they may pose a danger to others. It implies an ability to incorporate a diagnosis of mental illness into a "prediagnosis" identity, and this process usually requires some form of structured psychotherapy, individual and/or group. Some physician monitoring programs offer peer support groups to facilitate the healing process. It is useful to consider therapeutic goals of the treatment and monitoring of physician-patients with bipolar disorders and concurrent disorders. The box below provides some practical endpoints (Geddes and Miklowitz 2013; Cunningham 2010).

7.4.3.1 Early Maintenance Phase

On discharging a physician from the hospital, psychiatrists are often asked to provide their opinion regarding the patient's trajectory to return to work. In cases of mania and hypomania it is important that stabilization is considered separately from return-to-work planning. As mentioned earlier, the vast majority of doctors want to return as soon as possible and sometimes do, to their detriment. For this reason, a lag (sometimes months) between when the physician recovers symptomatically and when they return to work is advisable. It is probably wise for inpatient staff to discharge the physician-patient to the care of the outpatient treating team or clinician without recommendations on a return to work. At any stage the treating clinicians may be required to update a regulator and workplace. They may consider referral to a physician health program for specific guidance (Anfang et al. 2005; Harrison 2008). In general, physicians should not be managing their own return to work.

Early in the maintenance stage, the goals are to optimize the physician's health and to address chronic or subthreshold symptoms and comorbidities. Nonpharmacological interventions such as psychotherapy, group therapy, family support, and education as well as stress management training all play a key role in moving the physician-patient towards stability and wellness.

As no medication is free of adverse effects, one of the important components in the maintenance phase is reviewing the rationale for the medications prescribed, any changes that are to be considered, and a blueprint for the near future. All patients struggle with finding a rhythm to work with medications and doctors are no different. That said, regulatory expectations are an added motivator for physicians to accept ongoing interventions. For those individuals whose mania has been related to substance use, an addiction medicine assessment is necessary to review the diagnoses, consider the need for treatment, and emphasize the goals of abstinence, acceptance, and relapse management skills specific to substance use disorders (Lefebvre and Kaufmann 2017; McLellan et al. 2008; DuPont et al. 2009).

Often medications that were most helpful and tolerated in the acute treatment phase are continued into the maintenance phase. There is limited high-quality research on the optimal duration for maintenance, and this should be considered on a case-by-case basis (Yatham et al. 2013). Factors like the number of past episodes in addition to their severity and duration will inform decisions around long-term maintenance medication. In many cases, multi-year or lifetime maintenance drug therapy will be recommended. Two retrospective cohort studies of physicians found that a comorbid psychiatric diagnosis increased the risk of relapse (Albuquerque et al. 2009; Domino et al. 2005). One retrospective cohort study of physicians monitored for bipolar disorder and recurrent unipolar disorder showed a relapse rate (severe enough to require time off work) of 32% at 2 years (Albuquerque et al. 2009). For physicians who are technical specialists such as surgeons and interventionists, medication effects on coordination, balance, reaction time, and tremor are all relevant considerations.

Lithium is the best studied medication in the maintenance phase of bipolar disorder since the 1950s (Alda 2015). There is some evidence that compliance with lithium is associated with reduced suicide rates in people diagnosed with bipolar disorder (Alda 2015; Geddes and Miklowitz 2013; Ahrens and Müller-Oerlinghausen 2001). Lithium's narrow therapeutic window means that it is necessary to monitor blood levels, as well as kidney and thyroid functioning. Lithium is associated with approximately a 10% rate of hypothyroidism (Yatham et al. 2013). Other maintenance medications include carbamazepine, divalproex sodium, lamotrigine, and atypical antipsychotics.

There has been considerable research interest around subtle cognitive dysfunction among people diagnosed with bipolar disorder (learning, processing, attention, memory, working memory) (Cardenas et al. 2016; Fountoulakis 2015). While this research has not yet translated into practical guidance, treating clinicians should be especially sensitive to the experiences of physician-patients around concentration, focus, and ability to retain information. At times further neurocognitive assessment may be useful in assessing global and specific function. Approaches to supporting and reviewing a physician's performance as well as their health and well-being upon returning to the workplace should be considered. Any perceived difficulties might lead to problem-solving strategies that could be potentially shared with the physician's support network. Finally, sleep problems may contribute to cognitive dysfunction as well as increase the risk for suicide and relapse.

7.4.3.2 Late Maintenance Phase

Once symptoms have resolved adequately, there is evidence that psychotherapy can help strengthen recovery and reduce the risk of relapse. Studies have shown that cognitive behavioral therapies (CBT), interpersonal therapy (IPT) and social rhythm therapy (IPSRT), family therapy, and group psychoeducation can help (Geddes and Miklowitz 2013; Yatham et al. 2013; Parikh et al. 2012). Health care professionals with comorbid substance use disorders often access Caduceus groups and mutual support groups (AA, NA) (Knight et al. 2007; Brewster et al. 2008; Sanchez et al. 2016). The process of formal monitoring offers additional structure, support, and

accountability that doctors find helpful in managing priorities as they move forward with a return to work (DuPont et al. 2009; Albuquerque et al. 2009; Lefebvre and Kaufmann 2017; Anfang et al. 2005).

Clinicians have an opportunity to advocate for their patient. An occupational plan is essential to coordinating clinicians and administrators. Practical questions about limiting overnight-call duties and a graduated return to work will arise and need to be negotiated. To the extent possible, accommodations at work should be made to support a regular sleep schedule. The occupational plan is helped greatly by information from the workplace. Doctors planning to return to work typically sit down with their department head and discuss any concerns they have, including institutional accountability, which may include permission to receive progress notes from treating clinicians or formal monitoring programs. Hospitals and other workplaces often have their own risk management programs in place that layer onto professional regulation. Occupational plans increase the confidence of all involved by providing some indication of good health, compliance with treatment, and suitable work performance.

Goals for Psychotherapeutic Interventions for Physicians (Bipolar Disorders and Substance Use Disorders)
Bipolar Disorder

- Education to understand the chronic nature of this illness that will require life-long attention and management of vulnerabilities
- Learning early signs and symptoms of relapse or recurrence
- Processing to accept the illness and its impact on life and work
- Importance of compliance and not directing one's health care
- Improving relationships at home, with friends and colleagues
- Learning stress management skills, effective communication skills
- Developing and nurturing health behaviors (sleep, eating, relaxation, exercise)
- Developing ways of managing risk to self and risk in the workplace
- Developing a network of trusted people who will provide feedback
- Reducing or stopping alcohol use and abstaining from any non-prescribed controlled substances

  Substance Use Disorder

- Robust understanding of addictions as a chronic illness requiring life-long attention
- Understanding a "total abstinence" approach to recovery
- Facilitation to mutual support community-based recovery groups
- Facilitation to peer support and treatment groups for health professionals
- Learning fundamental relapse prevention skills
- Adoption of balanced, healthy lifestyle choices
- Stabilization of any appropriate pharmacotherapy

7.5   Key Points

1. Doctors are not immune to mental health and substance use disorders. Training at all stages of a physician career is essential to aid colleagues in knowing where to turn for help and the importance of managing their health.
2. Stigma and discrimination are important barriers to physicians getting care. Education, peer support, and confidential services are essential. Frank and open stories of doctors talking about their health issues have transformative power.
3. Bipolar disorder is difficult to diagnosis and can be misdiagnosed without careful assessment. The use of collateral information and workplace information is crucial.
4. Suicide is an elevated risk in this population and clear processes must exist to assist the suicidal physician as well as the colleague or friend who is trying to help the physician.
5. Recurrence is the rule in conditions that cause hypomanic and manic symptoms. In hypomanic and manic states, the doctor is often highly vulnerable and may have little understanding that they are ill. It is important that treatment professionals consider long-term treatment and monitoring of their physician-patients with these conditions.
6. Careful management of return-to-work planning involves the workplace and the treatment team. Physician-patients should not be engineering their return to work on their own.
7. With treatment and monitoring of diagnosed health conditions doctors can achieve stability and safely return to the workplace.

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Substance Use and Addictive Behaviors Among Physicians

8

J. Wesley Boyd

Contents

Abstract

Health care personnel experience rates of substance-use disorders (abuse and dependence) that are comparable to the general public. Unlike the general population, however, physicians are more likely than nonphysicians to misuse prescription drugs and to do so for reasons of self-treatment. There are a number of nonspecific signs and symptoms that might suggest a problem, and being familiar with these is important for all physicians. If there is a problem, intervening as early as possible is important, both for the health of the physician and for his or her patients. The best approach for intervening with physicians is one that is highly structured. Residential programs of 2–3 months in duration are often

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recommended, but there is scant evidence that these extended stays produce better outcomes than shorter stays. If a physician has undergone extended inpatient treatment, aftercare plans generally include monitoring by a state physician health program. These programs can provide advocacy for physicians who have maintained abstinence and complied with all aspects of their monitoring agreements. Success rates for physicians who undergo substance-use disorders treatment and/or monitoring are generally very high, probably because the costs of failure and the rewards of success are both very high for doctors. Many physicians who have been caught in the grips of a substance-use disorder recover fully and return to the successful practice of medicine, and might even be better physicians given their newfound focus on their own health and well-being.

8.1   Introduction

Despite their medical knowledge, physicians are apt to develop substance-use disorders much like everyone else. It goes without saying that when a physician has a substance use problem, not only is the health of that physician in jeopardy, but also potentially the health and well-being of his or her patients are also in question. Substance-use disorders can and do impair physicians' abilities to care for their patients. One recent study found that among physicians with alcohol-use disorders, the rate of self-reported medical errors was increased (Oreskovich et al. 2015). Understanding the issues pertaining to substance use problems among medical personnel, signs of a potential problem, and knowing how and when to intervene can therefore be vitally important for everyone in health care.

8.2   Epidemiology

Rates of substance-use disorders among US physicians are generally reported to be in the 8–15% range, which is similar to rates of substance-use disorders among the general population (Baldisseri 2007; McAuliffe et al. 1991; McAuliffe et al. 1986). However, some studies have concluded that physicians have higher levels of alcohol consumption than nonphysicians (Rosta 2008; Brooke et al. 1991). One recent nationwide study found that 13% of male physicians and 21% of female physicians in their survey met screening criteria for alcohol abuse or dependence (Oreskovich et al. 2015) in the previous 12 months, although their response rate was less than 30%. The most extensive survey of physician substance use, which was published in 1992 (Hughes et al. 1992), reported an 8% lifetime rate of a substance-use disorder. This survey polled 9600 physicians about their own use of psychoactive substances and had a 59% response rate. Given that it relied on self-reports by physicians, its 8% figure might be artificially low. The survey asked respondents to report use that was "not prescribed by another physician for a legitimate medical or psychiatric condition." The authors found that the most commonly used substance

by physicians was alcohol and that, in general, physicians were less likely to have used illicit substances, such as marijuana, cocaine, and heroin, than nonphysicians. However, the study also found that physicians were more likely than the general population to use alcohol as well as two kinds of prescription medications—opiates and benzodiazepines. When they did use prescription medications they reported doing so for purposes of self-treatment, whereas their use of illicit substances and or alcohol was for so-called recreational purposes.

These authors used the same survey results to break down substance use by medical specialty (Hughes et al. 1999). They found that among physicians, emergency medicine physicians were more likely to use illicit drugs, anesthesiologists were most likely to use opiates, and psychiatrists were more likely to use benzodiazepines. Surgeons and pediatricians had low rates of substance use problems (except tobacco use was high among surgeons), although another study of Norwegian doctors found that surgeons were more likely to engage in problematic use of alcohol (Rosta and Aasland 2005) than non-surgeon physicians. A study from Germany concurred, reporting that surgeons were more likely than nonsurgeons to drink in a hazardous manner compared to other physicians (Rosta 2008). These researchers also found that rates of substance-use disorders (abuse and dependence) were highest among emergency physicians and psychiatrists and lowest among surgeons.

These findings illustrate that physicians tend to use drugs that they commonly see in their practice of medicine. This may be due to the relatively easy access to these medications but also might be due to feeling comfortable and familiar with their use to some extent. Additionally, the higher rates of substance-use disorders in these medical fields are probably also related to "the high-risk environment associated with these specialties (and) the baseline personalities of these healthcare providers" (Baldisseri 2007).

Being a younger physician might also put one at greater risk of developing a substance-use disorder. One study found that younger physicians were more likely than older ones to have "abused" alcohol or other drugs within the past year (Kenna and Lewis 2008). Another study reported that the odds of an alcohol-use disorder decreased with increasing age (Oreskovich et al. 2015).

8.2.1   Gender Differences

According to data from the USA, being a female physician seemingly carries a higher risk of developing a substance-use disorder than being male. Female physicians who have substance-use disorders are in general younger than their male counterparts, more likely to have coexisting psychiatric comorbidities, and are more likely to contemplate suicide (Wunsch et al. 2007). They are also more likely to have attempted suicide while intoxicated as well as while they were sober. Although alcohol is the primary drug of abuse for all physicians, women physicians appear to be more likely to abuse sedative-hypnotic drugs than men (Wunsch et al. 2007). Additionally, once they have achieved sobriety, women physicians have a shorter time to first relapse than do their male colleagues (Knight et al.

2007). On the other hand, Domino et al. (2005) found no difference in relapse rates by gender.

These findings about US women physicians are interesting given several studies out of Europe which found that male physicians were more likely to consume alcohol in a problematic manner. For example, a recent study examining Norwegian doctors found that male doctors tend to drink more frequently than female physicians, consume greater amounts of alcohol per occasion, and do so in a more hazardous manner than female physicians (Rosta and Aasland 2013). These same findings regarding male's use of alcohol compared to females were also present in a study of German physicians (Rosta 2008) and among German medical students (Voigt et al. 2009). Similarly, in a study out of Denmark, male physicians (25.1%) were much more likely than female physicians (14.4%) to report risky alcohol use (Sorensen et al. 2015).

One wonders about the discrepancies between these European and American studies. Are these differences due to study design in some way or do they reflect different cultures of medicine that affect the genders differently in some substantial ways?

8.2.2   Unique Aspects of Substance Use in Physicians

There are a number of aspects of being a physician that change the usual manner in which drugs might be procured or used. To illustrate some of these differences, consider the case of Hal, presented in two parts. Hal's case, like Nancy which will follow later in this chapter, is real, although all potentially identifying data has been altered.

Case Vignette: Hal (Part 1)

Hal was just several years out of residency training and had achieved his life goal of becoming a practicing physician. Although he would only realize it later, the job he had settled into was boring and rote. After a biking accident sent him to the emergency room (ER), Hal was given a prescription for 30 oxycodone tablets. Because his pain resolved pretty quickly, at first he only used several of the pills. Over the next several months, he began using one or two a week, after work, just to relax and feel good. When he ran out of the pills, he went back to the ER complaining of ongoing back pain from the accident (even though he had been pain-free for several months), and was prescribed more oxycodone. Soon thereafter, he was using the pills nightly. At that point, he stole his wife's driver's license (she had a different last name than Hal) and began self-prescribing extended-release oxycodone (OxyContin®) in her name. Over the next year and a half his daily habit grew to approximately 800 mg a day. By that time, he had a map in his office with pharmacies all over the region, and kept meticulous notes about which pharmacy he had visited and when, so as not to go to the same pharmacy more than once every 30 days. To fill his needs, he ultimately was going to 3 pharmacies every day and paying with cash. Eventually, something must have set off alarm

bells, because a suspicious pharmacist called the police while Hal was waiting for a prescription to be filled. Within minutes, Hal was in handcuffs. The state police soon got involved because they thought that nobody could be taking that much OxyContin® on a daily basis and functioning well at work and at home, so they assumed that Hal must be selling drugs. Additionally, because he had filled prescriptions across state lines, the FBI launched an investigation as well.

Hal's story illustrates several aspects of drug use among physicians that are unique to physicians. First of all, on the two occasions when Hal went to the ER, it is likely that the physicians caring for him gave him the benefit of the doubt and believed his complaints of pain, seeing him as one of their own and trusted that his complaints of pain were legitimate (which was in fact the case initially, after the bike accident). As a result, the caregivers in the ER might have been much more willing to prescribe opiates for Hal compared to nonphysician patients.

Additionally, even in the midst of his drug use, Hal was obviously intelligent enough to know that if he were to repeatedly show up at the same pharmacy too often, suspicion by pharmacists about his abuse of this medication might have arisen long before it did. (In the 8 years that I worked with him, Hal never did figure out what caused the pharmacist to call the police on him as he waited for the prescription to be filled.) Thus, carefully mapping out which pharmacies to go to on any given day took intelligence and diligence. Also, something else that is fairly unique to physicians is the fact that because he had a relatively high-paying job, Hal was able to maintain his drug habit without stealing. Many of those who are addicted to opiates fairly quickly resort to stealing or dealing in order to maintain their habits, things that are far more rarely seen in physicians who abuse drugs. Additionally, given his fairly high level of income, unlike many Hal never went down the path of using heroin, usually first by snorting and then ultimately by injecting it, because heroin is so much cheaper than opioid pills for most. And finally, Hal was able to self-prescribe medications, something that is obviously completely unique to healthcare providers.

Hal's case highlights the need for physicians to be aware of the dangers of the profession, given the easy access that most physicians have to medications with addiction potential. I strongly recommend that all physicians have their own primary care physician and never treat themselves. Additionally, only in true emergencies should a physician ever prescribe medications for friends or family members (Gold et al. 2014). Treating oneself or someone who is personally close invites poor, compromised judgment on the part of the physician. In the worst-case scenario, it can start or contribute to a substance-use disorder.

8.2.3   Developmental Issues

Substance-use disorders often develop during college, medical school, or residency. A survey of medical students at one school found that "approximately one-fifth of the respondents reported" drinking too much. The authors found that "drinking too

much" was associated with more severe depression and impairment, past suicide attempts and current suicidal ideation, intense affective states, and other substance use (Martinez et al. 2016). Thus, not only is drinking heavily problematic in and of itself, but it also is correlated with a number of other concerning mental states or behaviors, including problematic use of other drugs.

Clearly, medical school and residency are emotionally draining, and a number of studies show significant rates of depression among medical students and residents. One study, for example, found that "mental health worsens after students begin medical school and remains poor throughout training … (and that) this distress can contribute to substance abuse, broken relationships, suicide, and attrition from the profession" (Dyrbye et al. 2005). One study of medical residents in the USA found that 4% of them met the criteria for depression just prior to beginning internship but that during internship year that figure rose to just over 25% (Sen et al. 2010). Given that depression is one risk factor for misusing substances, we need to consider that for some individuals, medical training might be the initial stress that sends vulnerable individuals down a path toward developing a substance-use disorder. Indeed, a survey of German medical students found that more than one-third of them showed problematic drinking behavior (Voigt et al. 2009).

Prevention and early intervention in substance-related problems among medical students is therefore obviously important, and it also appears to be predictive about future behaviors concerning use of substances. A Norwegian study, for example, found that hazardous drinking, which researchers defined as consuming five or more drinks on one occasion at least 2–3 times a month in medical school, as well as drinking to relieve tension were the most important predictors of hazardous drinking up to 10 years later (Mahmood et al. 2016).

8.3   Is There a Problem?

Occasionally a physician will present with behaviors that undeniably confirm that there is a substance-related problem, such as being pulled over for driving under the influence (DUI) while headed to work or being caught while diverting substances in the workplace. Other than these telltale behaviors, most physicians who have substance-use disorders initially show symptoms outside of the workplace rather than in the workplace (Centrella 1994). Another study found that on average physicians displayed problematic drug use for over 6 years before they received treatment (Brooke et al. 1991).

There are a number of nonspecific signs and symptoms that potentially suggest that there might be a problem. Almost all of these warning signs are nonspecific and by no means guarantee that there is a problem. They could equally be present in someone who just had an argument with a spouse, who just was notified of a poor patient outcome, who recently experienced a death within the family, or any other of a myriad of bad experiences. Therefore, these signs should only be used as an initial list of potentially concerning signs that might point to a substance-use disorder.

So, with that caveat, signs that might indicate a substance-use disorder could include behavioral or personality changes, mood swings, or a worsening of personal hygiene. Other potentially concerning signs include slurring of speech, dilated or pinpoint pupils, sweating, unsteady gait, or tremulousness. The individual might also have the smell of alcohol on their breath at work, which could all by itself indicate a serious problem. Even this sign, however, could prove to be a red herring, given personally observed instances where individuals had metabolic abnormalities that were ultimately determined to be the cause of what someone else thought was a smell of alcohol.

A number of behaviors in the workplace might also indicate an underlying substance-use disorder. These can include frequent absences from work, including prolonged breaks or unexplained absences, or repeatedly showing up late for meetings or patient appointments. In order to even become a physician, individuals have to have shown up time and again, on time no less, to multiple classes or tests in college and medical school. As a result, if a physician is not present when he or she is expected to be, it can be a significant indication of a substance use problem or some problem otherwise. Failing to return pages, making mistakes in one's clinical judgment, or decreasing one's workload for no obvious reason might also indicate a problem. Self-prescribing or asking colleagues to prescribe substances for oneself is also a concerning sign. Altercations with staff or patients, not returning calls or attending to duties around the office, incomplete or poor charting, and having a disorganized scheduled are also potentially concerning.

Some physicians will make statements about how they are feeling which might also indicate that there is a substance use problem. Such statements could include expressing excessive anxiety or irritability, sadness, anger or hostility, expressions of hopelessness or worthlessness, and feeling or acting isolated. Given their nonspecific nature, the presence of these warning signs should be the cause for concern and warrant further exploration and investigation, instead of being seen as confirmatory of a substance-use disorder.

When asked directly, physicians often minimize the effects that substance use has had on their ability to practice. If they are using at night and on weekends, there might be very little evidence of impairment. This obviously changes if the physician is using in the mornings prior to work. Additionally, if physicians have developed tolerance to a substance, then they might appear to be totally normal when the substance is present in their serum and only begin to show signs of distress—such as sweating, shaking, or anxiety—when the substance is no longer in the serum and they are experiencing physical withdrawal from the substance. To illustrate how this pattern of use might appear in a physician, consider the case of Nancy, whose case is real but whose identifying data, like Hal's, has been altered. Nancy's case will be presented in two parts as well.

Case Vignette: Nancy (Part 1)

Nancy is an internist who has been working in a private group practice for 15 years.
Over the last 6 months, on several occasions office staff have suspected that they smelled alcohol on her breath. Additionally, and uncharacteristically, three

different patients have complained to the office manager that Nancy snapped at them for no reason. One of these patients felt so belittled that she even asked to switch primary care doctors. Although the office staff were becoming suspicious that Nancy might have a substance use problem—or some other mental health issue that was causing an alteration in her usual behavior —it was only when one of the nurses saw Nancy taking a quick drink of something from what looked like a bottle of alcohol and then placing the bottle into the middle drawer of her desk that Nancy was ordered to go to her state physician health program for an evaluation. Although Nancy stated she had driven 30 miles to the evaluation without incident and appeared to be totally sober, a routine breathalyzer obtained during that interview read 0.17, over twice the legal limit for driving. Nancy denied having had any alcohol prior to that meeting.

Nancy's story illustrates several aspects of substance use among physicians. First, given the fact that she appeared completely sober at her initial visit to the physician health program despite having a significant blood alcohol level, she obviously had developed a very high tolerance for alcohol. Given that erratic behaviors had begun to present themselves in the workplace, her alcohol-use disorder had probably been present for a long time prior to manifesting in the workplace. Also, Nancy basically seemed like a very nice, caring person, so that when patients began complaining about her demeanor toward them, the extent of her alcohol problem was probably fairly large.

8.4　Assessment and Treatment

If one is asked to evaluate a physician who might have a substance-use disorder, at the outset the physician ought to be informed about the extent to which the evaluation will be confidential or not. Referral sources should expect a report back from the evaluator about what transpired. Additionally, evaluators may or may not see themselves as treating physicians, and their assumptions about what they will reveal and to whom may vary accordingly. Releases for information should be signed.

If the physician-patient decides not to sign any releases or consent to a full evaluation, the evaluator might not be allowed to say anything about the physician to the referring source. In these instances, inform the physician that standard procedure involves signing releases and reporting back to the referral source. Thus, if a reporting entity does not hear anything back from the evaluator, it would likely indicate that either releases were not signed or the evaluation did not occur. The physician-patient should be informed that the referring source will likely draw those conclusions. Of course, without written signed consent, the evaluator should not answer any specific questions about the individual physician. Although some might question whether this course of action coerces the physician-patient's consent and violates their right to privacy, the author's opinion is that this procedure successfully navigates various competing needs and interests without trampling on the individual physician's right to privacy and autonomy.

If the examination proceeds, it should include a complete psychiatric and medical history as well as appropriate diagnostic tests. Collateral contacts should also be consulted after obtaining written consent, although caution needs to be used with some sources, given potential bias from any single source as well as the need for confidentiality. Bias could occur in various directions. A vengeful officemate might paint an overly negative picture, whereas a coworker who fears getting overloaded with much more work by covering for a physician who has left to undergo treatment might downplay matters. Spouses and other family might downplay any problems to cover for the physician or, conversely, might exaggerate problems out of anger and resentment for a problem that has gone on far too long. Sometimes a physical examination is indicated. History should include a complete substance use history, including questions about first use of a given substance, last use of that substance, and what his or her peak use was of that substance (including how much over any given time period and also how long that lasted). Additionally, the history should include questions about tolerance, loss of control over the substance use, withdrawal symptoms (if any), attempts to quit, and whether or not the individual has ever been in a detoxification program or rehabilitation program, or otherwise treated for a substance-use disorder.

The history should also include questions about the use of substances in situations where it is hazardous; problems at work that might be related to substance use; and whether there have ever been any legal or interpersonal problems that are substance-related. Physicians who misuse prescription drugs should be asked how they obtained them. Given that doing so frequently involves breaking the law, consideration should be given to consultation with an attorney.

If concerns about a colleague are serious enough, a structured intervention may be necessary. First, it is necessary to know what the legal obligations are in a particular state or province when a colleague might have a substance-use disorder. Hospitals, state licensing boards, and other agencies sometimes mandate being informed about any such concerns about colleagues. Also, gather facts about what has been reported and/or alleged. After doing so, arrange a meeting with the individual and generally try to have a third person present. The third person can serve as a witness to the conversation that ensues. Often this should be a clinic chief or a chief medical officer.

When meeting with the individual, avoid jumping to any conclusions (e.g., "I think you have a problem with alcohol") but instead inform the physician about the facts you know about potential substance use issues. These facts could include statements such as "A nurse on your floor reported smelling alcohol on your breath" or "a physician assistant said that you were slurring your words on several occasions." The tone should be nonaccusatory and matter of fact.

If the physician denies any problems, a comprehensive evaluation is necessary. If the physician admits to having a problem, tell him or her how much you appreciate his or her honesty and insist that he or she enter a treatment program immediately. It is often necessary to insist that the physician cease practice immediately and arrange for coverage of his or her patients.

If there is any doubt about a substance use problem in the physician, laboratory testing ought to be obtained as soon as possible. Rapidity is important because many substances have fairly short detection windows (Verstraete 2004). When obtained for forensic purposes (or when legal challenges are possible), urine and blood should be collected and stored under federally mandated collection and chain-of-custody procedures, and interpreted by a certified Medical Review Officer (Swotinsky 2015). If there are any questions about how to proceed, a toxicologist should be consulted about the type of testing that should be performed for the drugs that are suspected, so that test results can be interpreted properly. Hair testing can be helpful given that it provides a 3-month window of detection of substance use (Agius et al. 2010). Caution should be used when interpreting a hair sample for substances that can be smoked, however, given that ambient smoke in the air can result in a false positive for individuals who might have been exposed to smoke from various substances but who themselves did not ingest the drug in question.

Immediate laboratory testing provides the physician with a means of refuting any false allegations of substance use. When collecting urine, the specimen must be checked for temperature, specific gravity, and creatinine to exclude the possibility of substitution or dilution, and confirmatory testing must be performed on any positive screen. Given that physicians generally face serious personal, professional, and legal sanctions if drug tests indicate drug use, great caution should be taken to ensure that specimens are handled properly and results confirmed through additional testing prior to concluding that a test is in fact positive for drugs of abuse.

For those physicians who enter residential treatment, initial treatment usually consists of medical observation for any signs of withdrawal, with provision of medication and other treatment as needed. After this initial period of medical stabilization, the physician enters into an intensive psychosocial rehabilitation program, which includes individual and group therapy, Alcoholics Anonymous (AA) and/or Caduceus meetings (12-step meetings specifically for healthcare professionals), psychological and psychopharmacological evaluation and treatment if indicated, and, often, family meetings. Health insurance seldom covers more than a fraction of the cost of residential treatment and their significant expense can be prohibitive for many physicians. Additionally, evaluation centers that recommend lengthy treatment stays not uncommonly offer treatment recommendations for costly, lengthy stays that are often fraught with significant conflicts of interests. These should be viewed cautiously by physicians themselves, physician health programs, and state boards of medicine, and not automatically be mandated by these latter entities (Boyd 2015).

So what happened with Hal?

Case Vignette (Hal Part 2)
Instead of going to jail Hal went straight into a detoxification program and from there stayed on an inpatient unit for several weeks. While he was there, Hal signed a monitoring agreement with the state physician health program. I first met Hal several days after his discharge and became his psychiatrist for the next

8 years. Hal was freely forthcoming with details about his past opiate use and the extent of his problem. Probably because of how rapidly he was withdrawn from the opiates, Hal felt bad physically and was clinically depressed for several months. Nonetheless, he began going to AA meetings, was undergoing random urine screens, and remained completely clean and sober (except for a glass of champagne at a friend's wedding a couple of years into our work together). After 2 years—with the advocacy of his physician health program—Hal was able to get his medical license reinstated and found a small group practice that was willing to take a chance on hiring him. Unlike before, Hal started out half-time and also had complete control over his schedule of patients. Hal felt a renewed appreciation of being a doctor and throughout the time we worked together, remained clean and sober.

Despite Hal's significant addiction to opiates, the fact that he was able to remain clean and sober and ultimately successfully return to work is not atypical for physicians across multiple specialties (e.g., DuPont et al. 2009; Rose et al. 2017; Skipper et al. 2009; Yellowlees et al. 2014).

8.5   Special Issues for Monitored Physicians

Physicians who have been treated for substance-use disorders or who are or have been in monitoring by their state physician health programs should carefully assess what to disclose if anything to colleagues, hospitals, insurance companies, or state licensing boards when they are asked to disclose their own past substance-related treatment or monitoring contract information as part of a hiring, credentialing, or licensing application form.

Physicians should answer all direct questions honestly, but they should try to avoid making a disclosure of confidential information until a face-to-face interview. Additionally, they should avoid making any disclosures at all until they are fairly certain that they want the position being offered. When making any disclosure, the physician should make a fairly quick, factual statement and then move on to what the physician has done about it. For example, the physician could say, "I want you to know that 3 years ago I was suspended from practice because of problems with alcohol, but since then I entered a lengthy rehab stay and have been monitored ever since in the state physician health with random drug screens and close scrutiny otherwise and have not touched alcohol in over 3 years." The physician should then state that the result is greater health and understanding about substance use and a statement that he or she would be willing to do whatever is necessary to have the employer feel secure about sobriety both now and in the future. If there is any doubt about how to answer any question about substance-related issues, physicians should consult attorneys who are knowledgeable about licensure and other professional issues pertaining to physicians in their own jurisdictions.

8.6   Legal Considerations

There are some important legal considerations to keep in mind when addressing physician substance use. In many states, individual physicians and healthcare organizations are required to report a physician to the licensing board if there is reasonable suspicion that the physician is impaired by alcohol or some other drug (Boyd 2015). (Massachusetts healthcare providers are also required to report physicians with impairment due to physical disabilities or mental instability.) In many states, failure to report an impaired physician can result in sanctions against the individual physicians or healthcare facilities who failed to make the report. In some states, clinicians are exempt from reporting their own physician-patients given their need to maintain doctor-patient confidentiality. Such clinicians, however, should recommend time off from work for treatment until concerns about safe provision of patient care are no longer an issue.

Many states allow for a confidential referral to a physician health program instead of a report to the licensing board. This is commonly referred to as a "diversion program," and in states where this provision exists the diversion program should be preferentially used. Doing so allows the impaired physician the possibility of obtaining much-needed help without immediate fear of the legal and professional difficulties that can arise when the licensing board becomes involved. If the impaired physician refuses to enter the diversion program, then most states require that the licensing board be notified about the physician.

Some impaired physicians engage in illegal acts to procure their drug(s), whether through self-prescribing, diverting stock medications for their own use, stealing medications from patients, prescribing for fictional patients or family members, or purchasing drugs via the Internet or on the street. In these situations, the author strongly urges physicians to obtain legal counsel early, preferably from an attorney who is experienced in dealing with physicians, hospitals, and state boards of medicine as well as the police, prosecuting attorneys, and the federal Drug Enforcement Administration. Obtaining an attorney who both knows these agencies and is licensed in the state where the alleged offenses occurred is essential. The author has observed a few physicians who have wasted money employing attorneys who knew little of these issues or who were out of state and unfamiliar with the local licensing board's rules, regulations, and usual practice.

Another legal consideration is whether to self-report information to the state licensing board about a possible infraction of their rules or some other wrongdoing. Recovered physicians should be judicious about what they reveal to the licensing board, but they should never withhold information or lie. This constitutes perjury, and when discovered invariably leads to a disciplinary procedure and harsher treatment than if the physician had been truthful with the board in the first place. Physicians are advised to consult with an attorney before making any self-report to the licensing board and before completing license renewal or other credentialing forms and questionnaires.

8.7   Ethical Considerations

There are a number of ethical issues that arise when considering physicians who might have substance-use disorders (Boyd 2015; Boyd and Knight 2012). Ethical dilemmas arise when basic ethical principles are in conflict with one another. For example, our duty to respect the autonomy of others might come into conflict with our duty to promote both beneficence (defined as "doing good") and nonmaleficence (alternately defined as "preventing harm" and/or "not inflicting harm on others") in the case of a doctor who is suspected of misusing substances. In such cases, there may also be a conflict between our values of protecting confidentiality (and not reporting) vs. protecting the safety of patients (and reporting) (Bright and Krahn 2010).

The potential tension between beneficence and nonmaleficence might be especially pronounced in cases where we are not certain about a physician's behavior, where it might not be clear how best to proceed such that one does good and prevents as much harm as possible to all parties involved (including the physician, his or her family, and his or her patients). The author has witnessed interventions in ambiguous cases that resulted in public scrutiny, loss of professional income, jeopardized housing, and suddenly deprived a panel of patients of their treating physician. At times it is difficult to conclude that, all things considered, good had been accomplished. That said, one cannot know in these circumstances what harm might have resulted if the intervention had been postponed and the physician was allowed to continue to misuse alcohol or drugs. In other cases seen by the author, inaction led to greater harm to family members and patients, incarceration of the physician, or death of the physician.

Physicians are not usually trained to observe and evaluate fellow physicians. Our objectivity when dealing with fellow physicians might be compromised. Also, with a colleague, it might be harder to draw a line between casual use and either mild or moderate-to-severe substance-use disorders. There are many "slippery slopes" in medicine, and we might be tempted to give our colleagues the benefit of the doubt (compared to our patients) and avoid confrontation. Other reasons for not reporting a potentially impaired colleague include beliefs that someone else would report the colleague or that nothing would happen as a result of reporting, or fear of retaliation (DesRoches et al. 2010).

Others might raise legitimate concerns that in forcing an intervention upon someone we are acting paternalistically. Furthermore, especially in those situations where physicians are working in the same clinic or practice, reasonable concern ought to be given to the possibility that our motives might at times be impure. There could be occasions when bringing a colleague down in some manner might serve to improve our own standing in some way—such as by increasing our own patient panel or improving our status within our medical institution. Can a physician be certain about the purity of his or her motivations when confronting a colleague?

Case Vignette: Nancy (Part 2)

Despite the evidence to the contrary Nancy steadfastly denied having any alcohol
problem whatsoever, and only entered a monitoring agreement because her hos-
pital medical staff demanded she do so if she didn't want to be terminated. Even
though she maintained this stance about her use of alcohol, she managed to stay
clean and sober (as documented by random screens) and was otherwise compli-
ant with all aspects of her monitoring agreement.

8.8   Summary

Healthcare personnel experience rates of substance-use disorders that are compa-
rable to the general public. Unlike the general population, however, physicians are
much more likely to misuse prescription drugs and to do so for reasons of self-
treatment. Physicians in certain specialties—anesthesia, emergency medicine, and
psychiatry—are more likely than other physicians to develop problems from using
certain drugs. Those in other specialties—especially pediatrics and surgery—are
generally less likely to develop problems from misusing substances. Physicians are
generally very bright, and as a result, if they do have a problem with substances,
they generally are able to keep it out of the workplace for several years before prob-
lems begin to arise in the workplace.

There are a number of nonspecific signs and symptoms that might suggest a
problem. Knowing these can increase vigilance and possibly result in intervening
earlier rather than later. Intervening as early as possible is important, both for the
health of the physician and for his or her patients. What should never happen is for
other physicians to bury their heads in the sand and pretend nothing is wrong.
Speaking up could save a life. Open discussion and dialogue with the colleague—
and perhaps conferring with others—is the best way to ascertain whether one's con-
cerns merit intervention or not. If one does suspect that a colleague is impaired, it is
important to know what one's reporting obligations are. In many states, failure to
take action in certain ways can lead to stiff sanctions.

The best approach for intervening with physicians is one that is highly struc-
tured and that leads to an independent evaluation with required report-back.
Residential programs of 2–3 months in duration are often recommended, but
there is scant evidence that these extended stays produce better outcomes than
shorter stays. If a physician has undergone extended inpatient treatment, after-
care plans generally include monitoring by the state physician health program
which exist in almost every state in the USA. These programs vary in their stan-
dard practice but in general provide or facilitate independent assessments for
physicians when there is a concern about substance use (or other mental health
disorders). They also provide guidance to hospital administrators, contract with
physicians, and then provide monitoring and advocacy for physicians who have
maintained abstinence and complied with all aspects of their monitoring agree-
ment. Given the practices of some PHPs which offer physicians little choice but
either to comply with any and all recommendations of the PHP or lose their

ability to practice, this author has repeatedly called for the ability for physicians to appeal PHP decisions, national standards for PHPs, and also routine external audits of PHPs. In addition, given the financial ties that often exist between evaluation centers and state physician health programs, caution needs to be exercised about blindly adhering to demands for lengthy or costly treatments (see also Chap. 12 for more information and discussion about PHPs).

Despite concerns about the administration and oversight of some PHPs (Boyd 2016), for some physicians these programs can be the cornerstone for recovery. Success rates for physicians who undergo treatment for substance-use disorders and/or monitoring are generally very high, probably because the costs of failure and the rewards of success are both very high for physicians.

Finally, physicians who have had substance-use disorders or been disciplined in some way as a result should be very careful about what information they disclose to any entity, including a state board of medicine, a hospital, and insurance companies. These physicians should consult with an attorney before making any disclosures to hospitals, insurance companies, state licensing boards, or any other entity.

Having a substance-use disorder is not a moral failing. It is problematic behavior that can potentially indicate a disease state. When it occurs within physicians it must be addressed fully, with a steadiness, without moral judgment, and with the goal of getting that physician whatever helps he or she needs. There is help and many physicians who have been caught in the grips of a substance-use disorder recover fully and return to the successful practice of medicine, as was the case with Nancy, Hal, and numerous other physicians.

When individuals embrace not just remaining sober but attending to all aspects of their own health, they are likely to be better doctors for their own patients (Frank 2007), given research showing that those who engage in better physical health practices themselves are more likely to test for and counsel their patients about health-inducing behaviors.

Key Points

1. Physicians experience rates of substance-use disorders that are comparable to the general public.
2. Signs of substance-related impairment usually manifest outside of the workplace long before they present in the workplace. When impairment manifests itself in the medical workplace, problematic substance use has usually been occurring for years.
3. Knowing potential warning signs and intervening as early as possible are vitally important for both the physician and his or her patients.
4. If a physician suspects a colleague might be impaired, it is important to know what one's legal obligations are in terms of taking action and/or reporting.
5. Almost every state in the USA has a physician health program. These programs provide or facilitate independent assessments for impaired physicians, provide guidance to hospital administrators and physician health committees, and

contract with physicians, who agree to treatment and to maintaining complete abstinence from alcohol and drug use, in order to provide monitoring and advocacy.

6. The success rates for physicians who undergo treatment for substance-use disorders and/or monitoring are generally very high, probably because the costs of failure and the rewards of success are both very high for physicians.

7. Physicians with any substance use history—such as past treatment or a DUI— should consult with an attorney who is knowledgeable about physician health issues in the physician's jurisdiction before making any disclosures to hospitals, insurance companies, state licensing boards, or any other entity.

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Cognitive Changes and Physician Performance: Causes, Clinical Implications, and Treatment

9

Carol C. Persad and Linas A. Bieliauskas

Contents

Abstract

Just like their patients, physicians are susceptible to a variety of medical, neurological, and psychiatric conditions that have the potential to impair cognitive functioning which can lead to declines in patient care. Given the nature of the work environment, physicians are also at greater risk of problems related to stress and sleep deprivation, factors that can also impact cognition. Early recognition of potential problems on the part of the individual physician and the clinical institution is key. Having a model in place that triggers mechanisms for a comprehensive assessment of the problem, development of remediation or accommodation plans, and guidance throughout will maximize successful outcomes while protecting patient safety.

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The U.S. Bureau of Labor and Statistics (2015) lists important qualities needed to be a good physician or surgeon. In addition to having a solid knowledge base with good training experiences that one gets from medical school and strong residency programs, other qualities include both interpersonal (compassion, leadership, patience) and cognitive skills including strong communication skills, organizational skills, attention to detail, and strong problem-solving skills.

Often when looking into the history of physicians who commit errors, early signs of problems are evident in their training, highlighting the need for early recognition and remediation (Paice and Orton 2004). Common concerns surrounding poor clinical competence include poor note keeping or errors in prescription, problems following protocols and procedures, and difficulties responding to crisis situations (Paice and Orton 2004). In a study looking at the neuropsychological performance of physicians who had disciplinary actions brought against them, the authors found that cognitive deficits were implicated in over 60% of medical adverse events (Perry and Crean 2005), whereas 32% of physicians referred to a physician review program due to performance concerns showed significant deficits on neuropsychological testing (Turnbull et al. 2000; Turnbull et al. 2006). A closer look at the pattern of cognitive weaknesses showed that these physicians had more problems with sequential processing of information, visual attention, complex problem solving, and learning new information.

Physicians are susceptible to the same factors, diseases, and disabilities as their patients that can impact cognitive functioning and affect clinical competence. These range from chronic long-standing disabilities like attention-deficit/hyperactivity disorder (ADHD) and specific learning disorders, medical and neurological disorders, stress, psychiatric disorders, substance use disorders, sleep disturbances, and aging. The challenge for physicians is to recognize when they are experiencing a condition that has the potential to influence their cognitive functioning, in order to take the necessary steps to ensure that they can continue to provide high levels of quality care and ultimately safeguard patient safety.

Conditions that impair cognitive functioning and impact performance among physicians are not well studied and relatively little is known regarding the prevalence of different disorders in physicians as well as their specific impact on clinical care. When medical programs do encounter trainees and faculty who are struggling due to these cognitive-based disabilities, there are often misperceptions about the disorders' influence on performance as well as a lack of good policies and procedures on how to identify and assist physicians in need to ensure successful outcomes. This chapter focuses on a few of the more common conditions encountered in training programs and clinical settings that can impact physicians across their clinical career.

9.1   Learning Disorders and ADHD

Cognitive weaknesses can be evident even in bright individuals that can impact their ability to learn and perform to the expected levels of their colleagues in medical school. The most common difficulties for students are learning disabilities (LD) and

ADHD. It is important to understand that the majority of medical students and residents with LD or ADHD are very bright, and have clearly done well in college in order to have gained acceptance into a medical training program, but have different styles of learning that can make it more difficult to demonstrate their knowledge within the typical medical setting.

Medical students and residents with LD typically have difficulties in circumscribed areas which can impact their performance in both the classroom and clinical settings. Dyslexia and other reading disorders are common, but other disorders of learning (such as those associated with writing and arithmetic as well as general learning problems) can be present that have different cognitive strength and weakness profiles, and different impacts on test performance and clinical outcome measures. ADHD is also present in medical students. Although inattentiveness, impulsivity, and hyperactivity are the hallmarks of ADHD, it also often presents with a greater range of cognitive and behavioral challenges. Recognizing and responding to these types of difficulties early, either through treatment, remediation, or accommodations, is key to ensuring a successful outcome for both the medical student and the clinical program and for good patient care.

Prevalence estimates of learning disorders in the USA are variable with numbers ranging from 5 to 30% depending on the definition of LD used and the population studied (Boyle et al. 2011; Romberg et al. 2016). A recent study examining the trends in prevalence rates from 1997 to 2008 in the USA reported that 7.7% of children between the ages of 5 and 17 are diagnosed with a LD, with a significant upward trend in numbers over time (Boyle et al. 2011). This number is likely an underestimate as past research has found that as many as 50% of students with LD are not diagnosed until college. Many of these bright students have found ways of compensating that have allowed them to perform well until their post high-school education (Rosebraugh 2000). As the demands significantly increase in college and medical school, compensatory strategies that were developed and used in elementary school become less effective and the student begins to struggle to keep up with the pace and amount of material that needs to be covered. In medical training programs, it is estimated that at least 3% of medical students and residents have a LD (Cruikshank et al. 2002; Rosebraugh 2000). Often the profile of the learning disabled student will be an individual in the high average to gifted intellectual range with good verbal skills but difficulty with reading comprehension and spelling, and particular problems on standardized tests (Brinckerhoff 1996).

ADHD has been shown to have a worldwide prevalence rate of 3.4% (Polanczyk et al. 2015) although estimates have ranged from 3 to 30%. Recent figures suggest that 4.4% of adults carry the diagnosis (Joy et al. 2010) while a recent study found that 5.5% of medical students had ADHD (Tuttle et al. 2010). The core deficit of ADHD is difficulty focusing or paying attention consistently, a skill that is necessary for learning and task completion. ADHD can present as primarily inattentive type, hyperactive/impulsive type, or combined type (symptoms of both inattentive and hyperactive/impulsive are present). The hyperactive/impulsive type is defined

by behavioral features, including trouble-sitting still, blurting out comments, interrupting others, and impulsive responding, and is more often picked up by parents and educators at a young age due to the disruptive nature of these behaviors. The inattentive type is characterized by distractibility and daydreaming and goes undiagnosed more often, as during school or at home the child is usually quiet, sits still, and doesn't disturb the classroom. Although the name of the disorder implies deficits in attention, other core features of ADHD are just as disruptive to learning. These include problems with organization, planning, multi-tasking, and decision making and problem solving, a set of behaviors often classified as executive functioning skills. In the medical trainee, it may manifest as difficulties with vigilance and problems adapting to rapid changes in condition during emergency or surgical situations, problems prioritizing tasks, and potential errors in prescribing (Fitzsimons et al. 2016). Although psychostimulants are the first line of treatment in ADHD and can help with the core attention deficits, it is important to understand that medications typically do not significantly improve the executive functioning weaknesses, and additional help is needed to build/teach these skills.

In order to help students and trainees early in the program, mechanisms need to be in place to recognize a problem, identify the underlying reason(s), and help remediate or offer accommodations. A number of organizational models have been described in the literature to help medical schools and clinical training sites develop these programs (Lacasse et al. 2012; Liu et al. 2016; Smith et al. 2007; Rosebraugh 2000). All of these proposed models encompass four basic components: (1) delineation of institutional policies and procedures regarding students who have been identified as having problems, (2) recognition of a student in need, (3) assessment and documentation of the problem, and (4) development of a remediation/accommodation plan. These models need to be developed to deal with a broader variety of issues that include psychiatric, social, physical, and medical problems, but a focus on these components as they relate to LD/ADHD is presented here.

9.1.1 Developing Written Policies

In order for an institution to prepare to work with students who are identified as needing help, it is vital to develop written policies that outline the expectations for training programs that include minimal competency standards as well as procedures regarding how the program will deal with students who are identified as having difficulties (Smith et al. 2007). These policies should cover areas such as admittance into the program, need for an evaluation, request for accommodations, and remediation protocols, as well as the needed personnel responsible for each key area of the process. These written documents will serve as a road map for the institution when faced with a student who is struggling, not just for the administration but also for the student who is identified as needing help, faculty and clinical mentors, peers, and other staff. Having well thought-out policies will ensure that fair and full diligence is provided for every student.

9.1.2 Identification and Recognition of a Student in Need

Assessment of the problem will encompass collecting data from supervisors, mentors, and the trainee himself/herself to understand the scope and type of problem that may need to be addressed. One way of gathering data is to make use of clinical competency committees to help identify medical students and residents who are falling behind or not performing as expected (Liu et al. 2016). The clinical competency committees can be a forum for supervisors and others to discuss student performance across multiple settings, provide a more comprehensive understanding of the issues involved, and also serve as a mechanism for documentation of difficulties. This information can then be used to start a discussion with the resident or medical student regarding the problems and what the underlying cause may be. Another important trigger is the failure of key examinations; once a student fails an examination, it is important to step in immediately and begin to investigate why this occurred and whether the process delineated for dealing with learning-disabled students needs to be initiated.

A number of the students will have a previous diagnosis of LD or ADHD and have received accommodations earlier in their academic careers, but are not comfortable in disclosing their disability or asking for accommodations for fear of reprisal (Romberg et al. 2016). After disclosing a disability to advisors and colleagues, students have reported experiencing biases that they are not as "smart" as others or are just trying to get special accommodations to get ahead of their peers. Yet, not disclosing means not getting accommodations they may be entitled to and instead leads to unnecessary struggles in the program and increased stress (Newlands et al. 2015). Program directors need to develop an atmosphere of acceptance and understanding that will encourage students to disclose any diagnosed disabilities or ask for help when they are struggling. Incorporating education of LD/ADHD for faculty, students, and others will also help increase acceptance and reduce bias and discrimination against learning-disabled students.

9.1.3 Assessment and Documentation

As part of the assessment process, the institution should first consider who are the key members of an assessment team, ensuring that members of the team are comprised of people who have extensive experience dealing with LD/ADHD and either know how to properly assess for these and other disorders or have resources to get the proper assessment. An assessment encompasses a number of steps, much like a clinical evaluation, and includes data gathering from the student/resident, collateral sources such as the supervisor or educator, formal testing, and past documentation. Lacasse et al. (2012) describe the initial data gathering as a clinical interview, with information collected such as the history and description of the presenting problem; background educational history; personal issues such as health, family, and other stressors that may be impacting performance; learning environment in which the difficulty is occurring including the teaching model; and

learner characteristics. As part of this evaluation, it will be important to conduct a comprehensive neuropsychological assessment. The neuropsychological evaluation must be comprehensive and cover a broad range of cognitive domains including those areas that were identified earlier as necessary skills to be a good clinician (such as problem solving, decision making, attention to detail, sequential processing, flexibility, good communication skills), along with mood measures. The resulting profile will lead to an understanding of not just a pattern of cognitive weaknesses (that can lead to a potential diagnosis) but also cognitive strengths that can be used to compensate for these weaknesses. Some trainees may have very good memory skills that allow them to do well in the first 2 years, but more difficulty with conceptualization and problem-solving skills that don't surface until year 3 during the clinical rotations. Other students show the opposite pattern, struggling with coursework, but doing very well in the clinical rotations. Many individuals with LD and ADHD also suffer from comorbid problems with low self-esteem or more serious symptoms of anxiety or depression that could impact their ability to learn and perform, and may need targeted treatment with a psychiatrist or other mental health practitioner. A comprehensive assessment will also provide a clearer picture of the student/resident and allow for more targeted recommendations regarding the need and type of treatment, accommodations, and/or remediation approaches.

Documentation is typically needed in most institutions when requesting accommodations and is particularly important for such requests for national board exams. Joy et al. (2010) reviewed applications for accommodations on the National Board of Osteopathic Medical Examiners based on a diagnosis of ADHD and found that 86% of applications did not have sufficient documentation to support an ADHD diagnosis and therefore did not receive the requested accommodations. These results highlight the need for the development of detailed protocols about the type and timing of documentation regarding medical trainees who need accommodations.

9.1.4 Remediation and/or Accommodation Plan

Once a determination is made that the medical trainee has an LD or ADHD, a decision is made whether accommodations are necessary for academic testing or in the clinical setting. Examples of accommodations can be extra time on tests, using text-to-speech programs for reading difficulties or dictation software for writing difficulties, more time for handovers at the end of shifts, and extra training on documentation procedures. There has been concern on the part of medical trainees regarding asking for accommodations because of potential backlash from others due to perceptions of receiving special treatment that might put them at an advantage. However, research has shown that the concerns regarding accommodations giving an advantage to the LD/ADHD student over other students have not been born out. When comparing performance on multiple-choice tests (Gibson and Leinster 2011; McKendree and Snowling 2011; Ricketts et al. 2010) or other test questions and clinical competency exams (McKendree and Snowling 2011), no difference was found between LD students who were given time accommodations and students

without LD who performed the tests under typical time conditions. Results from the full assessment can also be used to provide guidance regarding the choice of a career trajectory that matches the trainee's cognitive strengths to an area of specialty training. For instance, some individuals with ADHD may do well in fast-paced environments like emergency medicine, but have more problems in specialties that require focused attention to detail.

With the appropriate accommodations, medical trainees can be successful, with a 78–90% success rate in remediating residents when problems are identified early and a learning/treatment plan is put into place (Liu et al. 2016). Education plans work best when tailored to the specific needs of the medical trainee and the learning environment (Fitzsimons et al. 2016). When an organization has a well thought-out model to deal with struggling students, the institution will have all the information needed to develop individualized learning plans and maximize the chance of successful remediation.

9.2 Sleep Disorders and Sleep Deprivation

It is well documented that sleep loss and sleep deprivation have adverse effects on cognitive functioning. These effects are especially pronounced in the areas of attention, reaction time, learning, flexibility in thinking, and problem solving (Rosenbluth and Landrigan 2012). And as already discussed earlier in this chapter, these are the very skills that are exemplified by physicians for high-quality clinical care. In addition, poor or disrupted sleep can have negative effects on mood state, leading to poorer coping skills when dealing with stress, and increased symptoms of depression and anxiety (Papp et al. 2004; Rosenbluth and Landrigan 2012; Saadat et al. 2016).

Individuals diagnosed with obstructive sleep apnea (OSA) have been shown to have impairments on tests of attention, memory, and executive functioning, which improve with appropriate treatment (Salario et al. 2002). Cognitive and work-related performance decrements associated with poor sleep have also been documented in shift workers (Mansukhani et al. 2012), and given the demands of shift work in the medical field, medical trainees and faculty are at the same risk of these adverse effects. Declines in memory and learning, speed of processing, reasoning, and flexibility have been documented in interns, residents, and faculty after sleep deprivation (Benson et al. 2014; Chang et al. 2013; Halbach et al. 2003; Maltese et al. 2016). Abdulghani et al. (2012) found a relationship between levels of sleepiness and academic performance in a group of medical students. When examining performance of residents postcall, declines on measures of learning, fine-motor hand dexterity, working memory, information-processing speed, perceptual reasoning, and flexibility have been documented (Halbach et al. 2003; Maltese et al. 2016). Arnedt et al. (2005) compared cognitive and simulated driving performance in residents after different work conditions: (a) light call (daytime schedules averaging 44 h per week and overnight call only if another resident called in sick), (b) light call with alcohol consumption to produce blood alcohol levels of 0.05 g%, (c) heavy-call rotation (averaging 90 h a week with 34–36 consecutive call hours every 4–5 days), and (d) heavy call with a placebo drink. Results showed that after heavy-call rotations, performance

declines were found and these declines were similar to declines documented when the light-call residents had 0.05 g% blood alcohol levels. Specific declines were noted in aspects of sustained attention including vigilance, impulsive responding, slowed reaction times, as well as more variability in lane position and speed in the driving simulator. Huffmyer et al. (2016) reported similar findings.

Specific declines in clinical performance have also been documented. Declines in the ability to detect adenomas in gastroenterology residents were evident after a night when the resident came in to do a procedure as compared to nights when there were no clinical demands (Benson et al. 2014). Landrigan et al. (2004) compared the number of errors made by interns who worked traditional shifts of 24 or more hours every 3 days to those who worked less extended shifts (no more than 16 h). Those who worked longer hours made 35.9% more serious errors (defined as an error that either caused or had the potential to cause serious harm) and 5.6 times more diagnostic errors. Increases in medication events (errors in medications that led or had the potential to lead to serious adverse events) and self-reported errors in other clinical tasks are related to restricted sleep (Dollarhide et al. 2014; Rosenbluth and Landrigan 2012). Using a meta-analytic approach, Philibert looked at the effects of sleep on performance in both physicians and nonphysicians (Philibert 2005). Performance declines were noted for both groups, although slightly less in the physician group. Sleep deprivation was shown to have the greatest effect on clinical outcomes and vigilance, as compared to memory and other cognitive functioning. Sleep loss of 54 h or more had the most effect on performance, followed by 30 h. This is notable as 30 h was allowed under standards of the US Accreditation Council for Graduate Medical Education (ACGME) at the time of the studies.

Although most of the research has focused on residents and medical students, decrements have been documented in faculty as well. Chang et al. (2013) showed declines in memory and learning after overnight call in faculty anesthesiologists. In another study with board-certified internists, performance on the multiple-choice questions from the licensing exam was correlated with self-reported sleepiness, with lower test scores related to higher levels of sleepiness (Durning et al. 2014). This relationship was evident even though the physicians rated themselves at most as experiencing mild sleepiness. Sleepiness ratings were also correlated with decreased medial prefrontal cortex activity on fMRI, an area that is implicated in executive functioning and particularly susceptible to the effects of sleep deprivation.

However, not all studies have supported a decline in performance associated with sleep deprivation or loss in physicians. Vinden et al. (2013) examined the outcomes of daytime (between 7 AM and 6 PM) elective cholecystectomies performed by the same surgeon after a night of either no work or performing a nonelective operation between midnight and 7 AM. No differences in surgical outcomes, injury, or death were found. In a review of medical charts of over 38,000 patients, clinical outcomes were not different for patients treated by doctors who had just completed a night shift compared to doctors who did not work the night before (Govondarajan et al. 2015).

After reviewing the existing data on effects of sleep deprivation on cognitive and clinical outcomes, the ACGME proposed work hour restrictions for residents. The latest restrictions based on the 2011 standards call for a limit of 80 h a week aver-aged over a 4-week period, and maximum duty lengths of 16 h for an intern

(PGY-1) and 24 h for a second-year resident (PGY-2)[1]. However, studies looking at the impact of the ACGME work hour restrictions for residents have been mixed, ranging from mild improvements in clinical errors to a decrease in performance in surgical procedures (see also Chap. 13). Concerns have been raised that the new work restrictions may impact the quality of education for residents, as opportunities to learn and deal with emergent complicated cases may be reduced. For instance, Babu et al. (2014) showed a higher rate of postoperative complications after brain tumor and cardiovascular surgeries. These authors argued that there was a negative effect on neurosurgery residents due to the lack of experience in postoperative care that resulted with the restriction in hours. By contrast, the study cited above by Govindarajan et al (2015) reviewed over 38,000 patient charts and found similar outcomes whether the physicians had worked from midnight to 7 AM the night before or didn't work a night shift. In a review of the available literature evaluating the effects of reducing shift length in residents, Levine et al. (2010) demonstrated that overall limiting shift lengths to 16 h did not impact resident education, improved patient safety in most cases, and resulted in an increased quality of life for residents. Sen et al. (2013) found no evidence of improved well-being or self-reported increase in sleep hours in residents following US duty hour reform.

One of the potential factors underlying the variable reports of improved functioning with the new work restrictions is related to the effects of chronic sleep deprivation. Even with the new ACGME work restrictions, studies have shown that residents continue to report significant levels of sleep deprivation (Mansukhani et al. 2012). In addition, when residents have the opportunity to get a few hours of sleep during an extended shift, minimal improvements in cognition are seen (Arnedt et al. 2005; Maltese et al. 2016). Most research studies looking at the effects of sleep restriction and physician outcomes do not measure the amount and/or quality of sleep in the physicians being evaluated. Anderson et al. (2012) looked at residents' performance on cognitive tasks during medical ICU or coronary care rotations who worked extended work shifts of 24–30 h every other shift for 3 weeks. Careful sleep data was collected for each resident using sleep and work logs as well as actigraphs. Residents were asked to complete a psychomotor vigilance task at the beginning of every shift, then every 6 h, and again at the end of the shift. Declines in reaction time and lapses in attention were seen over time in each shift, and between shifts with continually worsening performance with each extended shift completed. What was striking is that even after long periods of sleep recovery between shifts, the cumulative effects of sleep deprivation were evident as reaction time was impaired at the *beginning* of the sixth extended shift, and did not improve to baseline despite having some time for sleep recovery. There was also a more rapid decline in performance across the later shifts compared to earlier shifts.

Limited studies have compared performance in medical trainees vs. faculty. Although a few studies have shown declines in cognitive performance for both trainees and physicians, it is possible that patient care may not be as affected in faculty, as their clinical experience could offset some of the sleep-associated decrements. Nonetheless, these studies demonstrate the need to be cognizant of the amount of sleep one has and how it may impact clinical care.

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[1]As this book was going to press, ACGME announced that it would remove the 16-h limit for PGY-1s and extend it to 24 h.

9.3 Cognitive Aging and Neuropsychological Assessment

As of 2006, there were approximately 80,000 physicians over age 65 who were active in patient care in the USA. Given that 5–10% of those over 65 may have dementia, it appeared certain that some practicing physicians have dementia or some aspect of impaired cognition (Harada and Sachs 2006). Neuropsychological tests are designed to examine a variety of cognitive abilities, including speed of information processing, attention, memory, language, and executive functions, which are necessary for goal-directed behavior (Encyclopedia of Mental Disorders) and individual performance on these is generally compared to normative values for relevant population groups. Perry and Crean (2005) compared the neuropsychological test performance of 148 physicians referred for assessment by the California Medical Board for various infractions, and found relative deficits on tests of performance in specific cognitive domains. The authors suggest that a framework to assess physicians may uncover potential cognitive contributions to medical errors, and this would appear to be particularly germane in aging physician and surgeon populations. The California Public Protection & Physician Health, Inc. (2014, p. 9) notes that "an assessment of cognitive function is an essential element in determining the physician's ability to perform his/her current or requested privileges safely."

9.3.1 Cognitive Aging and Medical Practice

Studies have found that older and long-practicing physicians possess less factual knowledge, are less likely to adhere to appropriate standards of care, and may have poorer patient outcomes than younger physicians (Choudry et al. 2005). Older surgeons also appear to have higher mortality outcomes for complex operative procedures (Waljee et al. 2006). Boom-Saad et al. (2008) demonstrated that there is a decline in cognitive abilities with aging surgeons and suggest that this may be a particular consideration when older surgeons are learning new visually complex procedures.

In our work, we have clearly demonstrated a cognitive decline among 359 aging surgeons (ages 45–86 years) in measures of sustained attention, visual learning, and memory undergoing neuropsychological assessment (Bieliauskas et al. 2008). There was also a positive relationship between self-reported subjective cognitive change and retirement status in this group of surgeons, but no clear relationship between subjective change and objective measures of cognitive change. Thus, the ability to perceive and appreciate cognitive changes with aging did not match on to objective neuropsychological measures. Most surgeons, in fact, did not report changes in perceived cognitive abilities, and were active in acquiring new surgical innovations (Lee et al. 2009). Interestingly, the majority of practicing senior surgeons were found to be performing at or near the level of their younger peers on cognitive tasks, though there was considerable variability in cognitive proficiency across age groups, including a higher prevalence of deficient performance in more elderly and retired surgeons (Drag et al. 2010a).

In 2015, the American Medical Association (AMA) agreed to convene a special group of professional organizations to help older physicians continue in practice. It was noted that one in four US physicians is older than 65 (AMA News 2015). This echoes a call to form an expert consensus panel to make recommendations concerning aging physicians with cognitive impairment who are at risk for medical errors (LoboPrabbu et al. 2009). Among suggestions made by the authors are broad-based examinations which might include special monitoring for physicians over age 65, and a committee to review literature for sensitive and specific tools to screen cognitive capacity of aging physicians. What is clear is that chronological aging is not synonymous with cognitive aging and that aging does not necessarily result in decrement in cognitive performance (Durning et al. 2010). Rather, cognitive performance is more variable with advanced age (Eva 2002), and includes a decline in working memory, decreased information-processing speed, increased difficulty in inhibiting irrelevant information, and a decline in hearing and visual acuity. These appear to reflect a decline in fluid intelligence (the ability to reason and to process information) vs. stable crystallized intelligence (accumulated knowledge) (Lee 2012). Overall, however, these descriptions reflect generalized changes with cognitive aging for all individuals, and are not specific to medical or surgical practitioners (Drag et al. 2010b).

9.3.2 Pressure for Mandated Screening of Cognitive Changes

Professions other than medicine and surgery already mandate monitoring of potential adverse effects of cognitive aging on execution of professional responsibilities. The Federal Aviation Administration, for example, requires pilots to undergo medical and cognitive screening at age 40, and mandates retirement at age 65. Air traffic controllers must discontinue work at age 55. There is a trend, as noted above, to pursue cognitive screening as part of credentialing for medical practitioners over age 65 (Humphreys and Gunderson 2013), although others have recommended age-based screening to start at 70 (Moutier et al. 2013). The authors report that of 267 physicians referred to a doctor-assessment center, 24% showed some degree of cognitive difficulty on screening. Those with cognitive deficits are then typically referred for more comprehensive neuropsychological testing which can identify cognitive strengths and weaknesses as well as suggest further medical evaluation for potentially reversible causes of cognitive inefficiency. The American Board of Medical Specialties is reported to be among credentialing agencies which are beginning to incorporate health and cognitive screening as part of the process of continuing demonstration of competency (Humphreys and Gunderson 2013).

While only early stages of assessment for age-related cognitive changes which potentially affect medical practice are being developed, trends for such screening can be identified and potentially positive steps in the progression of such programs can be identified.

1. The report of the AMA Council on Medical Education makes it clear that physicians are professionally obligated to continually assess their own physical and

mental health (AMA News 2015). Nevertheless, as pointed out by Bieliauskas et al. (2008), even though surgical practitioners clearly indicated that self-perceived cognitive decline would lead to a decision to retire, the self-perception of cognitive change does not map onto objective measures of cognitive change. It would thus seem that objective measures of cognitive performance which are validated in terms of their implications for medical and surgical practice could provide a positive and confidential means for medical practitioners to monitor their own cognitive efficiency. Humphreys and Gunderson (2013) suggest that a proactive confidential process should be developed to allow for early detection of cognitive decline, with attendant means for early treatment, where appropriate, as well as implications for fitness for duty, all in the privacy of one's own office. Such a private and individualized approach can potentially be developed with computerized cognitive screening instruments which can detect cognitive change over time and thus alert the medical practitioner for the need for more comprehensive cognitive screening and/or personal evaluation of consideration of retirement strategies. While such instruments exist (e.g., Cogstate.com), they have not yet been validated against their direct relationship to medical and surgical practice. Continued development in this regard is ongoing and is strongly encouraged.

2. The call for mandatory competency testing is being explored by the AMA and policies and procedures in this regard are being developed. This includes an assessment of cognitive functioning (California Public Protection and Physician Health 2014). Such development of screening procedures also requires continued development in terms of validation for their relationship to medical and surgical practice, and should be done in conjunction with well-established groups which regularly assess the validity of practices in clinical neuropsychology, such as the American Academy of Clinical Neuropsychology (theAACN.org).

The variability in cognitive aging must be respected among professionals who potentially have higher levels of cognitive reserve and thus a potential for competent practice at a more advanced age (Humphreys and Gunderson 2013). It thus needs to be underscored that the justification for cognitive assessment in individuals who have a higher degree of variability in ability as they age assures that those who retain the capability of competent professional practice can confidently continue to maintain it; while at the same time, those who may show weakening of cognitive abilities are afforded the opportunity to make judicious decisions in terms of maintaining professional gains while altering patterns of practice to assure safety and personal satisfaction.

Just like their patients, physicians are susceptible to a variety of medical, neurological, and psychiatric conditions that have the potential to impair cognitive functioning which can lead to declines in patient care. Given the nature of the work environment, physicians are also at greater risk of problems related to stress and sleep deprivation, factors that can also impact cognition. Early recognition of potential problems on the part of the individual physician and the clinical institution is key. Having a model in place that triggers mechanisms for a comprehensive assessment of the problem, development of remediation or accommodation plans, and guidance throughout will maximize successful outcomes while protecting patient safety.

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Personality Traits

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10

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Reidar Tyssen

Contents

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Abstract

There is no empirical evidence for a specific physician personality, but we lack large and representative comparison studies. Prospective studies show that the neuroticism trait is a risk factor for stress, depression, and reduced well-being in physicians as well as in the general population. The conscientiousness trait may be both beneficial (reduce drinking and increase performance) and detrimental (for stress and burnout) in physicians. Reality weakness is a pathological trait that has shown predictive validity in Norwegian physicians with respect to severe depression, suicidal ideation, and lack of help-seeking. Despite being relatively stable after young adulthood, traits may develop and change over the whole life span, suggesting that traits causing dysfunction can also change with treatment. Psychotherapy is effective in the treatment of personality disorders.

10.1   Introduction

Thirty years ago, Dr. Glen O. Gabbard described compulsiveness and the triad of doubt, feelings of guilt, and an exaggerated sense of responsibility in the "normal physician," yet there has since been limited research on the role of personality traits in the medical profession (Gabbard 1985). This applies particularly to representative and relevant epidemiological studies. Therefore, we do not know for sure whether compulsiveness is more common in medical doctors than in academia, other professions, and other comparable groups.

Dr. Gabbard's two well-known JAMA articles build on observations of several physicians attending workshops for physicians and their families at the Menninger Clinic back in the 1970s and 1980s (Gabbard 1985; Gabbard and Menninger 1989). He wisely shares these observations "without any implication that such dynamics apply to all physicians or to any one particular physician" (Gabbard 1985). Still, it is common clinically to see physician-patients with problems related specifically to trait compulsiveness (or the similar traits of obsessiveness or conscientiousness). Interestingly, conscientiousness in the NEO classification of personality traits (Costa and McCrae 1988) is sought by "headhunters" for many jobs, and is related to school performance, and hence to selection for and admission to medical school. However, the enormous volume of *Gray's Anatomy* can frustrate any high-achieving student. Previously, they may have learnt the details of their school texts more or less by heart, but there are simply too many in *Gray's Anatomy*!

This review is divided into two major sections. First, a review of selected articles about the prevalence of particular personality traits and characteristics in physicians is presented. Second, personality traits as predictors of mental health and well-being in physicians, with a particular attention to prospective and longitudinal studies, are discussed. The review is based on a focused search in Medline (Ovid) October 2016 with the two terms [Physicians]OR[Physician Health]OR[Physician Impairment]/ AND   [Personality]OR[Personality   Assessment]OR[Personality   Disorders]

OR[Personality Inventory]OR[Personality Development]. The search was limited to the last 20 years (1996–2016) and this yielded 257 articles that were hand-searched for prevalence and predictor studies. Some studies about prevalence of traits did not include mental health or well-being as an outcome, whereas the predictor studies were restricted to these outcomes.

Personality traits were assessed with different inventories, but some of these may be fairly comparable (see Table 10.1). The most common and validated personality measure in general is Costa and McCrae's NEO or "Big Five" (BF) (Costa and McCrae 1988), named for the five major personality dimensions it measures (see Glossary for terms). Our studies on physicians included Cloninger's Temperament Character Inventory (TCI) (Cloninger 1987), Eysenck's Giant Three (EYS) (Eysenck 1967), and Torgersen's Basic Character Inventory (BCI) (Torgersen 1980). In addition, a few studies with more freely described personality characteristics as well as personality typology were included. For the purposes of this chapter, personality traits as measured specifically by these scales will be shown in *italics*, sometimes preceded by the scale's abbreviated name when it may be unclear which inventory was used.

In the following discussion I will make use of my own experience both as a researcher and clinician. I have more than 20 years of experience in doing research on mental health among medical students and doctors. Since 1993 I have run a part-time specialist practice in psychiatry and psychodynamic psychotherapy primarily with physician patients.

Table 10.1 Personality dimensions (modified after Torgersen (2008))

Author	Inventory	I	II	III	IV	V	VI
Eysenck (1967)	Giant Three (EYS)	*Neuroticism*	*Extraversion*	Not *Psychoticism*			
Torgersen (1980)	Basic Character Inventory (BCI)	*General Neurotic*	*Impulsive Hysterical*	*Obsessive*		*Reality Weakness*	
Cloninger (1987)	Temperament and Character Inventory (TCI)	*Harm Avoidant* Not *Self-Directedness*	*Reward Dependent*	Not *Novelty Seeking*	*Cooperativeness* *Reward Dependent*	*Self-Transcendence*	
Costa and McCrae (1988)	Big Five (BF)	*Neuroticism*	*Extraversion*	*Conscientiousness*	*Agreeableness*		*Openness*
Torgersen revised (later) (Tyssen et al. 2000; Røvik et al. 2007)	BCI	*Neuroticism* (*Vulnerability*)	*Extraversion* (*Intensity*)	*Conscientiousness* (*Control*)		*Reality Weakness*	

Case I

Carl was 55 years old and a specialist in cardiology who worked in a busy hospital department. On admission 3 years ago he told me that he was feeling depressed and very tired from attending to his patients. After having seen outpatients, he worked long hours in his office to keep up with paperwork and strove hard to have a clean desk every night. Yet, he often felt obliged to bring work home for the weekends, and this frustrated his wife who accused him of never having time for her. During the last year he felt that he had lost patience and just prior to admittance he had been harsh and impolite to an anxious and clingy patient with supraventricular tachycardia. He had little time for avocation and no really close friends outside of his immediate family. He presented in my office with a prewritten, three-page record of his history and tentative assessment. He told me about his background and had experienced an emotionally miserable childhood. His father, an officer in the air force, had been quite cold, sarcastic, and controlling towards his two sons. His mother was rather selfish, and the boys grew up feeling that they needed to please her and show admiration for her. In medical school he failed a significant exam in the second year, and later he realized that this was due to a depressive episode. He also suffered from low self-esteem and was vulnerable to student and resident colleagues who made fun of his clumsiness in sports. He accused himself of not being strong enough to hit back. His depression had previously been successfully treated with both antidepressant medication and cognitive-behavioral therapy, but after turning 40 he had been depressed a couple of times after periods of extreme hard work. He had no symptoms of bipolar disorder. His low self-esteem or neuroticism and his perfectionistic work attitude were clearly trait-dependent, and this became the focus in his long-term psychodynamic therapy. After 2 years in therapy, he gradually gave up the idea of going back to full-time work in the hospital, and decided to work part-time in a private practice he could share with a colleague. The increase in leisure time became a new challenge for him. In the beginning he felt guilty about just going for a walk with his wife, but he started to enjoy this and other things in life. He spent more time with his youngest son of 10, and he also started to become friends with two other men of the same age that he really enjoyed being with. He realized that his strenuous work was due to an unconscious wish for the genuine approval that he had missed in his childhood.

Comments:

Excessive obsessiveness, conscientiousness, and perfectionism are maladaptive traits that often complicate the course of depression and affective disorders. Often these patients need psychotherapy, and long-term psychodynamic therapy with a focus on transference issues may be beneficial if they also have relational problems. The growth of a sound self and identity requires nurturing from more than just a work-performance perspective: for instance, from our relationships with partner and friends, our role as a good parent if applicable, and avocational activities. When Carl realized this, he could enjoy his reduction in work hours and, it is hoped, the rest of his life much more than he had enjoyed the last decade.

10.2   Epidemiology

10.2.1 Prevalence of Personality Traits in Physicians

The search identified 12 studies that compared personality traits among groups of physicians with traits in other physicians (e.g., specialty), other healthcare workers, or general population norms (Akiskal et al. 2005; Clack and Head 1999; Deary et al. 1996; Eley and Eley 2011; Hojat et al. 1999; Kluger et al. 1999; Lung et al. 2009; Lydon et al. 2015; Magee and Hojat 1998; Nash et al. 2009; Pajonk et al. 2011; Roback et al. 2007). None of these studies were comprised of large and representative samples of physicians, but they did include a diverse range of physician subgroups and specialties.

10.2.1.1   Comparison with General Population Norms (Five Studies)

Five studies compared traits with general population norms (Akiskal et al. 2005; Hojat et al. 1999; Kluger et al. 1999; Lydon et al. 2015; Magee and Hojat 1998).

A US study compared a national sample of 188 positive role models in medicine with population norms on the BF dimensions (Magee and Hojat 1998). The whole sample of role models scored significantly higher on BF-*Conscientiousness*, whereas the male role models (*N* = 164) scored higher on BF-*Agreeableness* than other men, and the female role models (*N* = 24) scored higher than other women on BF-*Extraversion* and BF-*Openness*.

A later study of the same role models compared them with 104 internal medicine residents (Hojat et al. 1999). This study found that the residents also scored higher on facets of BF-*Conscientiousness* than population norms.

A study from New Zealand compared 364 doctors (specialist anesthetists, trainee anesthetists, and other physicians) with a community sample using the TCI and found that they were more *Cooperative* than the community sample (Kluger et al. 1999). The anesthetists were also more *Harm Avoidant* and *Self-Directed*, but less *Reward Dependent* and *Novelty Seeking* than the community sample.

In a study of 334 Irish doctors and medical students, BF-personality traits were found to be similar to norm values except that they were high in *Openness* (Lydon et al. 2015). This study emphasized the diversity of personality traits in the sample and gave no support for a specific physician personality.

Another study compared temperament profiles in different profession groups among psychiatric outpatients with matched patients outside of these professions (comparison group) (Akiskal et al. 2005). Physicians and lawyers had higher rates of obsessive-compulsive traits and dysthymic temperament than the comparison group.

Overall, while four of the five studies found differences in levels of various personality traits between selected physicians and the general population, neither the role models nor psychiatric patients can be considered representative physician samples. Nevertheless, both of these groups reported relatively high levels on the obsessive-compulsive spectrum (conscientiousness) compared with population norms. Still, there is no convincing support that the general population of physicians

differs from the nonphysician general population, due to an absence of studies with large and representative physician samples.

10.2.1.2   Stage of Career and Medical Specialties (Five Studies)

Using the TCI, anesthetists in training were more *Novelty Seeking* and *Reward Dependent* than specialist anesthetists, whereas a comparison group of physicians were more *Cooperative* than specialist anesthetists (Kluger et al. 1999). Using the BF, internal medicine residents were higher on facets of *Neuroticism* than the older physician role models (Hojat et al. 1999). A Scottish study compared 39 psychiatrists with a combined group of physicians and surgeons ($N = 149$). The psychiatrists reported higher levels than the other doctors on the BF-measured *Neuroticism*, *Openness*, and *Agreeableness*, but lower levels on *Conscientiousness* (Deary et al. 1996). In a study that compared emergency physicians and paramedics with nonemergency medical doctors and medical students (Pajonk et al. 2011), the authors used a German version of the BF (Hamburg Personality Inventory). They found no homogenous differences between the groups, but rather diversity across groups. Still, a larger proportion (50–70%) of the emergency doctors and paramedics were characterized as "resilient and stable."

The previously mentioned Irish study did not find any differences in traits between specialties, but basic medical trainees (students and interns) reported lower levels of BF-*Conscientiousness* than did postinternship respondents (senior physicians) (Lydon et al. 2015).

In sum, it seems that stage of career, and perhaps age, is more important than specialty comparisons with respect to personality trait differences, but there is a paucity of studies that compare traits in large samples between different specialties.

10.2.1.3   Comparisons with Nurses and Special Groups of Physicians (Four Studies)

An Australian study compared doctors ($N = 214$) and nurses ($N = 212$) on TCI-measured personality traits (Eley and Eley 2011). Doctors were lower in *Novelty Seeking*, *Reward Dependence*, and *Self-Transcendence*, but higher in *Self-Directedness* and *Cooperativeness* than the nurses. Another study compared physicians and other health professionals (including nurses) during the Asian SARS outbreak in 2003 (Lung et al. 2009). This study found no differences between the groups in EYS-*Extraversion* and EYS-*Neuroticism*.

Two other studies looked at physicians with medicolegal problems (Nash et al. 2009; Roback et al. 2007). A comparison study at Vanderbilt University using personality inventories in 88 problematic physicians found that those classified as "sexually boundary violators" showed more serious character pathology than those classified as "behaviorally disruptive" or "other misconduct" (Roback et al. 2007).

In a study among 566 Australian general practitioners, males who self-reported medicolegal matters (civil claims, Medicare fraud inquiry, disciplinary hearing, etc.) had higher EYS-*Neuroticism* scores than doctors who did not report such matters (Nash et al. 2009).

The differences in TCI-measured temperaments between the Australian nurses and doctors resemble those between trainees and already-trained anesthetists, since both the nurses and the young anesthetists were higher in *Novelty Seeking* and *Reward Dependence*. Still, effect sizes were small and we need more studies before any conclusion can be made here.

10.2.1.4   What About Sex Differences? (Three Studies)

The study of physician role models found that females scored higher than the males on BF-*Openness*. Moreover, the differences between the female role models and population norms were larger than the differences among their male counterparts (Magee and Hojat 1998). Among Australian general practitioners, men reported higher EYS-*Psychoticism* scores than did women, whereas women reported higher EYS-*Neuroticism* scores than did men (as in community samples) (Nash et al. 2009). A survey on gender differences in 371 medical graduates in medicine and dentistry in London found that men reported more "leadership potential," "spirit of curiosity," and "tolerance of ambiguity and uncertainty" than women (Clack and Head 1999). On the other hand, women reported more "ability to inspire confidence in others", "ability to listen," "ability to work in team," "caring and compassionate nature," and "motivation," and being more "satisfactory at interpersonal relationships in professional life." These findings were concluded to be in keeping with existing general theories on personality differences between men and women, and therefore not doctor specific.

To sum up, it seems that doctors possess diverse personality traits, as do the general population. We have no reasons to believe that their personalities differ much from other comparable groups, such as other professionals or academics. Still, the pressures and responsibility of being a physician may be more stressful to individuals with particular traits. This should be investigated first and foremost in prospective studies.

10.2.2 Personality Traits as Predictors of Mental Health and Well-Being in Physicians

This section focuses on studies with prospective or longitudinal designs, because temporality is an essential criterion with respect to the possible causation and identification of any risk factors (Hill 1965). Other important criteria, such as strength and consistency of the associations between the traits and outcome, will also be alluded to and therefore some prospective studies that were not identified by the search will also be discussed.

The search above identified 14 prospective and longitudinal studies (Brewin and Firth-Cozens 1997; Finset et al. 2005; Gramstad et al. 2013; Grotmol et al. 2010; Isaksson Ro et al. 2010; Mahmood et al. 2016; McManus et al. 2004; Richman et al. 1996; Ro et al. 2008; Sen et al. 2010; Stoen et al. 2013; Tyssen et al. 2001; Tyssen et al. 2004; Tyssen et al. 2009). Seven of these were about depressive symptoms and suicidal ideation as outcomes (Brewin and Firth-Cozens 1997;

Gramstad et al. 2013; Grotmol et al. 2010; Sen et al. 2010; Stoen et al. 2013; Tyssen et al. 2001; Tyssen et al. 2004); four were about work stress and burnout (Gramstad et al. 2013; Isaksson Ro et al. 2010; McManus et al. 2004; Ro et al. 2008); two were about problem drinking (Mahmood et al. 2016; Richman et al. 1996); and three included measures of positive psychology, such as work and life satisfaction (Finset et al. 2005; McManus et al. 2004; Tyssen et al. 2009). Most of the studies were Norwegian, and 7 of the 14 studies were from the Longitudinal Study of Norwegian Medical Students and Doctors (NORDOC). This survey included the BCI in 1993 and 1994, either in medical school or in the first post-graduate (internship) year, and mental health outcomes were measured several years later. Unfortunately, the BCI has not been well validated in samples other than Norwegian.

10.2.2.1   Depressive Symptoms and Suicidal Ideation

Brewin and Firth-Cozens (1997) identified self-criticism as a predictor of depression 2 years later, even when controlled for workload in the first postgraduate year, in a British cohort study of 318 medical students. In the same study self-criticism, which closely resembles neuroticism, predicted depression in the male doctors 10 years later, but not in their female colleagues.

In the same vein, a 10-year follow-up NORDOC study showed that earlier low self-esteem (which also is similar to neuroticism) partly mediated the predictive effect of perceived parental bonding on severe depressive symptoms (Grotmol et al. 2010). A 15-year follow-up of the same cohort, with repeated measures, showed that those who had reported high levels of BCI-*Neuroticism* at medical school had a threefold increase in risk for later severe depressive symptoms when controlled for other predictors (Stoen et al. 2013). Students with high levels of BCI-*Reality Weakness* had double the risk of severe depressive symptoms in the 15 years after leaving medical school. *Reality weakness* is a trait used to describe an individual's perceptions that border between reality and fantasy; and it measures chronic illusions, paranoid traits, and problems with identity-security and relationships. Torgersen intended it to capture personality pathology, such as paranoid, borderline, and schizotypal personality disorders (Torgersen and Alnæs 1989).

Sen et al.'s large cohort study followed interns ($N = 740$) from 13 US hospitals across their internship year. BF-*Neuroticism* at baseline was an independent predictor of the increase in depressive symptoms even when work-related and other predictors were controlled for (Sen et al. 2010). This study also found evidence for a genetic polymorphism effect on depression that was moderated by the neuroticism trait.

In another Norwegian cohort study of young physicians, the effect of BCI-*Neuroticism* on depressive symptoms was mediated (absorbed) by perceived job stress, whereas BCI-*Reality Weakness* had an independent and direct effect on depressive symptoms (Gramstad et al. 2013). In this study BCI-*Extraversion* protected against depressive symptoms.

With respect to suicidal ideation, a prospective study of 522 Norwegian doctors showed that both BCI-*Neuroticism* and BCI-*Reality Weakness* predicted change in suicidal thoughts from the end of medical school to the end of the first postgraduate (internship) year, even when other predictors controlled for (Tyssen et al. 2001). BCI-*Reality Weakness* was the only trait predictor for the transition of suicidal thoughts to suicidal planning from medical school to the first and fourth postgraduate years (Tyssen et al. 2004).

In all, these studies show that neuroticism, self-criticism, and reality weakness predict depressive symptoms over many years after leaving medical school. BCI-*Neuroticism* also predicted mental health treatment needs during internship in a NORDOC study that was not captured by the search (Tyssen et al. 2000). Reality weakness was the most important trait predictor of depression and aggravation of suicidal ideation over the first few postgraduate years. This finding indicates a detrimental role of personality problems in young doctors at the very stressful beginning of their career. To sum up, personality traits, particularly neuroticism, can be risk factors for depression after leaving medical school. The long-term predictive validity of neuroticism with regard to mental disorders is in keeping with several studies of other populations (Jeronimus et al. 2016). In fact, personality traits and mental disorders may share the same genes, and recently a high genetic correlation between BF-*Neuroticism* and major depression ($r = 0.56$) has been found (Lo et al. 2017).

10.2.2.2 Stress and Burnout

A large 12-year British cohort study among almost 1700 senior house officers (residents) in hospitals or general practice used BF measures obtained earlier (McManus et al. 2004). The study found that *Neuroticism* was the most important independent predictor of stress 5 years later as measured by the 12-item version of the General Health Questionnaire.

This is in keeping with one of the studies mentioned above, which found that BCI-*Neuroticism* predicted job stress in the internship year (Gramstad et al. 2013).

With regard to burnout, the British cohort study also found that the emotional exhaustion factor of burnout was predicted by both high levels of BF-*Neuroticism* and low levels of BF-*Extraversion* in a multiple regression model (McManus et al. 2004).

We followed a sample of doctors that had participated in a counseling intervention for burnout at Villa Sana in two studies (Isaksson Ro et al. 2010; Ro et al. 2008). The first one found that higher levels of EYS-*Neuroticism* and lower levels of EYS-*Extraversion* at baseline predicted more reduction in burnout 1 year after the intervention (Ro et al. 2008). A 3-year follow-up found that there was a reduction in EYS-*Neuroticism*, but that the reduction in emotional exhaustion occurred sequentially before the reduction in EYS-*Neuroticism* both at the first and third years of follow-up (Isaksson Ro et al. 2010).

It seems that neuroticism is an important marker of stress-vulnerability in doctors, at least early in their career. In another prospective NORDOC study, which was not captured by the search we found that BCI-*Neuroticism* alone

predicted half of the explained variance in a multiple regression predictor model of job stress during internship (Tyssen et al. 2005). We also found that the combination of BCI-*Neuroticism* and BCI-*Conscientiousness* was the most important predictor of work stress, both in medical students (Tyssen et al. 2007) and first-year postgraduates (Røvik et al. 2007). Both studies indicate a protective effect of BCI-*Extraversion*. These findings were in keeping with Doherty and Nugent's review of cohort studies on personality among medical students; conscientiousness is a predictor of academic success early in the curriculum, but may also predict later stress among the students (Doherty and Nugent 2011). Later on, when they start seeing patients and meeting the challenges of clinical work, it seems that extraversion and openness are important protective factors for the students.

10.2.2.3 Problem Drinking

Twenty years ago, Richman et al. showed that personal susceptibility (narcissism) predicted problem drinking in internship, or more specifically the interaction between narcissism and workplace abusive experiences predicted such problems (Richman et al. 1996). This is one of very few prospective studies on personality and drinking among doctors. In a recently published 15-year follow-up we identified low BCI-*Conscientiousness* measured at medical school as an independent predictor of hazardous drinking throughout the years, even when mental distress and other factors were controlled for (Mahmood et al. 2016).

Conscientiousness seems to have a protective effect against problem drinking. Consistent with this, we have found that low BCI-*Control* (or conscientiousness) at the beginning of medical school predicted hazardous drinking 6 years later (Kjøbli et al. 2004). But we need more studies on this, and in particular we need more studies on the role of narcissism with respect to alcohol and drug misuse in doctors. There are few studies on the predictive role of narcissism in medical students and doctors (see Case II below).

10.2.2.4 Work and Life Satisfaction

A prospective NORDOC study of job satisfaction 4 years after graduation found that the interpersonal problem of being withdrawn was a univariate significant predictor, but the significance disappeared in the fully adjusted model (Finset et al. 2005). The study also included the BCI traits, but none of these were significant.

The large British cohort study mentioned previously found that lower levels of BF-*Neuroticism* predicted overall satisfaction with medicine as a career 5 years later (McManus et al. 2004).

In another study, we looked at life satisfaction in Norwegian doctors 4 and 9 years after leaving medical school (Tyssen et al. 2009). The doctors were more dissatisfied than a general population comparison sample matched on age, sex, and educational level. The only significant trait in the adjusted model was BCI-*Neuroticism*, and low levels of this trait predicted higher life satisfaction almost 10 years later. BCI-*Conscientiousness* predicted less increase in life satisfaction from

the end of medical school to the end of the first postgraduate year, possibly due to the detrimental effect of being overly compulsive during this stressful year.

It seems that the traits of neuroticism and conscientiousness are also important with respect to positive psychological outcomes because they reduce work and life satisfaction in physicians. Nevertheless, we need more analytical studies about satisfaction with life and work in physicians.

10.3 Unique or Physician-Specific Dimensions

We lack representative studies that compare physicians with the general population, but we have some quite representative Norwegian studies on doctors ($N = 814$) and police officers ($N = 3272$) aged about 40 that both include the BCI (Aasland et al. 1997; Berg et al. 2005). When mean levels between these samples are compared, the police officer sample reports significantly higher BCI-*Conscientiousness* and BCI-*Extraversion*, as well as lower BCI-*Neuroticism* than do the medical doctors. This applies to both genders, but the difference in extraversion is more prominent in women than it is in men. Effect sizes were generally small in these preliminary calculations, except for a small to medium one (Cohen's $d = 0.49$) with regard to difference in BCI-*Conscientiousness* between the two samples of women (the police officers reported higher levels).

Generally, it seems that the police officers, who are a highly selected group, possess more "healthy" or beneficial personality traits. Both higher extraversion and lower neuroticism have been linked to subjective well-being. The relatively higher level of neuroticism in doctors may explain in part the susceptibility of this group to depression and suicide. The comparison studies on depression so far have been mainly on self-reported depressive symptoms, and we still lack studies with validated diagnostic interviews that compare doctors with other samples (Mata et al. 2015).

10.3.1 Major Dimensions of Personality

Despite scarce evidence about a higher frequency of the obsessiveness dimension among physicians than others, this concept deserves additional discussion for two important reasons. First, conscientiousness predicts good performance and success in medical school, as mentioned above (Doherty and Nugent 2011). Second, the obsessive dimension is often referred to when stress and mental health problems in the medical profession are discussed (Myers and Gabbard 2008). As clinicians, we very often meet physician-patients with burnout and depression that struggle because of their compulsiveness, perfectionism, or overly conscientiousness. These are all traits that belong to the obsessiveness dimension. Obsessiveness was first described in the 1960s by Lazare, who had a background in psychoanalytical work and clinical experience (Lazare et al. 1966). He also described the dimensions of neuroticism and hysterical traits, and in 1980 Torgersen identified the hereditary

basis for these three major dimensions (Torgersen 1980). They are, in this sense, biologically rooted. Eysenck has also referred to these three dimensions as the "Giant Three," somewhat as an alternative to the Big Five (Eysenck 1994). It is important to acknowledge that Eysenck's *Psychoticism* trait is not obviously about being "psychotic" or "reality weak." Eysenck defined it as the "halfway stage towards psychosis," but this has later been criticized because the wording of the items suggests that high *Psychoticism* is also about being impulsive or irresponsible and not thinking things through (Torgersen 2008). Therefore, Torgersen claims that this is the opposite of obsessiveness or conscientiousness. In Table 10.1, these traits have been referred to as Not *Psychoticism*. On the other hand, psychoticism has now been included as one of the pathological traits in the new DSM-5 system, and there are parallels between some of the items in Torgersen's *Reality Weakness* and Eysenck's *Psychoticism*.

10.4 Developmental Issues

10.4.1 Biology or Social Factors?

That intrinsic maturational processes underlie personality development has been a tradition since Freud, who argued for psychosexual development as internal processes (Briley and Tucker-Drob 2014). In more recent times, Eysenck and Cloninger have linked personality to biological systems, such as the activation of reticular systems and the presence of neurotransmitters. Costa and McCrae have also followed this tradition by emphasizing the role of biology and genetics within individuals. Recent studies show that 40% of the variance in personality can be attributed to genetic factors (Vukasovic and Bratko 2015). However, there are also theories that link the development of personality to social challenges and exogenous influences. Erikson, with his focus on phases of life; Ainsworth and Bowlby, with attachment theory; and the growth of relational psychoanalysts at the expense of the orthodox ones have all paved the way for more recent and social personality models. These all put more emphasis on the role of social factors and relationships for mature personality development, and the term "neosocioanalytic" theory actually brings our thoughts back to Freud (Briley and Tucker-Drob 2014; Roberts et al. 2006).

We have known for a long time that personality changes are most common in childhood and early adulthood, and that traits are relatively stable later on. Some have even argued that personality was "fixed as plaster" already by the 20s, and McCrae and Costa and others have advocated that the five-factor model reaches a stable plateau at the age of 30 and thereafter shows no change (Ferguson 2010; McCrae and John 1992). Over the past two decades, large longitudinal studies have found that there are some changes over the whole life span, even if there is also relatively high stability. This applies to mean levels in age groups as well as to individual trajectories over the years (Lucas and Donnellan 2011).

In addition to the biological understanding of personality development and the social and contextual model referred to above, there is a third position. This is about a combination of such understandings in the case of a gene–environment interaction, or so-called epigenetic models. A recent meta-analysis of epigenetic models shows that the environmental contribution is most important in adulthood (Briley and Tucker-Drob 2014). This means that challenging changes in life, such as the classical life stages and phases first described by Erikson, may drive personality changes over the years (Hutteman et al. 2014). Several studies show that BF-measured *Neuroticism*, *Extraversion*, and *Openness* are slightly lower in older adults, whereas *Conscientiousness* and *Agreeableness* are slightly higher in older adults (Tackett et al. 2009).

10.4.2 The Roles of Life Events and Age

Life events may also drive personality changes, and a recent review shows that this also applies to becoming a university student and beginning a new and demanding job (Bleidorn et al. 2016). This is highly relevant for medical doctors. In the prevalence studies mentioned above, younger students and doctors showed higher levels of BF-*Neuroticism* (Hojat et al. 1999) and lower levels of BF-*Conscientiousness* (Lydon et al. 2015) than their older colleagues in more established jobs. Other population studies show the same patterns related to becoming senior students and beginning first jobs (Bleidorn et al. 2016). The effect of age may also be important here, especially with respect to conscientiousness, because this trait seems to increase over the years and then decline after the 60s in the general population, forming almost an inverted U shape across the life span (Lucas and Donnellan 2011).

To test the effect of age in nationwide representative samples, our research group compared the levels of BCI traits in one of the NORDOC cohorts (N = 522; mean age = 28) with those of a representative sample from the Norwegian Physician Health Survey (N = 814; mean age = 38) (Tyssen et al. 2000; Aasland et al. 1997). The older male doctors (by 10 years) were significantly lower in BCI-*Extraversion* and BCI-*Reality Weakness*, and higher in BCI-*Conscientiousness* than the younger doctors, although effect sizes were small (Cohen's d ~ 0.2). These preliminary calculations were in keeping with the large population studies above, although this applied only to the male doctors. The older female doctors were not significantly different from the younger ones in any of the BCI traits.

10.4.3 The Role of Latent Traits and Importance of Self-Report Bias

When we look at the stability coefficients in individuals, the differential stability coefficients of traits are relatively high in adulthood, with ranges from 0.5 to 0.8 over a 4-year period (Ferguson 2010; Lucas and Donnellan 2011). There is also

another position that takes into account the contextual influence on self-reported measures. This is the role of contextual and age-specific factors that may influence self-report on trait items. This opinion advocates quite stable "latent traits," but life phases, such as being new or established in work, may color how individuals respond to the individual items of, for example, neuroticism or conscientiousness inventories (Tackett et al. 2009). The possible measurement artifacts that adhere to self-report lead us to the next section where we discuss assessment of personality.

10.5 Assessment and Treatment

10.5.1 Inventories of Personality Traits

As mentioned above the most widely used and validated personality trait model is the BF or five-factor model. The model includes the 5 traits or dimensions, each with 6 facets (total 30 facets), and therefore the inventory (known as the NEO-PI-R) is relatively comprehensive with 240 items, although there is a short version of 60 items. The Eysenck Personality Questionnaire-Revised (EPQ-R) includes three dimensions (the Giant Three), each with 9 traits (total 27). The EPQ-R constitutes 100 items and a short version of 48 items. Cloninger's TCI includes ten dimensions or traits that are divided into seven temperaments and three characters. Each of these dimensions has 3–5 subscales that comprise 240 items altogether (TCI-R). Torgersen's original BCI consisted of 136 items that comprise 3 dimensions measured by 17 personality scales with 6 items in each. We have used a short version (BCI-36) with four dimensions (including *Reality Weakness*), and each dimension was measured with nine items. This makes the BCI-36 a very short and feasible instrument for epidemiological surveys, but unfortunately, it has not been well validated in samples other than Norwegian students and physicians. There are also other personality inventories that will not be dealt with here.

10.5.2 Personality Types and Characters

A single personality dimension can be difficult to recognize in an individual. A person may, for instance, have high levels of neuroticism and be either an extravert or introvert. In the first case his or her vulnerability may be more visible to others, while in the second case, it will be more hidden. To manifest recognizable personalities, it is useful to combine high and low levels of different traits into types. There are several such systems, including Cloninger's character types and the Myers–Briggs' Type Indicator. By using Torgersen's lesser known typology (Torgersen 2008) our research group studied all eight personality types in medical students

(Tyssen et al. 2007) and doctors in their internship year (Røvik et al. 2007). In this way we identified a combination of high *Neuroticism*, low *Extraversion*, and high *Conscientiousness*, which was labeled as "brooders." This type is most stressed in medical school and during internship. The opposite profile type, who score inversely on these traits, are the so-called hedonists, the happy-go-lucky ones that we easily can imagine, and who experience the least stress of all. This dichotomization of the personality dimensions produced only a limited loss of predictive power compared with that found by using the dimensions (Røvik et al. 2007).

Case II

Yvonne, at 29, is a resident specializing in otorhinolaryngology and has been a patient since the beginning of residency. In medical school, she was very ambivalent about doing medicine, and she still often feels alienated to being a physician. She has musical talent and now has regrets about not taking on an artistic career. Yvonne often fell out with female student colleagues, and had difficulties in finding a boyfriend that treated her well. She complained of boundary problems when meeting a new man; she felt that she too easily went to bed with him. A structural diagnostic interview showed that she had borderline personality disorder. She had not been suicidal or acting out violently. It was obvious she had felt neglected during childhood with a mother who always worked, running her own business and a distant and cold father. We opted for long-term psychodynamic therapy. Yvonne was insecure and suspicious during the first year of therapy, and she often misinterpreted both what I said and how I looked at her. The therapy quite regularly went along with two or three calm sessions and then in the next session she could accuse me of almost anything and sometimes yell at me in anger. The session thereafter she was sorry for her rude behavior, smiled, and went like a lamb. After almost 2 years in therapy she had improved, and relaxed more in the therapy room, and obviously she was also more secure when meeting others.

Comments:

Surprisingly often, borderline personality structure is found in medical students and doctors who find their way into treatment. Being intellectually brilliant does not protect one from severe personality problems. Most often it seems to be of the emotionally unstable type and not the type associated with dramatic acting out and suicidal behavior. But the latter type may also occur and may be complicated with alcohol and drug problems. Clinical examples include a young doctor who in panic swallowed a handful of painkillers (paracetamol and codeine) in order to kill herself, and another physician who was chased by the police while drunk and suicidal in a park. Both physicians had a diagnosis of borderline personality disorder.

When there are behavioral complications such as acting out with drugs and suicidal intentions, dialectic behavioral therapy is the "drug of choice." Cognitive behavioral and psychodynamic therapy may also be useful for selected patients. They often present themselves with emotional dysregulation, self-direction and identity problems, and troublesome relational issues. They frequently misread

communication with others and also have extraordinary problems with intimacy and sex. With regard to identity and relational problems, clinical experience has shown that long-term psychodynamic therapy can be useful. There are often early developmental deficits (<3 years old) and insecure attachments during childhood as background factors. The patients may shift rapidly in their attitudes towards the therapist and active transference interpretation and assurance are necessary to keep an adequate working alliance. Countertransference reactions can be really demanding, but supervision and support from an experienced supervisor can help considerably.

10.5.3 When Do Traits Become Pathology?

It is not always easy to distinguish between traits and pathology, because two people may report similar levels in a personality dimension and still exhibit large differences in their behavior and functioning. It has been a clinical rule of thumb that when a character or personality entails reduced function, with regard to social relationships and/or their vocation, this is considered a personality disorder, both in the Diagnostic and Statistical Manual (DSM-5) of the American Psychiatric Association (2013) and the International Classification of Diseases (ICD). Personality disorders are important because they may complicate the course and treatment of other mental disorders (Skodol 2015).

 After a long discussion about categories and dimensions on personality disorders in the DSM-5, the Work Group in 2013 decided to retain the same ten categories as in the DSM-IV-TR (Table 10.2). However, personality disorders are no longer separate from other mental disorders since the Axis system from DSM-III and DSM-IV was removed in DSM-5. Dr. Joel Paris has written a very good

Table 10.2 DSM-5 personality disorders

Cluster A
Paranoid
Schizoid
Schizotypal[*]
Cluster B
Antisocial[*]
Borderline[*]
Histrionic
Narcissistic[*]
Cluster C
Avoidant[*]
Dependent
Obsessive-compulsive[*]
Other specified/unspecified
Personality disorder—trait specified[*]

Note: [*]Included in Section III of DSM-5

paperback guide to the DSM-5 for those not familiar with the new system; the chapter about personality is also informative (Paris 2015). What is new following the discussion of categories, dimensions, and clinical relevance is a "hybrid model" that builds on psychodynamic theory and understanding. The hybrid model retains only six personality disorders (labeled with an asterisk in Table 10.2), which are among the most important well validated. For instance, clinical experience shows that paranoid personality disorder very often co-occurs with other personality disorders when doing a structured clinical interview, and therefore this diagnosis may be of low discriminant validity. Furthermore, the hybrid model (in Section III of DSM-5) places more emphasis than earlier systems on the significant impairment of self (identity or self-direction) and interpersonal functioning (intimacy and empathy) as major requirements. Despite previous concerns about its utility, it has been found to be clinically useful in several aspects (Morey et al. 2014). The model includes both an evaluation of personality impairment and five broad areas of pathological personality traits. These deviant traits build on the pathological variants of BF that were developed prior to DSM-5 (Widiger 2015). As it involves a new emphasis on pathological traits we will discuss them in more detail.

10.5.4 Pathological Personality Traits

The original personality inventories such as the EPQ and NEO-PI-R have been criticized by clinicians for not capturing trait pathology in psychiatric patients. One exception was Eysenck's *Psychoticism*, which was intended to identify some deviant trait expression or early signs of mental deterioration. Torgersen also developed his *Reality Weakness* trait on this basis because it was associated with borderline, paranoid, and schizotypal personality disorders (Torgersen and Alnæs 1989). Examples of *Reality Weakness* items are as follows: "I experience myself as being totally different at different points in time," "Sometimes I live in a fog," "It is difficult for me to trust people because they so often turn against me or leave me in the lurch," and "Every now and then I get strange thoughts in my head that I cannot get rid of." The first two items showed the highest correlation with aggravation in suicidal thoughts in young doctors (Tyssen et al. 2004), and similar statements are often heard clinically among borderline patients.

Later, pathology versions of the BF were developed and this work has laid the foundations for the pathological traits in the DSM-5 (Widiger 2015). The five domains of DSM-5 pathological traits are called *Negative Affectivity*, *Detachment*, *Antagonism*, *Disinhibition*, and *Psychoticism* (American Psychiatric Association 2013). *Negative affectivity* (versus emotional stability) resembles BF-*Neuroticism* but with frequent experience of negative emotion that leads to behavioral and interpersonal dysfunction. *Detachment* is about such low levels of BF-*Extraversion* that social isolation and restricted affective experience result. *Antagonism* is the

opposite of BF-*Agreeableness*s, putting the individual at odds with other people because of an exaggerated sense of self-importance and expectation of special treatment. *Disinhibition* (versus BF-*Conscientiousness*) is about an orientation towards immediate gratification and impulsive behavior driven by current thoughts and external stimuli. *Psychoticism* (versus Lucidity) is about exhibiting culturally incongruent odd, eccentric, or unusual behaviors and thoughts. Both Disinhibition and Psychoticism in this definition can resemble BCI-*Reality Weakness*.

Case III

Roger is 40 and runs a private practice in dermatology. He did his half-year internship in family medicine in a remote rural area with quite stressful call-work including long drives at night for visits. He lost sleep and started to self-medicate with benzodiazepines to relax and get to sleep. Gradually, he increased the doses over the years and he was reported by the pharmacy agent to the State Board 15 years later for prescribing daily doses of up to 25 tablets of 5 mg diazepam. He had managed to run his practice without any reported mistakes or patient complaints. His wife had not noticed his drug abuse, but she had noticed that he had become a little more tired in the evenings … On a couple of occasions he had tried to quit the medication on his own without succeeding. After receiving a letter from the State Board he had abruptly discontinued the benzodiazepine medication over a period of 1 week. On admission he was very tense with withdrawal symptoms and on the verge of developing delirium tremens. In a structural diagnostic interview, he scored above threshold for narcissistic personality disorder. He was medicated and relaxed, but he waited quite a long time (6 months) for the decision from the Board. His license was revoked for 2 years and over this time he had to prove abstinence by urine tests and have regular consultations with a psychiatrist to get his license back.

Comments:

Doctors are at risk of self-prescribing hypnotics and minor tranquilizers for different reasons. In particular, benzodiazepines and other hypnotics are dangerous with respect to developing dependence. Self-prescribing is a slippery slope, and physicians with more narcissism may be at particular risk, because they have a strong fear of accepting their own weakness and may consider themselves more able to manage prescribing their own medication. Typically, Roger had discontinued the medication on his own before admission, but lacked knowledge about how dangerous this could be with benzodiazepines and did not know that a gradual reduction is recommended (e.g., 10% every week). Physicians often have inadequate knowledge about substance use disorders, because attention to them as part of the medical school curriculum is almost universally deficient, especially given how prevalent these disorders are in clinical practice. In Norway there is often a long wait time for a decision from the Board, and this can be quite frustrating for the doctors, who are at risk of suicide when being under surveillance (Finlayson et al. 2016; Lindeman et al. 1997).

10.5.5 Clinical Considerations

To go into detail about the treatment of specific personality disorders in physicians is beyond the scope of this chapter. For more details, the reader is referred to Chaps. 6 and 7 in the excellent handbook by Myers and Gabbard (Myers and Gabbard 2008) or the practical guide by Beck and colleagues (Beck et al. 2016). One common misconception is that personality disorders are untreatable. This is simply not true. The most effective treatment is psychotherapy (Skodol 2015; Leichsenring and Leibing 2003).

Four issues derived from clinical experience are emphasized below.

First, be careful not to miss personality problems in physician-patients. Remember that doctors can be excellent clinicians, perform very well, and still have serious problems with themselves and their relationships with others. We may, as doctors and therapists, easily overidentify with colleague-patients and miss what really troubles them. Carl, the cardiologist at the beginning of the chapter, presented with his own written history. History taking and diagnosis may be seductively "easy" with many doctor-patients, but be as accurate and strict with regard to assessment as with any other patient. Most doctor-patients appreciate that we are conscientious and rigorous in using symptom-rating scales and structured diagnostic interviews.

Second, most traits or personality dimensions have positive and negative aspects. For instance, we would prefer doctors to be quite conscientious in order to perform well and take care of their patients. But being overly conscientious or perfectionistic may drive them to burnout and depression, which may, of course, impact upon their performance. As the saying goes, "The perfect may become the enemy of the good." In the same vein, a certain level of self-criticism may be better than being too low on this trait (neuroticism). The vulnerable doctor may be more sensitive and have more capacity for empathy than the one who is apparently strong and callous. In addition, a discrepancy can occur between how individuals think they perform and how they really do. For example, during medical school some of the self-critical students who were most afraid of failing were those that got the highest marks on exams!

Third, if there are alcohol and drug problems, they should be dealt with at the beginning of therapy, to avoid acting out issues that should be included in the therapy. It is important to remember that doctors not only self-prescribe medication, but they frequently also adjust the dosage of drugs that have been prescribed by others, so being scrupulous in checking what the doctor-patient actually takes may reveal differences from how the prescription appears in the medical record. Always assess suicide risk in doctors with personality disorders, and remember that substance use disorders can lower the threshold for suicidal behavior.

Fourth, doctors should have the same high quality of treatment as any other patient. There are some obstacles to the patient-doctor relationship when the patient is also a doctor. The doctor-patient is often reluctant to seek help, and will easily deny their own problems or even feel that they are not sick enough to deserve any treatment. In addition, confidentiality is often problematic. The doctor-patient may be well known to those who provide treatment but is still entitled to the same

professional secrecy as any other patient. Personality diagnoses, in particular, should be kept highly confidential. Although more doctors should be offered, and would benefit from psychotherapy to modify personality problems, this is often compromised by their busy work and confidentiality issues. Some doctor-patients will need medication, especially if there is a comorbid mood disorder, and combined therapy from a physician that is also a trained psychotherapist can be the best and most feasible course of action.

Key Points

- There is no empirical evidence for a specific physician personality, but we lack large and representative comparison studies.
- The neuroticism trait is a risk factor for stress, depression, and reduced well-being in physicians as well as in the general population.
- Conscientiousness may be both beneficial (to reduce drinking and increase performance) and detrimental (for stress and burnout) in physicians.
- Reality weakness is a pathological trait that has proved to have predictive validity in Norwegian physicians with respect to severe depression, suicidal ideation, and lack of help seeking.
- About 40% of personality traits are attributed to genetic factors alone; the remainder are influenced by social factors and developmental phases of life.
- Despite being relatively stable after young adulthood, traits may develop and change over the whole life span, suggesting that traits causing dysfunction can also change with treatment.
- Personality disorders in physicians may easily be overlooked, and there are obstacles to the patient-doctor relationship when the patient is also a physician.
- Personality disorders may complicate the course and treatment of other mental disorders.
- Psychotherapy is effective in the treatment of personality disorders.

Glossary

The Big Five (BF) inventory identifies five major factors of personality:

- *Neuroticism* refers to being anxious, irritable, and sensitive, often combined with low self-esteem and high self-criticism. Moreover, there is typically a tendency to feel guilt, shame, and sadness.
- *Extraversion* refers to being social and outspoken, often enjoying company. This trait is characterized by joy and energy, seeking of stimulation and excitement. Persons with this trait are often in leadership positions.
- *Openness* is characterized by curiosity and lively fantasy, often with daydreaming. Persons with this trait frequently have artistic talents and high awareness of

their own feelings and esthetics. They are not very traditional, often liberal and antiauthoritarian.

- *Conscientiousness* refers to being orderly, organized, and capable of fulfilling tasks. Persons with this trait think things through well; they are hard-working and morally responsible.
- *Agreeableness* is about being generous, and refers to concerning oneself with others and their well-being. The trait is characterized by being honest and sympathetic and not being skeptical towards others.

The Temperament and Character Inventory (TCI) consists of three major personality types:

- *Harm Avoidant* refers to being worried and pessimistic, fearful and doubtful, shy versus outgoing, and also fatigable versus vigorous.
- *Reward Dependent* type is characterized by being warm and sentimental, dedicated and attached, dependent upon others, and a need to please others.
- *Novelty Seeking* is about being curious and exploratory, impulsive and disorderly, and extravagant and enthusiastic; persons high on this trait seek challenges and excitement.

The Eysenck (EYS) "Giant Three" includes the following:

- *Neuroticism* is comparable to the corresponding BF term.
- *Extraversion* is comparable to the corresponding BF term.
- *Psychoticism* refers to being impulsive, not thinking things through well, toughminded or aggressive, not warm and mild; persons high on psychoticism are less empathic, but can be creative.

The most recent version of the Basic Character Inventory (BCI) has four dimensions:

- *Vulnerability* or *Neuroticism* is comparable to the corresponding BF term.
- *Extraversion* or *Intensity* is comparable to the corresponding BF term.
- *Control* or *Conscientiousness* is comparable to the corresponding BF term.
- *Reality Weakness* refers to having bothering thoughts and ideations on the borderline between reality and fantasy. Persons with this deviant trait have selfdirection and identity problems, and they are often distrustful and suspicious towards others.

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Part III

Interventions

Self-Care, Resilience, and Work-Life Balance

11

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Contents

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Abstract

Resilience and wellness are more than an absence of distress or disease. In the population at large, a relatively small subset of people achieves a full and happy life and is flourishing. The same applies to physician well-being and resilience. There is growing awareness that more must be done to promote physician resilience, increase satisfaction within the profession, and prevent burnout. Both individual and organizational efforts serve complementary and synergistic roles. There is no "one size fits all" tactic for encouraging self-care, wellness, and resilience, but the different pressures at each stage of the physician life span can inform individual and organizational approaches. Attending to personal self-care with good nutrition, adequate sleep, and regular exercise promotes well-being, as does the practice of cognitive-, behavioral-, and mindfulness-based strategies for stress reduction, empowerment, and happiness. Being able to focus on the aspects of work that are most meaningful appears to protect against burnout, as does having control over the practice environment. Authentic social connections at home and at work foster resilience. Good role models and mentors enhance career satisfaction. In order for physicians to overcome stigma and seek help when appropriate, changing cultural norms and increasing organizational support are critical. Physicians indoctrinated within a culture that boasts of superhuman stamina understandably have underdeveloped skill sets for self-care and for achieving a meaningful work-life balance. To achieve what they have, ongoing significant sacrifice becomes engrained as a way of life contributing to high rates of burnout and distress. This chapter provides a glimpse into the real-life struggles throughout the life cycle of a physician ranging from the premedical years to the preretirement years and offers pertinent evidence-based solutions and remedies.

11.1 Introduction

Physicians indoctrinated within a culture that boasts of superhuman stamina, e.g., "the down side to every other night call is missing half the good cases," understandably have underdeveloped skill sets for self-care and for achieving a meaningful work-life balance. To achieve what they have, ongoing significant sacrifice becomes engrained as a way of life contributing to high rates of burn out and distress. This chapter provides a glimpse into the real-life struggles throughout the life cycle of a physician ranging from the premedical years to the preretirement years and offers pertinent evidence-based solutions and remedies. We have altered the details within the scenarios to protect the confidentiality of those involved. If they seem familiar, it is because these struggles are all too common to many of us in the profession.

11.1.1 Overview of Important Concepts

Resilience and wellness are more than an absence of distress or disease. Resilience is the ability to recover quickly from adversity, sustain positive

engagement in the midst of hardship or stress, and to learn and grow from the experience. Resilience is also the ability to respond to an anticipated change that may or may not occur (Zautra et al. 2010). In the population at large, a relatively small subset of people achieves a full and happy life and is flourishing (Keyes 2007). Those who are able to remain resilient in the face of extreme hardship or stress manifest the following eight characteristics (Charney and Southwick 2012):

1. They maintain a focused attention and calm state.
2. They seek out and make human connections.
3. They imitate role models.
4. They value and love something or someone.
5. They approach rather than avoid, i.e., confront fears.
6. They act rather than react.
7. They accept responsibility for their personal emotional well-being.
8. They have an optimistic yet realistic outlook.

The same applies to physician well-being and resilience. There is growing awareness that more must be done to promote physician resilience, increase satisfaction within the profession, and to prevent burnout (Shanafelt et al. 2003). Efforts to decrease stigma on both the personal (Strong et al. 2013) and organizational (Dunn et al. 2007; Swensen et al. 2016) levels are critically important to eradicate barriers that keep physicians from reaching out for help (Worley 2008). Both individual and organizational efforts serve complementary and synergistic roles (West et al. 2016). There is no "one size fits all" tactic for encouraging self-care, wellness, and resilience, but the different pressures at each stage of the physician life span can inform individual and organizational approaches.

11.2 The Journey Through the Lifetime of a Physician

11.2.1 Step One: The Pre-Med College Years

Life as an Undergraduate College Student:

Stacy is a sophomore in college struggling to grasp the intricacies of stereochemistry—the foundation for acing Organic Chemistry. He's weary, tired of not getting to go out with his friends and now can't even fall to sleep. The words of his college pre-med advisor keep going through his head … "High grades in organic are key to getting into medical school. You need to have lots of hours volunteering in the free health clinic, be a leader in campus activities, make a 4.0 GPA and strong scores on your MCAT. Everything you do has to go into your personal statement if you really want to get into medical school. Impress every single faculty member you work with. They will be the ones who write your letters of recommendation. Don't get distracted by dating or extracurricular activities. There is no time for rest or relaxation, not if you really want this..."

11.2.1.1   Discussion

The performance of many undergraduate premedical advisors is measured by the acceptance rates of their advisees. Promising high school seniors (and their parents) shopping for colleges examine these acceptance rates as they choose where to matriculate. The advice provided by pre-med advisors to students like Stacy does provide a focus and direction to enable their future applicants to achieve the necessary ingredients to be competitive, but alone, it does a disservice toward preparing them for the larger task of self-care and overall success in life as a physician. As a result, some students are woefully prepared for this more important aspect of life, especially if they haven't connected with a deeply values-driven motivation for this life trajectory or invested in loving relationships. Another common cultural norm in undergraduate populations is to succeed academically through all-nighters and short-term cramming made possible through the consumption of energy drinks, coffee, or other stimulants. This is then balanced by "hearty partying" and binge drinking to let off steam after the latest hurdle is overcome.

Knowing that the academic and emotional demands in medical school are significantly ratcheted up, e.g., "medical school = undergrad. on steroids," students who arrive at medical school with this background for having achieved success are at high risk for difficulty (e.g., academic failure, depression, substance use disorders, and suicide).

In order to perform optimally, students in undergraduate training could greatly benefit from establishing a healthy foundation for achieving solid, healthy sleep, excellent nutrition, regular exercise, and living ones' values while nurturing loving relationships. Those lacking this skill set are at higher risk for burnout and illness as the stress mounts over time.

11.2.1.2   Summary Recommendations

There may be factors specific to premedical students that increase depression and burnout (Fang et al. 2012). More studies are needed to understand how best to foster the behaviors and attitudes, such as self-efficacy, social supports, reflection, and limit-setting, that protect against depression and burnout during subsequent medical education. Social connectedness and cognitive style are important predictors of students' stress during the transition to college (Leary and DeRosier 2012). At the undergraduate level, campus wellness and mental health promotion programs should be geared to: (1) encourage wellness behaviors such as adequate sleep and regular exercise; (2) reinforce habits of creating a balance between work and leisure activities; (3) cultivate supportive relationships and social connections; (4) empower students to be self-aware and able to recognize the early signs of physical illnesses of the brain and body, risky substance and alcohol use; (5) facilitate the early utilization of accessible, confidential, affordable treatment services when needed; and (6) provide students with healthy stress management approaches, e.g., behavioral-, cognitive-, and mindfulness-based strategies, for learning optimistic and motivational thinking styles, staying present with difficult experiences, and enhancing social relationships.

Strategies for increasing awareness of distress/depression, setting habits for self-care, and reinforcing adaptive behaviors in response to stress:

- Undergraduate advisors help students focus on balance, authenticity, setting reasonable goals, rather than focus on achievement and test scores at the expense of the rest (Pritchard et al. 2007).
- Apps to increase awareness of stress/depression.
- Apps to track nutrition and fitness.
- Online toolkits for undergraduate students for mood, substance use, finding the right balance, managing the pressures of school, work, uncertainty about future, etc.
- Integrated behavioral health (Eisen et al. 2009) and collaborative care (Chung et al. 2011) programs in student health centers.
- Required online alcohol education courses and college curricula that include experience-based learning addressing alcohol and substance use (Lederman et al. 2007).
- Availability of quality, confidential, and affordable mental health counseling.
- Drop-in classes in mindfulness meditation, yoga, relaxation training, and biofeedback training, either student-led or co-led by students.
- Advisors and online resources specific to facilitate connections with social groups that match the students' interests and personality.

Organizational and cultural shifts to promote balance in future physicians:

- In addition to focusing on individual scholastic abilities and performance behaviors, the medical school admissions process should examine the ability to collaborate as a member of a team (Montgomery 2014).
- Request pre-med advisors to develop and evaluate students' self-care practices, e.g., by addressing this skill set in their recommendation letters (in addition to their coursework) and by offering opportunities for highly successful physician role models with strong life balance and self-care practices to speak to and to mentor their students.

11.2.2 Step Two: The Medical School Years

Life as a Medical Student:

Orientation week flew by and the first semester is half way over. Krista arrived in medical school having graduated from college at the top in her class with a 4.0 GPA. She was the one accustomed to setting the curve, a far cry from her current situation. Despite giving it her absolute all, she is barely passing. Prior to medical school Krista never made a 'C' and now she is barely making even that. She feels like an absolute failure and that someone made a mistake accepting her into medical school. She can't bear the thought of anyone knowing how badly she is doing. She is especially concerned that these grades won't be competitive enough to get

her a residency position. They keep hearing there aren't enough residency positions to go around and that some students aren't even matching.

Leading up to medical school, Krista's family and her boyfriend Kenneth were her strongest supports. Now they just don't seem to understand. They make her feel worse every time she talks to them. Her mom is upset because Krista "isn't calling or coming by the house anymore." Kenneth is withdrawn and irritable and just told Krista "he isn't sure about their relationship; he feels like medical school is more important to her than he is because they never spend time together and he can't even remember the last time they were intimate."

Krista feels absolutely exhausted. Despite her meticulous organizational efforts and non-stop studying she can't get through all the assigned readings, her class notes, and finish the required dissections to be adequately prepared for the onslaught of pop quizzes and block exams. It's impossible to do it all. She's getting more behind every day. It's going too fast. There is no time to rest, to eat, to exercise, to breathe. The anxiety and exhaustion are overwhelming. Krista's classmates at least look like they're holding it together….

Krista recently discovered if she drinks wine in the evening she is more relaxed and able to calm herself enough to allow her to fall asleep. The next morning, she drinks an energy drink to get moving and another to stay awake in class. She noticed that her clothes are feeling snug but her appearance is the least of her worries.

11.2.2.1   Discussion

The pace of medical school comes as a shock. Each year the exponential advances in scientific knowledge in the field of medicine are packed into the same 4 years. Mastering this volume of material at the level of complexity required to pass the requisite board examinations is onerous. This in conjunction with the multitude of emotionally taxing experiences encountered in medical training (e.g., dissecting human bodies, performing physical examinations on individuals who resemble your favorite grandmother or your intimate partner, learning that despite the best medical treatment possible, a cancer isn't responding to chemotherapy in someone far too young to die, or witnessing an abused child die despite providing every life-saving measure) add to the burden (see also Chap. 2).

In this scenario, Krista's performance is suffering due to multiple etiologies. Her perfectionism is keeping her from doing the best job she can in the time she has. In the process of trying to achieve perfection she is neglecting the very things that would enhance her ability to optimally learn and to remain resilient. Being strongly grounded through a connection to love through relationships and/or faith is essential. Restorative solid sleep enables short-term learning to consolidate into long-term memory. Exercise improves test performance, overall energy, and sleep, and is an excellent, healthy means to reduce stress. Having a network of trusted peers, study partners, or tutors with whom one can safely express normal frustrations and fears is tremendously helpful, and once expressed enables one to be freer to focus on learning. Self-medicating with wine can interfere with optimal learning and with restorative sleep. It also raises the risk for future dependence. Relying on energy drinks is also problematic as they exacerbate anxiety and if consumed late in the day

can interfere with sleep. Finally, eating nutritiously is essential in providing the fuel and building blocks for optimal learning and performance.

11.2.2.2 Summary Recommendations

Many medical students aspire to perfectionism and believe that one must devote all their time to work/study in order to succeed. This stance is often reinforced by peers and by the prevailing medical school culture. Perfectionism per se is exceedingly common and can be adaptive at times in medical school, but maladaptive perfectionism, i.e., excessive evaluative concerns, is associated with higher levels of distress and depression (Enns et al. 2001). Symptoms of anxiety in response to catastrophic thinking about the consequences of "failure," and subsequent disappointing performance raise the risk for test-taking anxiety and depression. Often students are oblivious to the suffering of their peers and resist seeking help for fear that it will harm their career or that they will be labeled or seen as weak if they do. Substance/alcohol use disorders are common (see also Chap. 8), and a high level of educational debt has been associated with risk for alcohol misuse among medical students (Jackson et al. 2016). In a recent study of medical students, mental health, and stigma, those with burnout rarely sought help and perceived doing so as a sign of weakness (Dyrbye et al. 2015). It is essential to provide effective prevention and wellness programs within medical schools integrated in a culture that supports compassion and self-care as a path toward excellence and to have systems in place to identify risk factors and facilitate appropriate services to treat mental illness and substance use disorders (Seritan et al. 2012). Efforts by programs to increase awareness of mental health issues in medical school, debunking myths such as treatment not being confidential, and continuing outreach and reminders can be effective in increasing utilization of support services (Thompson et al. 2016; Worley 1998).

Strategies to address stigma and encourage treatment:

- Provide lively, interactive, orientation week programming for incoming medical students and their families and significant others, including (1) an overview of the psychological journey of a medical student, teaching what to expect; (2) a panel with carefully selected upper-class medical students sharing tips for how to best manage it all; and (3) an overview of tips for both the new medical students and their loved ones regarding what they will need from one another to navigate this journey successfully. Help both the students and their families understand how high stress increases the risks for treatable illnesses of the body and brain. Teach the signs and symptoms of these illnesses and the importance of early recognition to maximize academic performance. Share utilization information about the student wellness services, and evaluative feedback narratives demonstrating students' positive views of the value and confidentiality of the services. Provide written materials with confidential contact numbers.
- Several weeks into medical school, provide a lunch talk (with food) led by a respected third- or fourth-year medical student who openly discusses the normal shock and difficulties of beginning medical school. It can be compelling when a respected medical student leader voluntarily discloses what they went through,

e.g., needing to take a leave of absence because they put off seeking care for depression until it significantly impacted their academic performance. Students (or residents) in solid recovery from substance use disorders who participate in 12-step groups may sometimes be willing to give their "open talk" to medical student peers. Instill a culture where peers and faculty encourage students to watch for the early signs of difficulty and to reach out for help promptly. Promote a mantra of "Life is far too short to suffer needlessly. Those who seek help are the courageous, healthy ones."

- Include in the medical school curriculum, teaching about the prevalence and consequences of mental health problems for both physicians in-training and in-practice (Seritan et al. 2012; Worley 1998), and involve medical students in the continuing development of pertinent programming (Thompson et al. 2016).
- Recruit physicians who have experienced mental distress (either as normal negative emotions or as a treatable mental illness) to share their stories in order to build awareness, confront bias, and to eradicate shame associated with seeking treatment (Hankir et al. 2014a, b).
- Make self-assessment tools of well-being available that provide instant feedback of an individual's subjective well-being in comparison to peers nationwide as an opportunity to increase self-awareness and recognize distress (Dyrbye et al. 2013; Shanafelt et al. 2014).
- Promote personal mental health within core competencies, expand faculty education about student distress, and empower students with the knowledge and skill set to know how and when to intervene when peers appear distressed (Dyrbye et al. 2015).
- Provide access to mental health counselors (who are separate from evaluative teaching faculty) (Gentile and Roman 2009; Schwenk et al. 2010; Thompson et al. 2010) and provide periodic messages assuring confidentiality and utilization rates to remind students that they are not alone and to alleviate their fears about help-seeking (Grant et al. 2015).
- Implement curricula for personal stress management, test anxiety, and self-care (Dyrbye et al. 2015; Kushner et al. 2011; Thompson et al. 2010).
- Provide education to faculty on how to avoid mistreatment of students and ways to provide constructive feedback; assess whether the grading systems are working to encourage excellence versus negatively affecting well-being (Cook et al. 2014; Reed et al. 2011).

Strategies to address maladaptive perfectionism, social isolation, and alcohol misuse:

Socially prescribed perfectionism implies that the individual, via the reinforcements and feedback they are given, perceives that parents, teachers, and/or community expect perfection. In a study examining the relationships among academic self-efficacy, socially prescribed perfectionism, and burnout in medical students, socially prescribed perfectionism was positively correlated with academic burnout, and academic self-efficacy was negatively correlated with academic burnout. Not surprisingly, high socially prescribed perfectionism and low academic self-efficacy

was associated with higher burnout, suggesting that strategies to increase academic self-efficacy are critical to prevention of burnout (Yu et al. 2016)*. Therefore, possible strategies to address maladaptive perfectionism may include:

- Expand mentoring programs ostensibly set up for career counseling, developing professionalism, and fostering interest in academic medicine or other fields (Frei et al. 2010); and to also help students balance their perfectionism with the necessities of being efficient and leaving time for restorative activities (Kalet et al. 2002).

A diverse set of interests and "high self-complexity" as well as healthy group identity and social supports have been shown to buffer the stress experienced in medical school (Mavor et al. 2014). Therefore, possible strategies to foster positive adaptation include:

- Encourage students to pursue activities outside of medical school, as well as activities that promote cooperation among students, and promotion of healthy norms with regard to drinking (Mavor et al. 2014).

  Strategies to address work-life imbalance and stress management:

- Provide a state-of-the-art, affordable, and accessible gym and exercise facility for students to work out with peers on study breaks. Rewards for completion of workout participation (e.g., College of Medicine Gym bags, t-shirts or water bottles) reinforce continued utilization.
- Assure availability of nearby nutritious, affordable meals and snacks.
- Include a curriculum that encourages health behavior change and self-care, and a "behavior change plan" (Kushner et al. 2011); or comprehensive wellness programs designed to promote self-care and health *(*Drolet and Rodgers 2010)*.
- Promote mindfulness programming (*see Resources Sect. 11.4.1) and facilitated small-group discussions (Luchterhand et al. 2015; Warnecke et al. 2011; West et al. 2014).
- Devise strategies to increase social support networks (Thompson et al. 2016).
- Offer self-hypnosis (Whitehouse et al. 1996)*, relaxation (**see Resources Sect. 11.4.1) and stress management training (Prinz et al. 2012), and/or an elective course in autogenic training and progressive relaxation (Wild et al. 2014).
- Establish (nonalcoholic based) faculty-led Stress Reduction Interest Groups (e.g., ballroom dancing, soccer league, baseball, bowling, bicycling) to role model healthy means of de-stressing while broadening social supports.

In reviews of the existing studies that tested interventions to prevent burnout or reduce stress in medical education, there are generally positive results for self-development groups, paced breathing relaxation training, switching to a pass-fail grading system (Williams et al. 2015) and mindfulness-based approaches (Regehr et al. 2014; Shiralkar et al. 2013).

11.2.3 Step Three: The Residency Years

Life as a Resident in Training:

The hint of the sun was peeking up over the horizon as Dr. Roger Kelly wearily crossed the hospital parking deck to his car. Morning checkout went extra-long today. The attending insisted on grilling the entire team about the intricate details of the code.

Roger was lost in thought as he made the morning drive home. He kept running through every detail. They really had done everything they could have to save the little guy. They ran the code much longer than normal, refusing to give up. Zach had been such a fighter. They couldn't let him down. In the end, he just didn't respond. It had all been in vain.

It would have been nice to have had some acknowledgement of the impact this remarkable young toddler made on the entire team. They had grown so fond of Zach and his family, who faithfully remained at his bedside throughout his heroic battle with cancer. They all marveled at his incredible resilience and the brightness of his spirit despite all he was enduring. This mornings' grueling morbidity and mortality style questioning by the attending did little to acknowledge the weight of the grief that the entire team felt.

Roger's heart sank when he made the final turn into his driveway and saw that Samantha's car was already gone. He could have really used his wife's hug today before she had to head out for work.

The last time they spent any waking time together was the previous weekend, but it hardly counted as quality time. Roger's sleep-wake cycle was inverted from being on nights, and he slept the majority of the weekend trying to recover strength after having been ill and having to continue to show up and function at work. In the few interactions they did have, Samantha seemed withdrawn and terse.

He knew how disappointed she was with how things had turned out since the move for residency. The pressures of having to pay the bills (including their significant student loans) necessitated that they both work full time. They had anticipated life getting easier once Roger finished medical school and began earning a salary. They dreamed of starting their family, of buying their first home and of enjoying life more.

Roger felt beaten down and discouraged. The morning felt dark and gloomy with little hope in the foreseeable future.

11.2.3.1 Discussion

The residency years can be difficult. Residents have very little control over their time or schedules. There is an unspoken (or in some cases spoken) expectation on the wards that physicians do not get ill and that they must be at work unless they themselves are a patient in the emergency department or in the hospital. Being able to get away during office hours to attend to one's own doctor's appointments is difficult and can contribute to the practice of residents self-medicating in an attempt to

continue to function. In the absence of accessible quality medical/psychiatric care, the risks are higher for suicide and other tragic outcomes.

Another common stressor is financial. Resident salaries are fairly modest and hefty student loans amassed become due at the same time trainees are hoping to purchase first homes and begin their families. These strains are shouldered by young couples who must make it a very high priority to avoid taking the stress out on one another and to effectively share their distress and needs with one another. Love and play is one approach couples who have survived these years intact recommend, e.g., a firm commitment to a weekly date night for 1:1 time to reconnect.

Finally, the educational emphasis within most residency training programs is the intellectual science and skills-building practice of medicine and not the skills building for effectively coping with the emotionally traumatic experiences encountered in training.

11.2.3.2 Summary Recommendations

The high level of responsibility despite limited autonomy, patient demands, sleep deprivation, and lack of time to incorporate daily exercise and leisure activities can be particularly challenging during residency or fellowship training. Screening positive for depression as an intern was associated with persistent burnout in residency (Campbell et al. 2010). Lack of time, perceived stigma, and skepticism about how helpful offered interventions might be are obstacles to engaging in resident wellness programs (Ey et al. 2013). In a meta-analysis of randomized clinical trials to prevent burnout in physicians, results did not differ between residents or practicing physicians (West et al. 2016). However, facilitated small group discussions reduced burnout in practicing physicians at an academic institution (West et al. 2014), but a study of a similar intervention in residency training did not result in a reduction of burnout (Ripp et al. 2016). Differences were that the successful model included self-selected participants who were freed from clinical responsibilities to participate, whereas the resident study simply enrolled residents from the first year class; and participation did not free up any time from clinical responsibilities—rather it created an added burden (Ripp et al. 2016). The resident model also utilized psychotherapists as facilitators rather than physician leaders. The authors noted that prior studies have shown lack of autonomy to be an important driver of burnout among residents (Geurts et al. 1999; Linzer et al. 2005; Thomas 2004); therefore, resident-driven interventions may be more effective. As with medical students and practicing physicians, stigma and fear of being reported can be a barrier to getting help. Finally, sickness presenteeism is common among both practicing physicians and residents, associated with increased medical errors, decreased productivity (Gustafsson Sendén et al. 2013), and self-medication (Montgomery et al. 2011). In one study of internal medicine residents, women had higher levels of burnout, emotional exhaustion, and self-blame (Spataro et al. 2016). Women are also more likely to report sickness presenteeism (Gustafsson Sendén et al. 2016). Although duty hour requirements have been associated with improved subjective well-being in some studies (West et al. 2016), results are mixed with several

unintended consequences, including a perceived negative impact on education and patient care and no clear benefit in sleep hours, medication errors, depression, or injuries (Lefebvre 2012) (see also Chap. 13). Thus, we must continue to seek solutions for balancing training requirements, patient safety, and resident well-being.

Strategies to overcome barriers for seeking help and engaging in self-care:

- Educate trainees that "wellness counseling" is not reportable to the board, nor is it part of the trainee's evaluation.
- Provide confidential wellness surveys and facilitate mental health treatment (Dyrbye et al. 2013; Haskins et al. 2016; Moutier et al. 2012).
- Provide self-assessment tools that give instant feedback of an individual's subjective well-being in comparison to their peers nationwide as an opportunity to increase self-awareness and recognition of distress (Dyrbye et al. 2013; Shanafelt et al. 2014).
- Utilize web-based prevention tools (e.g., Guille et al. 2015)
- If one's State Medical Board still requires reporting of mental health treatment irrespective of impairment, lobby to eliminate that requirement. There is evidence that the requirement of reporting treatment is a common barrier for physicians actively seeking appropriate care (Gold et al. 2016; Seritan et al. 2012).
- See that chief residents and program directors actively support participation in wellness programs for prevention of burnout, and mental health treatment for depression (Ey et al. 2013; Baker and Sen 2016).

Strategies for encouraging self-care and wellness:

- Educate residents that adequate sleep and regular exercise have been associated with improved well-being in physician trainees (Lebensohn et al. 2013).
- Incentivize exercise and physical activity programs (Weight et al. 2013).
- Provide structured resident wellness programs (Eckleberry-Hunt et al. 2009; Lefebvre 2012; Schmitz et al. 2012).
- Implement mindfulness-based* or stress management interventions to reduce emotional exhaustion and depersonalization (Luchterhand et al. 2015; West et al. 2016).
- Promote self-compassion to improve resilience and sleep quality in physician trainees (Kemper et al. 2015).

Strategies to discourage sickness presenteeism:

- Have program directors educate trainees (and colleagues) about the short- and long-term consequences of sickness presenteeism and emphasize the importance of staying home when sick. Implement systems to ensure well residents do not get overburdened by covering for repeated unplanned absences in order to promote long-term morale (Caravella et al. 2016).

Strategies to address declining morale within the residency training group:

- Hold focus groups (Rucker et al. 2014).

11.2.4 Step Four: The Early Career Years

Life as an Early-Career Physician:

The honeymoon is definitely over; Dr. Suzanne Warren is nearly 2 years into her first position as an attending in a highly regarded academic health center. Opening her bulging 'in box' she discovers an "invitation" from her chair to serve on yet another "important committee." The last one she said yes to resulted in hours and hours of additional work on top of her already overly busy clinical attending role, lectures, and faculty private practice duties. Not to mention the time pressures to be publishing some type of scholarly work and completing unfinished electronic health record notes, and of clinical reminders to meet her RVU requirements.

Last night Matthew (her husband) and she got into a heated fight over the messy house and their lack of intimacy. Their 3-year-old daughter, Kaylee, goes to a daycare center, which sent home a note about their failure (yet again) to pack the requisite extra set of clothes in her diaper bag, along with a nagging reminder regarding their parental "expectation of participation"—specifically, a required sign up for a time to help "spruce up the playground" and to "decorate the classroom," as well as to volunteer to accompany upcoming field trip activities.

Suzanne wants very much to be an involved mother for Kaylee but doesn't have any more to give with her current schedule and load. It seems ironic that she had hoped to be pregnant by now with their second child. Her mother frequently nudges her "that she isn't getting any younger…"

The thought of morning sickness, followed by sleepless nights on top of everything else feels insurmountable. It's no wonder she doesn't have an inkling of interest in sex.

She has nothing left to give and doesn't have time or energy left over for Kaylee, Matthew or even herself for that matter.

She is on empty.

11.2.4.1 Discussion

Early career years are incredibly challenging. The competing demands for time and attention are often mutually incompatible. It is exceedingly helpful to seek out trustworthy mentorship to guide early choices, based on a complete understanding of the guidelines and expectations for advancement as well as the importance of sustaining a fulfilling personal life. This guidance is essential to enable long-term success when coupled with the skills to effectively negotiate and arrive at win-win solutions when needed.

Sustaining a passionate, supportive partnership is one of the greatest challenges for physicians. This requires one to nurture the continued growth and development of each individual in the relationship while staying in close communication. Often the very traits that were initially attractive (e.g., the playful nature of your partner) can be the very traits that are especially aggravating in times of extreme stress. Having a solid ability to self-identify and express one's feelings in a constructive way and to effectively understand one another is essential to sustain and grow an

intimate relationship. Maintaining a sense of humor, being able to forgive, and to express love and appreciation toward one another are also key.

The added responsibility of parenting, while described as one of the most meaningful experiences of one's lifetime also presents additional hurdles in teamwork. Some couples find it useful to (1) create a list of all the required household duties and chores, (2) identify the favorite chores each partner wishes to take responsibility for, (3) identify and divide the chores that no one wants to do, and whenever possible, (4) hire reliable outside help to do these less desirable tasks. Note: It is important to accept differences in how partners complete tasks and to avoid criticism and micromanagement of one another.

11.2.4.2   Summary Recommendations

Dr. Warren realizes she is stressed but does not know how to address it. Being given tools to recognize symptoms, seek out professional advice, make an action plan, and build resilience and stress management skills will be needed to prevent burnout and attend to her personal needs (Hlubocky et al. 2016). It is easy to fall into a reactive pattern of responding to work demands and postponing personal needs. However, there is good evidence to suggest that when physicians do focus on their personal needs and goals, they are more likely to cope with the demands of work (Shanafelt et al. 2003). Especially for women in academic medicine, finding a mentor and having role models who successfully balance work and home life may help to foster academic advancement and prevent burnout (Hoff and Scott 2016; Perlman et al. 2015). Facilitated engagement groups specific for physician mothers, a particularly high-risk group for problems with work-life balance (Jolly et al. 2014), burnout (Dyrbye et al. 2011), depression, and suicide (Schernhammer and Colditz 2004), show promise as one way to promote flourishing and decrease stress and depression in that demographic (Luthar et al., 2017). These "authentic connection group" meetings were based in respect, empathy, and empowerment, and facilitated by a psychiatrist trained in the manualized procedures. Although there were clear topics and exercises, sessions were nondidactic in nature, based in guided discussions and role plays. In a small randomized controlled trial, at post-intervention there were significantly greater improvements for mothers in the authentic connection groups than control groups for depression and global symptoms. At 3-months follow-up, significant differences were again seen for these two dimensions plus self-compassion, feeling loved, physical affection received, and less parenting stress. Only the participants of the group intervention showed significant reductions in cortisol levels at both follow-up time points (Luthar et al., 2017). In an earlier randomized controlled study including male and female practicing physicians from a wide range of departments and career stages, the intervention program involved 19 biweekly, small group discussions incorporating mindfulness and shared experience across 9 months. At post-intervention, no group differences were found. At both 3- and 12-month follow-ups, however, two of the eight central outcome variables—empowerment at work and low depersonalization—showed significant gains in the intervention versus controls (West et al. 2014). Organizational efforts to positively engage physicians, mitigate drivers of burnout, and address issues related to clerical

burden (Shanafelt et al. 2016) are important for those physicians working within institutions (Swensen et al. 2016; West et al. 2016) (see also Chap. 13).

Practical tips to be successful in early career:

- Ask a mentor to review current position requirements and to guide key choices and negotiations.
- Be reliable and responsible delivering on commitments made.
- Skillfully decline "opportunities" when they are not congruent with your overall goals nor your capacity to accomplish them effectively.
- Live your values, especially the ones that fill you with love, joy, and deep meaning.
- Squeeze in exercise, eat healthily, and rest.
- Be efficient and strive for excellence, not perfection (i.e., doing the best job you can in the time you have).
- Focus and work hard.
- Take guilt-free breaks from work to refresh yourself with relaxation, play, and creative activities.

Organizational and cultural shifts to promote balance in early career physicians:

- Implement innovative career pathways that encourage physicians time to live their values (i.e., time with young children) while continuing to contribute professionally without penalization.
- Offer evidence-based support programs such as academic peer mentorship and facilitated physician engagement groups.

Strategies for advancement in academic medicine in early and mid-career:

- Programs for mentorship (Strong et al. 2013) (Kashiwagi et al. 2013; Mayer et al. 2014)
- Flexible schedules (Strong et al. 2013)
- Leadership training for department or division chairs to foster engagement and prevention of burnout among physician staff (Shanafelt et al. 2015)

Strategies to foster collegial support, enhance self-care, and prevent burnout in early and mid-career (See next section):

11.2.5   Step Five: The Mid-Career Years

Life as a Mid-Career Physician:

Nineteen years ago, Dr. Ralph Frist founded his private practice group and went on to build a wonderful reputation in the community. This past year their group decided to join the multi-specialty hospital-owned group. It has become readily

apparent to Dr. Frist that the hospital leadership neither appreciated his vision nor valued his seasoned perspective. He finds himself increasingly frustrated, impatient and restless as the months go on.

Ralph has been married to Kelly for almost 20 years. They have a son, Thomas who is a sophomore in college and a daughter, Tiffany who is a junior in high school. Kelly is very involved at Tiffany's school as a leader in the PTA, and is highly invested in her own job and activities with her many friends. It's been a very long time since she and Ralph spent one-on-one time together as a couple.

This past year, Ralph's aging parents moved into an assisted living center in town. They are requiring more and more help for medical appointments and supportive care as they become increasingly frail.

Ralph is disgusted with himself for how he's let his physical health go. The button popped off his pants this morning when he tried to fasten them. He is beginning to wonder what the point of all this is and whether there will ever be anything to look forward to.

11.2.5.1 Discussion

Physicians often persist in untenable jobs far beyond when it is ideal for their lives, viewing departure as a failure rather than a healthy, victorious choice. The common practice of hospital systems purchasing physicians' practices can be a shock for physicians who have been accustomed to calling the shots, especially when their opinions and needs are now disregarded. Physicians are not trained to strongly align with one another to effectively negotiate in these situations. This contributes to physician burnout and distress.

Keeping a marriage strong and vital through the busy child-rearing and career-building years is also a significant challenge. It is important to discover and nurture shared interests and hobbies and to regularly invest in maintaining strong, emotionally supportive, and physically intimate connections with one another. It can be difficult to turn this around once the relationship has been neglected, but one of the first steps is to consciously invest in getting physically healthy and fit, as this will naturally increase libido and desire. It is also important to rekindle the foundation of the friendship, including the ingredients that first led to falling in love.

11.2.5.2 Summary Recommendations

Dr. Frist is a talented doctor but is showing significant signs of burnout, with loss of engagement with and respect (bidirectional) for the leadership in his institution. He is showing signs of depression, and beginning to have existential questions about the future for his life and career. Exploring other career opportunities can be reaffirming. Leadership training to engage and inspire staff may prevent skepticism and burnout among their direct reports (Shanafelt et al. 2015) by finding ways to inspire and engage their staff and notice early signs of burnout. Dr. Frist will benefit from recognizing the early signs of depression (Dyrbye et al. 2013) and seeking help through counseling, lifestyle change, and finding ways to connect with aspects of his career that are most meaningful (Shanafelt et al. 2009b). Mindfulness-based programs are gaining traction as one way to help regain such balance, due to the

association of mindfulness-based practices with increasing self-compassion, being more present and listening better with patients, enlarging capacity for difficult experiences, and increased reflection and self-awareness (Ludwig and Kabat-Zinn 2008; McClafferty and Brown 2014).

Strategies to recognize stress and burnout in early and mid-career:

- Use of self-assessment tools such as the UK National Health Service's Wellbeing self-assessment (2016) and the Mayo Clinic's Well-Being Index (Dyrbye et al. 2013; Shanafelt et al. 2014); or asking trusted people about what they observe about one's stress level (Hlubocky et al. 2016).

Strategies to foster collegial support, enhance self-care, and prevent burnout in early and mid-career:

- Balint groups, i.e., regularly scheduled group meetings of healthcare professionals who present and discuss clinical cases for the purpose of enhancing quality of and insight into clinician-patient relationships (J. Benson and Magraith 2005; Sommers and Launer 2013)
- Facilitated physician engagement groups (Luthar et al., 2017) (West et al. 2014)
- Focus groups (Schrijver et al. 2016)
- Mindfulness-based* training (Amutio et al. 2015; Fortney et al. 2013; Goodman and Schorling 2012; Irving et al. 2009; Krasner et al. 2009; Luchterhand et al. 2015; Martin-Asuero and Garcia-Banda 2010)
- Stress Management and Resilience Training programs (Sood et al. 2011) designed to expand awareness of the neuroscience of stress and resilience, and learn skills to improve attention and enhance compassion, gratitude, acceptance, meaning and purpose, and forgiveness
- Cognitive-behavioral stress management training and reframing (Regehr et al. 2014)
- Interest in and gratification from "the person behind the symptoms" in doctor-patient encounters and establishing good doctor-patient relationships (Zwack and Schweitzer 2013)
- Treatment successes and medical efficacy (Zwack and Schweitzer 2013)
- Cultivation of authentic contact with colleagues, family friends (Zwack and Schweitzer 2013)
- Annual reviews being used to focus on developing and supporting work/life balance in addition to concerns regarding productivity and academic advancement
- Having "resilience champions" (physicians with an interest in fostering resilience and who can serve as a resource for other physicians) within each department at hospitals or academic medical centers
- Limit setting, understanding personal limitations and realistic expectations of patients, and personal reflection (McCrory 2016; Zwack and Schweitzer 2013)
- Being able to maintain focus on areas of work that are most meaningful (Shanafelt et al. 2009a)
- Making time for adequate sleep, nutrition, and fitness

- Selecting a trusted primary care physician (PCP) and following his/her recommendations (allowing oneself to be the patient for a change)
- Availability of wellness programs that support a healthy lifestyle for weight, fitness, health, and nutrition

Individual physicians with a greater sense of well-being are more likely to share personal experiences with colleagues about their medical practice (reducing professional isolation), incorporate skills such as mindfulness to respond more effectively to their patients' and life's challenges, and utilize strategies to increase their self-awareness and willingness to devote time to personal growth (Beckman et al. 2012). Organizations can facilitate flourishing by creating a culture that rewards rather than punishes self-care, facilitating interventions, and creating forums for healthcare professionals' concerns to be heard and addressed (Hlubocky et al. 2016; Shanafelt et al. 2015; Swensen et al. 2016).

11.2.6 Step Six: The Senior Career Years: Preparing for Retirement

Life as a Senior Career Physician:

Dr. Theodore Brown has devoted his life to his career and to caring for patients. He took the Hippocratic Oath to heart and is well known and respected for his driven work ethic where patients and trainees always come first.

His family became accustomed long ago to his regular absence at the dinner table and to his fatigue and irritability upon arriving home. They have gone on to build their own meaningful lives, relationships and interests.

As the chair of the department, Dr. Brown is approaching retirement age and is at a loss. He doesn't have a life outside of being a physician and certainly has never had time to develop outside interests or hobbies.

11.2.6.1 Discussion

For many physicians, due to the level of commitment and self-sacrifice that the practice of medicine requires, their whole personal identity becomes one of being a physician, and thus it is difficult and sometimes painful to reinvent themselves as they retire (Silver and Williams 2016). For some who practice in underserved communities they may feel guilty at the prospect of potentially abandoning their patients (Hansen et al. 2013; Nusbaum 2009). Others may be putting their patients at risk by practicing beyond their capacities due to illness or cognitive decline (Skowronski and Peisah 2012). Burnout can be a reason for early retirement, whereas financial obligations may delay retirement (Silver et al. 2016). Both the profession and the individual physician will benefit from engaging the wisdom and experience of a senior physician who has successfully balanced decreasing work demands and improving of work/life balance in preparation for retirement (Pit and Hansen 2014). George Vaillant, who from 1972 to 2004 directed the longitudinal study of Harvard men (the Harvard Grant study), concluded that supportive, loving relationships were the primary driver of happiness and a full life—even more than a successful career, money and good physical health (Vaillant 2012). Therefore, finding ways to

sustain and nurture one's loving relationships may also be a key to successful retirement. The Eriksonian stages of generativity (versus stagnation) and capacity for wisdom are relevant as one is transitioning to retirement.

11.2.6.2   Summary Recommendations
Strategies proposed to foster a flourishing end of career and retirement:

- Flexible, or part-time positions (Peisah et al. 2009) as a transitional phase before retirement.
- Reduction in working hours (Silver et al. 2016; Van Greuningen et al. 2012).
- Support for taking sick days when appropriate and discouragement of presenteeism (Rosvold and Bjertness 2001).
- Saying no to requests that are no longer necessary for career building and yes to specific, particularly meaningful projects (Chambers et al. 2004; Silver et al. 2016).
- More opportunities for teaching and increased flexibility to adjust the clinical focus of one's practice to fit with optimal career satisfaction (Brett et al. 2009; Silver et al. 2016).
- Late career and postretirement mentorship programs (Joyce et al. 2015; Silver et al. 2016) and engagement with younger students or faculty.
- Plan for retirement (Peisah et al. 2009) by taking advantage of financial services and maintaining meaningful activities outside of medicine (Silver et al. 2016).
- Nurture and rekindle intimate relationships, play together, adventure together, invest in the emotional bank account with one another (Gottman and Silver 2015; Klein 2013).
- Pursue a new hobby or activity that brings joy and happiness.
- Find a way to express creativity.
- Audit a course in college that interests you—many colleges offer this tuition free for seniors.
- Nurture spiritual connection, get out in nature, and learn meditation or yoga.
- Get in shape physically in preparation for a more active lifestyle.

11.3   Evidence-Based Recommendations to Protect Against Burnout, to Promote Well-Being, Resilience, and Overall Career Satisfaction

- Focus on the most meaningful aspects of work to protect against burnout (Shanafelt et al. 2009b).
- Have control over the practice environment (Dunn et al. 2007).
- Attend to personal self-care with good nutrition, adequate sleep, regular exercise (Weight et al. 2013; Williams et al. 2015), and periodic health maintenance examinations with a trusted PCP.
- Practice cognitive-, behavioral-, and mindfulness-based strategies for stress reduction, empowerment, and well-being (West et al. 2016).
- Nurture authentic social connections at home and at work (Luthar et al. 2015).
- Have good role models and mentors (Strong et al. 2013).

11.4 Resources

11.4.1 *Mindfulness-Based Approaches

Mindfulness practice originated in the Buddhist traditions, as a way of responding to the inevitability of suffering. Jon Kabat-Zinn is credited for secularizing it and introducing it to therapeutic environments such as with patients suffering from chronic pain (Kabat-Zinn 1982). Mindfulness training involves learning to pay attention to present experience in a particular way: on purpose, without judgment, with acceptance and compassion. Although it is natural to want to control our experience, especially if it is unpleasant or painful, there are many experiences that are impossible to control. Attempting to control an experience is called the "doing" mode and does work for a lot of situations. However, trying to control something that has already happened or is out of one's control can increase suffering. By stopping to try to control such experiences and intentionally observe and accept the present moment experience with compassion, i.e., "being mode," individuals paradoxically are able to respond more skillfully. Furthermore, greater well-being occurs when attention is in the present moment than with mind-wandering, even when the present moment is not pleasant (Killingsworth and Gilbert 2010). Mindfulness practice diminishes self-criticism and enhances self-compassion, as well as minimizing rumination over past events or worries about the future. Examples of mindfulness meditations include those focused on loving-kindness, breath awareness (or focused attention), and open monitoring. Informal practice includes being fully present with daily activities. Mindfulness Based Stress Reduction (MBSR), developed by Jon Kabat-Zin (Kabat-Zinn 1982), typically involves 8 weekly group meetings (2-h classes) and a 1-day retreat (6-h mindfulness practice) between sessions six and seven, homework (45 min daily), and instruction in three formal techniques: mindfulness meditation, body scanning, and simple yoga postures (Kabat-Zinn 2013).

In contrast to focusing energy on situations beyond our control, values-based action is associated with resilience and well-being. Intentionally thinking about personal values and affirming them has been shown to decrease the perception of threat, decrease defensive responses to threat, decrease rumination after "failure," and significantly reduce cortisol levels during stressful lab tests (Creswell et al. 2005). Acceptance and Commitment Therapy (ACT), developed by Steven Hayes, is a newer generation mindfulness-based therapy. Fundamental elements of ACT include cultivating psychological flexibility through acceptance, cognitive defusion (i.e., noticing thoughts as "just thoughts" and not as barriers for action), being present, awareness of one's "observing self," values, and committed action. Participants are taught to stay present in the moment with whatever psychological experience is encountered, change their relationship with their own psychological experience, and strengthen actions that are linked to chosen values (Hayes et al. 2006, 2013).

**Relaxation is often achieved with mindfulness-based practices but it is not their goal. However, there are many other mind-body therapies that are geared for

increasing parasympathetic tone and relaxation, which can also enhance well-being. Paced breathing, biofeedback training, and progressive muscle relaxation are examples. There is substantial research on the benefits of intentionally eliciting the relaxation response (Benson 1975).

University of Massachusetts, University of Rochester Medical Center, Harvard Medical Center, and others offer courses adapted for medical students, residents, and health care professionals.

11.4.2 Technological Resources

11.4.2.1 Smartphone Apps
- Soma Analytics—works with organizations to deliver evidence-based smartphone-driven programs for fostering resilience and tracking sleep and emotions
- Headspace.com—an accessible program to understand mindfulness concepts and learn to meditate—10 minutes a day
- Stop, Breathe, Think—a free app for learning and tracking meditation
- Calm—a free app with meditation techniques for stress reduction
- Insight Timer—a free app with over 3000 guided meditations
- Naturespace: a free app with "3D Sound"
- The Mindfulness App—a free app that sets alerts to remind you to stop and start meditating
- Buddhify—32 different meditations including informal practice, "on the go"
- MyFitnessPal—app to record nutritional intake, exercise, and activities as well as to set and track goals (free and paid version)
- Burnout Proof app from TheHappyMD.com
- CBT-i Coach—free app to assist those with insomnia

11.4.2.2 Fitness Tracking Devices
- Fitbit
- Apple watch
- Polar fitness trackers
- Garmin forerunner and vivoactive
- Jawbone UP
- Misfit flash and ray
- Samsung Gear Fit2
- Cyclemeter, runtastic, strava

11.4.2.3 Internet-Based Programs
- Stressfree.org (Amit Sood)
- mindfulness-solution.com (Ron Siegel)
- mindfulselfcompassion.org (Chris Germer)
- self-compassion.org (Kristin Neff)
- wisebrain.org (Rick Hansen)

- freemindfulness.org (free meditations)
- drdansiegel.com (resources for Wheel of Awareness practice)
- happinesstrap.com/free_resources (Russ Harris)
- thecenterformindfuleating.org (Jean Kristellar)
- http://marc.ucla.edu/mindful-meditations
- https://contemplativemind.wordpress.com/how-to-meditate-links-for-guided-meditation-practice/
- Relaxationresponse.org
- Shuti.me—CBT program for insomnia
- Weightwatchers.com
- https://www.stepsforward.org/modules/physician-wellness (AMA Steps Forward Program)
- http://wellmd.stanford.edu/healthy.html (Stanford Medicine WellMD)
- http://www.smartrecovery.org/ (Smart Management and Recovery Training, an evidence-based free program for addiction recovery)

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Physician Health Programs: The US Model

12

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Abstract

Physician Health Programs (PHPs) began in the early 1970s in response to calls from the Federation of State Medical Boards and the American Medical Association alarmed by physicians with addiction and/or psychiatric illness as well as the high number of physician suicides in those who had experienced licensure revocation. From modest beginnings, often as small volunteer groups within state medical societies, PHPs have grown and matured in their structure, funding, authority to operate, scope of services, and consistency from state to state. This process has been aided by their national membership organization, the Federation of State Physician Health Programs (FSPHP). PHP studies demonstrate PHP monitoring is highly effective in assisting physicians with potentially impairing illness while doing so in a fashion that promotes public health and safety. Today, these programs continue to work toward accountability, consistency, excellence, and serve as a "new paradigm" for addiction management. The success rates observed for PHPs significantly exceed other addiction care practices, and as a result PHPs have set a new standard showing that recovery (rather than relapse) can be the expected outcome of treatment. PHPs are well accepted by most all medical societies and licensure boards. This chapter will review the history of state PHPs, describe their authority to operate, staffing, funding relationships, and the expanding scope of services provided. It will also review recommendations for improvements and opportunities for growth.

12.1   The History of Physician Health Programs

Since antiquity, professional ethical standards have expressed that ill health, impaired judgement, or unacceptable behavior on the part of a physician may result in substandard care and potentially negatively impact the practice of medicine. Historically, professional standards were developed to improve the quality of care and enhance patient safety but provided little in the way of strategies to identify and provide assistance or treatment for colleagues in need. Today's physician is increasingly and more accurately perceived as human and therefore may be recognized as suffering from many of the same mental health and other health issues that affect nonphysicians. A variety of disorders are potentially impairing and may impact a physician's ability to practice medicine with reasonable skill and safety, including those related to substance use and mental health.

In the past 30 years, PHPs have developed in almost all states, and some in other countries (Kunyk et al. 2016) to provide a resource to seek help for physicians at risk or experiencing potentially impairing conditions such as substance use disorders (SUDs), mental illness, or other health issues. It is widely known since the time of William Stewart Halstead, MD, who was addicted to cocaine and morphine, that physicians are vulnerable to SUDs. The lifetime prevalence of SUDs among physicians is similar to the general population rate (Flaherty and Richman 1993; Hughes et al. 1992; McAuliffe et al. 1991). In 1958 the Federation of State Medical Boards (FSMB) identified drug addiction and alcoholism as a "disciplinary problem" and called for the development of state programs to address the issue. A decade later FSMB passed a resolution again calling for programs "…to provide advocacy for physicians and … to protect the public" In a 1973 landmark paper by the American Medical Association (AMA) Council on Mental Health, "The Sick Physician: Impairment by Psychiatric Disorders, Including Alcoholism and Drug Dependence" (1973) the AMA acknowledged physician "impairment" and in 1974 developed model legislation that proposed state medical boards create a therapeutic alternative to discipline for these illnesses. A number of other papers and two physician health conferences quickly followed and the first PHPs were born. By the early 1980s, most states, typically through their state medical associations, had authorized or developed "impaired physician programs."[1] Early PHPs were volunteer groups of "physicians helping physicians" who limited their work to physicians with SUDs. This evolution coincided with the development of employee assistance programs (EAPs) in the workplace. Like the EAPs, the early PHP effort included physicians who were themselves in recovery from SUDs. This is still true of many PHPs today.

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[1] "Impaired Physician" is a pejorative misnomer that has had unintended consequences. Most often these physicians are not functionally "impaired" but suffer from a "potentially impairing illness". (See ASAM Public Policy Statement (2011): Illness vs. Impairment in Healthcare and Other Licensed Professionals).

From the mid-1970s to late 1980s the leaders of the PHPs learned many valuable lessons as the scope, breadth, and complexities of their mission expanded and they began to actively communicate and collaborate. PHPs became aware that many physicians with SUDs also had co-occurring psychiatric illness which interfered with lasting recovery from addiction, or had isolated potentially impairing psychiatric illnesses. Over time, the PHPs received referrals of physicians with a wide range of physical and cognitive disorders. As the PHP population grew in size, scope, and complexity, the need for a structured linkage of the state PHPs was apparent.

The Federation of State Physician Health Programs (FSPHP), a national PHP membership organization, was formed in 1990. In addition to SUDs, today's PHPs address a wide range of behavioral disorders; among them are stress, burnout, depression, and preventing physician suicide. Some PHPs have a role with sexual boundary issues and other complex challenges. All PHPs focus on earlier detection of potentially impairing conditions in an effort to support physician health and well-being. Increasingly PHPs are working to promote primary prevention through education throughout the house of medicine from the early career medical students and residents to well-established licensed healthcare professionals. As the PHPs have become an established part of healthcare, most operate with a variety of state laws governing confidentiality, authorizing contract language, reporting requirements and exceptions. Many PHPs need additional qualified staff, as well as increased sustainable funding. PHPs, in essence, serve the dual roles of protecting the public and the successful rehabilitation of ill physicians.

This chapter is focused principally on the PHPs well-known work with physicians with SUDs. It also touches on other potentially impairing illnesses addressed by PHPs, a full discussion of which is beyond the scope of this chapter.

12.2   The Federation of State Physician Health Programs

The Federation of State Physician Health Programs (FSPHP) was established in 1990 and the vast majority of state PHPs are active participants. FSPHP is a nonprofit corporation whose mission is "to support physician health programs in improving the health of medical professionals, thereby contributing to quality patient care." The FSPHP's purpose is to create a forum for PHPs to learn from each other, provide education, and to promote the exchange of information and resources between PHPs. FSPHP conducts a well-attended national meeting each spring and regional meetings each fall to provide networking opportunities and educational programming, to promote best practices, and to address common challenges. PHPs also work together through a secure e-group that provides resources from around the country to discuss common practices and share expertise. In 2005, the FSPHP developed state PHP guidelines and are presently reviewing these for an update. FSPHP also offers performance enhancement review guidelines to its member PHPs to encourage reviews to enhance accountability, consistency, and excellence. PHPs are becoming increasingly sophisticated and consistent in their services. While the range of services may vary, most provide education, referral for evaluation and/or treatment for a wide range of potentially impairing illnesses, and direct individual support to participants, support groups, toxicology screening, and monitoring.

12.3   Authorization of State PHPs

The majority of state PHPs (59%) derive their authority to operate from state law (DuPont et al. 2009a) or they operate under contract with their medical boards. Many PHP operations are defined by contract with their state medical board. Variations exist from state to state regarding issues including funding, reporting requirements, confidentiality, and peer review/civil liability protection, yet there are more areas of consistency than variation in the approach to the issues reviewed in this chapter.

12.4   Authority of the PHP

Participation in a state PHP is voluntary although referring entities such as family members, group practice partners, colleagues, hospital medical staff, state medical boards, and other agencies may provide a variety of incentives for PHP participation, which allows the physician to mitigate or avoid pending consequences including loss of job or medical licensure. The PHPs are not empowered to subpoena, require participation, impose sanctions, or take punitive or disciplinary action. PHPs do not themselves diagnose or provide treatment and do not have a doctor-patient relationship with their program participants. As part of a PHP monitoring contract signed by participants, most PHPs have required reporting of noncompliance, relapse that could place the public at risk, and other specified reporting. This includes reporting by approved clinicians treating participants.

12.5   Blueprint PHP Study

In April 2005, noted researchers, with FSPHP support, began the first national study of state PHPs. A Phase I comprehensive questionnaire was sent to medical directors of the 49 listed PHPs, of which 42 (86%) responded (DuPont et al. 2009a). Phase II of the study utilized a retrospective chart review among these participating states. Sixteen [16] PHPs agreed to participate in Phase II. From these 16 states laboratory and chart records were analyzed from 904 physicians consecutively admitted to these programs from September 1, 1995, through September 1, 2001, who met diagnostic criteria for SUDs (McLellan et al. 2008). This study specifically focused on these single "intent to treat" episodes of care (i.e., physicians may have had subsequent admissions to the PHPs). The purpose of this study was to describe PHP operations and quantify their outcomes for physicians with SUDs throughout the duration of a single episode of PHP care management, which typically lasted up to 5 years. Data collected included state law, regulatory entity contracts, structure, staffing, funding, care management, participant contract requirements, licensure types followed, scope of services, board-reportable events resulting in disciplinary action, relapse rates, and participant status at study endpoint. This "Blueprint Study" is the largest national study of state PHPs to date. The two sentinel papers initially produced from the Blueprint Study are referenced throughout this chapter.

12.6   PHP Structure

Blueprint data (DuPont et al. 2009b) as well as a follow-up white paper (Carr 2008a) amplifying this data described and compared the structure of 45 state PHPs. Sixty-six percent (66%) were organized under a corporate structure, almost always a non-profit. Of the 45 states, 1 (2.2%) was run by the state health department, 1 by a university, 14 (31.1%) had some level of involvement or interface with their state medical association, and 3 (6.7%) were operated by their state medical board. The majority (58%) were fully independent with a dedicated Board of Directors (Carr 2008a). In only two states did the state medical association board also serve as the PHP Board. The trend continues toward professionally led PHPs with an independent, nonprofit corporate structure with a dedicated board of directors.

12.7   PHP Budget and Staff

In 2005 PHPs reported an average annual operating budget of approximately $538,000 (range $21,250–$1.5 million). The average PHP funding profile was comprised of licensing fees (50%), participant fees (16%), state medical associations (10%), hospital contributions (9%), malpractice companies (6%), and other (9%). The PHP budgets typically did not include funds for participant evaluation and treatment, toxicology screening, therapists, psychiatrists, and other healthcare needs while under monitoring. These expenses were typically borne by the participants themselves. About 50% of PHPs collected a fee from program participants. Seventy-four percent (74%) of state medical boards designated a portion of licensure fees to the PHP ($25/licensed physician was a common practice) while 38% of malpractice carriers contributed. Medical associations and hospitals each contributed in approximately 50% of states.

The average PHP operated with a staff of 5 (range 1–19), typically including a full-time physician medical director, most often an addictionologist or addiction psychiatrist. Many programs employed therapists who assisted with case management. Often, PHPs utilized a volunteer committee of physicians, healthcare professionals with specific expertise and experience, as well as members with personal recovery experience to assist case review and management. Larger or well-funded PHPs employed one or more full-time or part-time associate medical directors. In 2005, PHPs enrolled on average 34 new clients a year with a SUD diagnosis and maintained an average caseload of 138 physicians. Sixty-four percent (64%) of PHPs provided services to other healthcare disciplines such as dentists (51%), veterinarians (33%), and pharmacists (21%), and other healthcare professionals (20%). Two state PHPs were responsible for "all licensed [healthcare] professionals" in their state.

12.8   PHP Services

State PHPs provide early identification and assistance for physicians with potentially impairing illnesses (Table 12.1). Insofar as possible, PHPs serve as an alternative to the disciplinary process. PHPs provide initial assessment, referral for

Table 12.1 Potentially
impairing illnesses addressed
by PHPs

Addiction	100%
Psychiatric illness	85%
Behavioral	79%
Cognitive/physical illness	62%
Sexual issues (PSM)	>50%
Other	18%

comprehensive evaluation and treatment, continuing care monitoring/support, and earned advocacy. The medical board's mandate is patient safety and enforcement of the Medical Practice Act through discipline. PHPs, on the other hand, approach matters of physician health from the standpoint of "illness and health."

Education of secondary stakeholders[2] such as medical boards, professional associations, medical staff, insurance provider panels, and malpractice carriers is of vital importance. A national survey of physicians reported that 96% of them were concerned about another physician they knew, yet only 45% made a report of their concern (Shouten 2000). Early reporting is facilitated when a concerned physician or other party is aware of the availability of the state PHP and a confidential track enabling help without reflexive triggering of the board disciplinary process. Some states mandate reporting when one healthcare professional has reasonable cause to suspect another's impairment. Other commentators in the field argue that physicians have an ethical obligation to report physicians with potential impairment knowing effective treatment enhances patient safety and physician well-being.

Today, a growing number of PHPs are interested in promoting partnerships within organized medicine to better understand and more effectively mitigate the risk of epidemic levels of physician stress/burnout, depression, and their sequelae, including physician suicide.

12.8.1 PHP Referrals, Investigation, Intervention, Evaluation

PHPs typically receive their referrals from colleagues (20%), medical boards (21%), medical staff (14%), and other concerned parties (17%). Physician self-referral accounts for about 26% of new PHP cases when a confidential track exists.

When the state PHP is contacted, it makes a discrete inquiry to determine the legitimacy of the concern and the acuteness of the situation. Public safety is paramount; however, this is also a time of high risk for the physician's safety and well-being as well. At minimum, those expressing concern are interviewed. If the individual who reports a concern requests anonymity, the PHP will honor that request to the extent allowable by law. Without confidentiality, subordinates and other non-subordinate referents would likely not make such a report. After a call is made or a complaint is filed, the PHP will, depending on the circumstances,

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[2] Stakeholders—(a) Primary Stakeholders—PHP program participants and their families; (b) Secondary Stakeholders—professional associations, licensure boards, medical groups, hospital staff/administration, malpractice carriers, other medical organizations, and ultimately the public.

conduct a telephone interview with the physician, have the physician come to the PHP office, or go to the physician's workplace to discuss the concerns expressed. If concerns of a potentially impairing illness remain, arrangements may be made for a formal evaluation. PHPs are networked and, collectively, familiar with the expertise available at evaluation centers around the country. Physicians are given a choice of a number of nationally recognized and acceptable medical centers. The formal evaluation is typically a 2- to 5-day multidisciplinary, multimodal evaluation that may include history and physical examination, laboratory tests, toxicology screening, psychological evaluation, psychological testing, psychiatric assessment, and neuropsychological screening with formal testing if indicated. Evaluators obtain any necessary releases to acquire pertinent information from collateral sources. Refusal to provide a release considered necessary typically negates the evaluation.

12.8.2 Formal Treatment

Should a diagnosis of SUD, unstable behavior, and/or a potentially impairing illness be made and treatment be recommended, the physician is provided options of recognized treatment facilities that routinely manage professional patients and are acceptable to the PHP. To ensure quality care, treatment must be carried out at a facility or with a professional who is able to meet the quality standards of the PHP. Treatment for SUDs often necessitates a residential level of care (69% with a SUD), commonly 6–12 weeks. The primary substances used by physicians with SUDs (Table 12.2) only differ from those used by the general SUD population in that less heroin, methamphetamine, and marijuana use is observed among physicians, who more often use controlled prescription substances such as opioids, including intravenous morphine, meperidine, hydromorphone, and fentanyl. Alcohol remains the most commonly misused substance in both physicians and nonphysician populations.

Sixty-three percent (63%) of physicians in the Blueprint study were treated between 2 and 3 months at a residential level of care and 98% successfully completed treatment. Depending on the state's PHP experience and comfort level, some motivated physicians at low risk are afforded an opportunity for partial hospitalization or intensive outpatient (IOP) level of care. IOP was utilized in 9% of the cohort with the physician not allowed to work. In 18% of cases the physician was allowed to work under program supervision during initial treatment. Anecdotal reports are promising; however, further study is needed with regard to level of care, duration of

Table 12.2 Primary substance of abuse and prevalence of psychiatric diagnoses among physicians with SUDs

Alcohol	50%
Opiates	35%
Other drugs	15%
Alcohol and drugs	31%
SUD and psychiatric diagnosis	48%

treatment, and physician outcomes. Nine percent (9%) of physicians did not require formal treatment, because (a) they transferred in after completing care or being monitored in another state where they previously worked, or (b) for other reasons.

PHP-utilized treatment facilities are uniformly abstinence-based following treatment for physical withdrawal, meaning that physicians are required to remain abstinent from the use of any alcohol and controlled substances including nonmedical use of prescribed controlled substances. If there is a compelling medical indication for prescribing a controlled substance that is recommended by the treating physician and approved by the PHP, then an exception can be made (e.g., a stimulant to treat narcolepsy). Such case-specific exceptions are thoroughly evaluated and relatively uncommon. To remain under the supportive umbrella of the PHP, the physician must successfully complete any recommended treatment with staff approval. During the treatment phase, treatment professionals keep the PHP apprised of participants' progress. Evaluation and treatment are highly stressful times both for the physician and their spouse/significant other. PHPs communicate their support to the family and encourage engagement in their own education and recovery process.

12.8.3 PHP SUD Contract

12.8.3.1 Initial Meeting

Following treatment physicians enter into a contingency management contract with their state PHP. These contracts require many common elements as noted in Table 12.3.

Physicians typically meet with the PHP medical director to review and execute their contract, ensure expectations are clearly understood, and discuss back-to-work issues and parameters. Any necessary release of information documentation will be executed. The goals of the contract are to (1) create a system of accountability that ensures total abstinence and public safety, (2) support the physician into a sound recovery process, and (3) provide documentation of compliance and well-being. Each contract is individualized to include unique needs of continuing care recommended by treatment professionals such as psychiatric care, medications, individual therapy, any work-related restrictions (i.e., hours worked and prescribing limitations) as may be case-specific. SUD contracts generally have a duration of 5 years.

Table 12.3 Common PHP contract elements

Abstinence from alcohol and unauthorized mood-altering substances
Random toxicology screening, including observed urine collections
Psychosocial support groups, such as 12-step meetings
Weekly Caduceus/peer support meetings[a]
Workplace monitor
Treatment providers based on case-specific needs

[a]Caduceus meetings are peer support meetings limited to physicians and other healthcare professionals

12.8.3.2 Support Groups

Over 95% of PHP participants with SUDs attend 12-step meetings (i.e., Alcoholics Anonymous [AA] and/or Narcotics Anonymous [NA]) generally three or more times per week. Acceptable alternatives are made available. On occasion, for example, a physician may have an objection to AA/NA and utilize other avenues of group support as approved by the participant's PHP. Examples could include cognitive-behavioral therapy (CBT), Women for Sobriety, and SMART Recovery. It is typically required that the physician participate in a sound, evidence-based process that affords an active interface with an alternative support system comparable to those in 12-step meetings. Physicians also attend weekly facilitated Caduceus Group meetings composed of recovering peers including other healthcare professionals. After completing the PHP contract, the vast majority of successful recovering physicians cite participation in AA/NA as one of the most important elements of their success.

12.8.3.3 Interface with the PHP

Most PHPs require periodic meetings with the medical director, program therapists, case manager, and/or a volunteer of the PHP Physician/Professional Health Committee (e.g., case management committee). Such committees utilize some volunteers composed of recovering peers, including psychiatrists, addictionologists, and perhaps others such as neurologists, psychologists, therapists, and social workers. These dedicated professionals donate their time and expertise to support their peers in early recovery.

12.8.3.4 Toxicology Screening

All PHP contracts for SUDs require toxicology screening to aid early detection of relapse and support public protection, but also to help the participants document their success in recovery. Additionally, such quality testing functions as a deterrent to relapse itself. Random toxicology screening, of which urine is the most common matrix, is unannounced, witnessed at random frequencies, and follows a chain-of-custody protocol. Specimens are analyzed by screening tests and positive screens undergo confirmation testing, most commonly by gas chromatography/mass spectrometry. Medical Review Officers (MROs) and toxicologists are called upon as needed. Virtually all PHPs use varying drug panels selected randomly at a percentage of the total (e.g., 48 screens with 70% using Panel A, 20% Panel B, and 10% Panel C). Such a process minimizes costs and helps ensure abstinence, not only from the substances in the physicians' known history of use, but also tests for other common and uncommon substances with addiction potential. Participants are required to call a toll-free 800 number each day or go online to learn if they must submit a specimen for testing that day. "Forgetting" to phone-in daily is addressed actively and may prompt hair analysis or increased screening. Occasionally laboratory testing may be indicated for liver enzymes, carbohydrate-deficient transferase (CDT), ethyl glucuronide (EtG), and phosphatidyl ethanolamine (PEth) to detect recent alcohol use. Hair, which provides a 3-month window of detection for many drugs, is commonly used in addition to urine testing. Some

PHPs also find value in using breathalyzers, as well as tests of sweat and oral fluids. The typical PHP on average screens participants 48 times the first year with frequency decreasing to about 20 tests per year by the fifth year. All testing remains random, without advance notice and observed urine samples are commonly employed so each physician remains subject to testing on any given day.

12.8.3.5   Work Site Monitor(s)

Over 70% of state PHPs require at least one non-subordinate work-site monitor who reports to the PHP. These monitors are chosen based on their professionalism, proximity to the physician being monitored, and willingness to be diligent in their observations. Monitored physicians may or may not be aware of their monitor's identity. Monitors report quarterly to the PHP with an immediate telephone call for any urgent concerns.

12.8.3.6   The Role of Medication

One surprising finding from the Blueprint study was that PHP-monitored physicians tended to use very little medication. Often patients within the general population completing SUD treatment are discharged with several medications such as antidepressants, nonaddicting anxiolytics, and insomnia medications. Most treatment centers encourage long-acting injectable naltrexone (Vivitrol®) when alcohol and/or opiates are involved. Some treatment centers support medication-assisted treatment (MAT) with buprenorphine (commonly called Suboxone®) for opioid use disorders. Unfortunately, at this time the field only has observational data and no direct comparisons about the relative benefits of naltrexone, buprenorphine, or psychosocial treatment without medication for treating opioid use disorders in physicians (Braquehais et al. 2015; Merlo et al. 2011). While controversial, some treatment facilities allow the continued use of amphetamines for the treatment of ADD/ADHD.

The Blueprint study revealed no use of MAT with methadone or buprenorphine in practicing physicians and in only one who was not practicing. Of 760 physicians for whom naltrexone would have been appropriate, only 6% were receiving it. A recent analysis of the Blueprint data compared treatment outcomes for three groups of physicians based on their substance of choice: (i) alcohol only, (ii) any opioid with or without alcohol use, and (iii) non-opioid drug use with or without alcohol use reported (Merlo et al. 2016). Only 10% of physicians in the opioid group and 1% in the alcohol only and non-opioid groups were treated with naltrexone. Over the course of 5 years of monitoring, the three participant groups had similar outcomes, suggesting that physicians with alcohol and/or opioid use disorders, under PHP care, can achieve long-term abstinence without the use of naltrexone. Further longitudinal studies regarding craving, relapse, and possible mitigation of some behavioral components of SUDs are needed. It is important to underscore that all of the physicians in the Blueprint study entered their PHP contract between 1995 and 2001. The use of MAT for opioid dependence, which is now more common in the treatment of opioid dependence in the community at large, was rare in the PHP community at that time.

Only 32% of the original Blueprint physician cohort was prescribed an antidepressant which again differs from the general treatment population. None of the physicians in the study were prescribed benzodiazepines or amphetamines.

12.9 Physician Confidentiality

All effective PHPs have within their enabling legislation and/or contracts a provision for confidentiality affording the physician anonymity and safe-harbor, absent patient harm. This provision is critically important to the PHPs' mission of addressing "potentially impairing illness" prior to its progression to overt functional "impairment." Illness is the diagnosis of disease, whereas impairment is a functional classification. Illness often predates impairment by a significant period of time (see American Society of Addiction Medicine [ASAM] Public Policy Statement on Illness versus Impairment in Healthcare and Other Licensed Professionals). A confidential pathway is supported by the FSMB (2011), FSPHP (2005), ASAM (2005), and the AMA (2016) as well as organized medicine in most states. In well-constructed systems, a report to the PHP will satisfy any state reporting requirements regarding an "impaired" colleague. Anonymity and the ability to receive help without a report to the state medical board are contingent upon full cooperation with evaluation, treatment, monitoring, and contract compliance. Confidentiality is surrendered in the event of recalcitrant noncompliance, relapse, or any concern regarding public safety. The degree of latitude afforded state PHPs regarding reporting can vary from state to state. State PHPs who have transitioned to a confidential alternative to discipline report referrals have increased 300–900%.

12.10 Relapse

Within PHPs, "relapse"[3] as it concerns SUDs indicates refractory noncompliance, relapse behavior, or any use of unauthorized mood-altering substances. "Relapse" is typically subcategorized into one of three levels (which can vary by state):

- *Level I*—Relapse behavior without any use of an unauthorized mood-altering substance (e.g., not adhering to other parts of the contract).
- *Level II*—Any use of an unauthorized mood-altering substance outside the context of active medical practice (i.e., outside of working hours and not evident at the worksite).
- *Level III*—Relapse to use of an unauthorized mood-altering substance within the context of active medical practice (either use or evidence of use at the worksite).

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[3] "Relapse" in behavioral/mental illness cases—indicates recurrence of the behavior being monitored or exacerbation of the monitored mental illness.

- Level 1 Relapse: Behavior without chemical use that might suggest impending relapse should be reviewed by the PHP Medical Director or designated representative, who may make treatment recommendations that potentially include individual counseling, further treatment, or a more intensive level of monitoring.
- Level 2 Relapse: Relapse with chemical use that is not in the context of active medical practice may be reported to the medical board. Relapse in any context is serious, and the PHP should carefully review the circumstances of the relapse and arrange any additional evaluation and/or treatment as may be clinically indicated to enhance sustained remission from active illness and protection of patients.
- Level 3 Relapse: Relapse with chemical use in the context of active medical practice should be immediately reported to the state medical board. The PHP report should offer corrective action which includes the participant's amenability to further evaluation and treatment.

PHPs address relapse quickly and aggressively. Level I relapse is typically managed within the PHP by more stringent oversight/monitoring. About half of PHPs had authority to manage Level II relapse without required reporting to the board particularly when participants were not referred by the board. With respect to board-referred cases, 65% said they are required to report Level II relapse. This may or may not begin a formal board process and/or subsequent disciplinary action. Upon Level II relapse, PHPs typically require additional comprehensive evaluation and treatment and a new contract. Level III relapse always results in immediate removal from practice for evaluation with report to the medical board. Level III relapse is likely to result in board disciplinary action. PHP participants understand recalcitrant noncompliance or relapse is a serious issue that can have significant consequences.

12.11 Studies of State PHPs

The Blueprint study remains the largest study of the state PHPs to date. This retrospective study was conducted by investigators A. Thomas McClellan, Ph.D., Robert L. DuPont, M.D., William L. White, M.A., and Gregory E. Skipper, M.D., with Gary Carr, M.D., as Chair of the FSPHP Advisory Committee. The FSPHP Committee assisted in the construction of survey instruments to best capture the data sought. The initial papers produced are previously referenced. The phase II outcome data demonstrated that 78% of monitored physicians completed their 5-year PHP contract without relapse (McLellan et al. 2008). Of those who relapsed the vast majority went on to do well following additional treatment.

Over the course of 5 years, 66% completed monitoring, 16% had extended their contract with the PHP, 2% had died, 5% appropriately transferred to another PHP, and 6% were discharged from the PHP. Eleven percent (11%) were no longer licensed, 83% were licensed, and 78% were in active practice. Retirees comprised 4%, and 2% could not be determined.

A follow-up *BMJ* article reported on the Ontario PHP experience of their first 100 participants beginning in 1995 and found 71% completed treatment without relapse and an additional 14% with a brief relapse were successful following a second intervention giving a total successful completion rate of 85% (Brewster et al. 2008). Another study reported a 96% success rate over 5 years (Shore 1987). A study of the Washington State PHP reported a total abstinence rate of 75% over 11 years without any instance of patient harm (Domino et al. 2005). These studies reinforce the findings of earlier, smaller studies (Galanter et al. 1990; Gallegos et al. 1992; Reading 1992). The Blueprint and other data give compelling evidence that the vast majority of doctors with SUDs, who engage in PHPs are successfully treated and the public is protected.

PHP results are exceptional within the field of addiction treatment with 85–89% of monitored physicians doing well at 5 years. Intellectually honest studies of "success rate" within the general SUD treatment population indicate relapse in about 64% of patients at only 1 year. Studies reporting a significantly higher "success rate" should prompt a careful review of the data used. Many in the field point to the PHP model as "the gold standard" and wish to explore its applicability to the treatment and continuing care of the general population. Already we see positive evidence of care management in select populations such as drug courts.

12.12 Medical Specialty Representation in PHPs

The Blueprint data suggest some specialties were statistically overrepresented in state PHPs such as anesthesiology, emergency medicine, psychiatry, and family practice. Underrepresented specialties included pediatrics, surgery, and pathology.

Individual studies of this data have shown no significant differences in recovery rates between medical specialties including anesthesiologists (Skipper et al. 2009). The same impressive long-term outcomes were found among surgeons (Buhl et al. 2011), psychiatrists (Yellowlees et al. 2014), and emergency physicians (Rose et al. 2014), with other analyses currently underway.

12.12.1 Self-Report Survey 5 Years After Contract Completion

Under the leadership of Robert L. DuPont, M.D., the Institute for Behavior and Health, Inc. teamed with leaders in the field to conduct an unfunded follow-up study of physicians enrolled in PHP care 5 years after they successfully completed monitoring contracts for SUDs. The twin goals of this study were to gain the physicians' retrospective view of their PHP experience and to ascertain their recovery status. All PHPs were invited to participate in the study. A total of eight PHPs, five of which had also participated in the original Blueprint study, attempted to contact past participants who successfully completed their SUD

contract five or more years ago. A total of 42% of eligible physicians were successfully contacted, 89% of which agreed to participate in an anonymous online survey.

Data is preliminary and currently being analyzed. Ninety-six percent (96%) of physician respondents reported their current status as "in recovery." The top three components of monitoring rated as "extremely helpful" or "moderately helpful" were participation in 12-step meetings (66%), substance use disorder treatment (63%), and signing the PHP monitoring contract (59%). An additional 33% responding viewed all elements as valuable. Eighty-eight percent (88%) termed AA/NA attendance as helpful to extremely helpful. Ninety percent (90%) viewed overall PHP participation as helpful to extremely helpful. Worksite monitoring was viewed as the least helpful element by 47% of respondents. In addition, 57% did not believe their co-occurring psychiatric issue was well treated.

The vast majority of survey participants—96%—reported current medical licensure and 91% were in active practice. A significant number, 38%, had voluntarily extended their monitoring at some point, and a total of 20% were currently engaged in active monitoring.

Of the cohort completing treatment without relapse, 15 of the 116 (13%) reported relapse following monitoring. Seventy-eight percent (78%) reported continued AA/NA attendance over 5 years following PHP contract completion.

12.13 Costs of PHP Care

As of 2005, the average budget of a PHP was $538,000, of which licensure fees contributed about 50%. Other sources of revenue, as previously reviewed, varied state to state. In addition to the sources of revenues previously reviewed, many physicians across the country currently contribute about $25 each to the state PHP through the licensure fee.

Program participants pay for the majority of their treatment. A few may receive outpatient care at a cost of $8000–$12,000. Residential care is the rule and costs between $28,000 and $45,000. Of PHPs requiring a participant fee, participant cost ranged from $600 to $3000 per year. Participant drug testing costs range from $2400 per year and up. In addition, the costs of required therapy, psychiatric visits, and other professional expenses not covered by insurance are borne by the participant. PHPs would prefer to lower costs for participants who are often struggling after time away from work. Although some treatment centers are having more success with insurance coverage, health insurance policies typically cover only a fraction of the cost of care and many physicians lack adequate disability and overhead coverage. In a few states, participants have access to benevolent funds to offset costs based on financial need, and some treatment programs offer financial assistance as well. Overall, these costs must be weighed against the potential costs of not treating a progressive illness, for physicians, their patients, and society.

12.14   Other Conditions Addressed by PHPs

12.14.1   Psychiatric Illness

Like the general population, physicians may suffer from psychiatric illness such as major depression, generalized anxiety disorder, post-traumatic stress disorder, and bipolar disorder that, left untreated, can become impairing. In combination with a SUD, each condition can destabilize and exacerbate the other. In most cases, physicians with mental disorders do not come to the attention of their state medical board or the PHP. In a recent study of female physicians representing all 50 states and the District of Columbia, only 6% of physicians with a formal diagnosis or treatment of mental illness had disclosed this to their state licensure board (Gold et al. 2016). In other cases, however, the mental illness manifests in the workplace to a degree that necessitates reporting. In these cases the PHP may proceed such as with a referral for comprehensive evaluation, but appropriate treatment is usually obtained locally. Psychiatric monitoring contracts, when necessary, are typically structured for 6 months to 2 years, and the terms are individualized based on the condition being treated, the degree of functional impairment, if any, the recommendations of the evaluation and treatment professionals, and the physicians' insight, stability, and demonstrated responsibility for their own care. Some physician participants with more serious mental illness such as an overt psychosis, unmanaged bipolar disorder, or a complicating personality disorder may be monitored for longer periods of time. PHP contracts for mental disorders are designed to be supportive while ensuring attendance at treatment appointments, compliance with medications, and documented stability in the workplace.

Physicians with primary mental illness may not fit well within the 12-step groups of physicians recovering from SUDs. Some PHPs offer facilitated groups for this population (Sanchez 2016), which has been well received. Seventy-two percent (72%) of physicians in the Sanchez study reported a positive experience. Other PHPs provide an annual retreat for their participants at which dedicated programming is designed to address the needs of this group of physicians.

12.14.2   Behaviorally Challenged or Disruptive Behavior

The majority of PHPs have been tasked with assisting physicians identified as "disruptive" (acknowledging that many of these physicians are often "distressed"): interpersonal behavior that is inappropriate to such an extent that the healthcare team is adversely impacted and/or patient care compromised (The Joint Commission 2008; AMA Council on Ethical and Judicial Affairs): see also Chap. 3). Personality disorders often underpin such behavior. Other predisposing factors may include SUDs, mood and other psychiatric disorders, as well as stress and burnout (Bright and Krahn 2010). These conditions are commonly exacerbated by both external and internal stressors (Swiggart et al. 2009). External factors can include the workplace environment and life events (e.g., an illness or death in the family, separation or divorce, and financial problems).

Disruptive physician complaints are typically complex, sometimes with split medical staff loyalties, legal threats or actions, and a host of other confounding issues. PHPs have been cautious in approaching these situations. Those who do deal with disruptive physicians typically require that the hospital medical staff or group partnership first exhaust all due process provisions in their bylaws before referring the physicians to the PHP in lieu of more formal actions such as suspension of hospital privileges (which is a reportable event to the National Practitioner Database after 30 days). Under these conditions the PHP can assist by arranging a multidisciplinary evaluation and treatment with centers around the country that have the necessary cohort-specific expertise.

Following required treatment, a PHP contract is typically specific in requiring strict avoidance of identified behaviors, ongoing attention to underlying internal stressors/conditions, occasionally coaching, behavioral psychotherapy, and other care as recommended by treatment professionals. Monitoring typically includes a complex 360-degree process requiring the willing participation of others within the hospital/practice system including superiors, colleagues, nurses, and others that each provide feedback to the PHP. A study by the Massachusetts PHP (Knight et al. 2007) demonstrated that physicians followed for mental and behavioral issues successfully completed monitoring at essentially identical rates as those with SUDs.

12.14.3   Physical/Cognitive Impairment

In most cases physicians referred to the PHPs for these conditions are aware when they are unable to cognitively or physically continue in their work or certain parts of their work. Multiple issues such as metabolic disorders, seizures, auditory or visual deterioration, head trauma, cerebrovascular accident (CVA), neuromuscular disease, advanced arthritis, and neurological conditions may raise concern. The AMA reports that the prevalence of dementia alone in individuals 65 and older is between 3 and 11%, and 18% of physicians fall into this age group (American Medical Association (AMA) 2006). Visual-spatial, reactivity, reasoning, and calculation skills vary and the sensitivity of standard screening exams may prove inadequate in the well-educated physician. Neuropsychological testing may be necessary (see Chap. 9). In such cases the PHP can arrange an evaluation with the appropriate specialists and obtain neuropsychiatric or any other specialized testing, if indicated, and make recommendations to the referent based on the objective findings of the evaluation. Infrequently, monitoring may be indicated or requested—primarily to ensure compliance with recommendations and coordinate worksite monitors.

12.14.4   Professional Sexual Misconduct (PSM)

In anonymous self-report surveys 7–10% of male and 3–4% of female physicians acknowledge past sexual contact with a patient. Between 1989 and 1996 board disciplinary action for PSM increased over 250% (Carr 2003). Nevertheless, only 1039 US

physicians were reported to the National Practitioner Data Bank for professional sexual misconduct (PSM) from 2003 to 2013 (AbuDagga et al. 2016). Psychiatric illness may underlie a number of boundary violations, but PSM is the most egregious. The American Psychiatric Association (APA) prohibited sex with patients in 1973. Because PSM can be extremely detrimental to the patient, medical boards historically have dealt with this issue through harsh discipline; often licensure revocation. More recently the vast majority of PSM cases are recognized as physicians with underlying emotional/psychiatric issues including mid-life crisis, addiction, and/or mental illness such as depression, personality disorder, or some combination of these factors. While some physicians are determined to be unsafe to practice medicine, many are amenable to treatment, rehabilitation, and monitoring and have shown an extremely low rate of recidivism (Brooks et al. 2012; Gray et al. 2013).

PHPs who work with these cases, most often in conjunction with the medical board, require a formal evaluation and treatment at select centers specializing in discerning the underlying issues and providing targeted treatment. Evaluations typically include an in-depth history, collateral information, psychological evaluation/testing, and psychiatric evaluation. Polygraph has been instrumental in many case evaluations (Finlayson et al. 2015). Treatment models, dependent on the case, may be from a psychodynamic approach, cognitive-behavioral approach, or addiction-model approach and may incorporate boundary and skills training. The PHP then engages the physician in a contract and monitors the physician's recovery activities for at least 5 years. Monitoring contracts are individualized in concert with the treatment professionals and include strict maintenance of boundaries, chaperone reports, workplace monitor reports, ongoing visits with a specified therapist and/or psychiatrist, compliance with medication, and workplace restrictions. Twelve-step groups such as Sex Addicts Anonymous may be recommended. Many PHPs require quarterly polygraph testing which has proven instrumental in providing additional information not previously disclosed and can be used to protect patients and strategize treatment options (Finlayson et al. 2015).

12.14.5 Monitoring Without a Diagnosis or Treatment

In some referred cases the assessment and evaluation are not diagnostic and important questions remain unanswered. Some PHPs only monitor physicians after a potentially impairing diagnosis is established. PHPs can have different approaches to such cases. Other PHPs may opt for an extended evaluation to include random urine testing for a brief period of time. In some states, evaluators may recommend— or referents may require—a period of PHP monitoring to (a) determine a health issue should one exist, or (b) assist the physician with documenting the absence of a potentially impairing illness. PHP monitoring in such cases may vary from 6 months to 2 years with 1 year being typical. Monitoring requirements are individualized to the concerns in question. This is particularly beneficial to younger physicians who may need advocacy of well-being as part of the licensing process of the medical board at the time of initial licensure.

12.15 Controversies Regarding the PHP Model of Care Management

The success rates documented by research in the PHP-modeled professional health system of care management for SUDs are exceptional, exceeding comparable rates of success seen in the general population. Only the commercial airline pilot program has similar high rates of success. Still, even the most respected state PHPs are sometimes criticized and confronted with unexpected challenges. These challenges may include complaints from dissatisfied or disgruntled participants who believe the evaluation, treatment, and monitoring requirements to be unreasonable and onerous; question due process; disagree with the prohibition of buprenorphine for opioid dependence by some PHPS; or question the objectivity of evaluation/treatment professionals. The costs of participation as mentioned above are another source of dissatisfaction. Medical boards experience frequent turnover and, on occasion, a PHP faces unexpected scrutiny from new executive directors or board members. Meanwhile, some public citizen groups insist on public discipline or licensure revocation as they oppose the entire concept of PHP-monitored recovery. Such groups often criticize these programs' need for a confidential track, sometimes publicizing the mistaken belief that the PHPs "hide bad doctors." Consequently, PHPs must balance (a) the rights of the public which expects and deserves safe medical care only from physicians who are competent, caring, and fit for duty, and (b) the rights of physicians to confidential and effective treatment for potentially impairing illnesses, without reflexively losing their hard-earned licenses to practice.

Accordingly, PHPs must be staffed and led by knowledgeable professionals who are dedicated to the health and wellness of their colleagues struggling with potentially impairing illnesses. Their work must be transparent, consistent, intellectually honest, defensible, and acceptable to powerful secondary stakeholders, such as the medical boards, without which they could not exist. The PHPs work must abide by laws, rules, and regulations that vary from state to state. Public safety is paramount to all PHPs. The potentially impairing illnesses their licensees suffer are often misunderstood, even by medical colleagues, and are shrouded in layers of guilt, shame, stigma, and denial. PHP participants, early in the process, sometimes feel unheard or unfairly treated. These same physicians often become the biggest proponents of their PHP with time and recovery as demonstrated in the preliminary study noted above of PHP participants 5 years post-monitoring.

PHPs are acutely aware that a physician within their care who harmed a patient could spell disaster for the entire program making it unavailable for future physicians. For this reason, PHPs require excellence in evaluation, treatment, and monitoring. They are quick to intervene when problems surface. Any room for doubt is managed in the interest of public safety. Well-designed PHPs provide a buffer between the physician and the medical board. Absent the PHP, all physicians now referred to the PHP would come before their medical board as occurred in the early 1970s. In that venue due process is diligently afforded. The question, however, shifts from one of "illness and health" to one of "guilt or innocence" and the outcome is often painful. Physicians who are invited to work with their state PHP

around health issues always have the option of declining PHP services and taking their case directly to the medical board. Nevertheless, given the uncertainty of outcomes and the risk of losing one's license and livelihood, physicians may understandably perceive the PHP system as coercive even though participation is voluntary (Candilis 2016). Even the term "coercive" is reflective of the emotional experience toward the intended effect of providing a reasonable way out of a difficult situation. For such physicians, the decision to participate may seem the lesser of two evils. Moreover, shame about their socially stigmatized illness as well as the circumstances in which they find themselves becomes complicated by anger which is displaced at the PHP. Therefore, the addictionologists and psychotherapists who treat PHP-participating physicians need to be sensitive to these issues, and help them process their feelings therapeutically without adding to their sense of profound shame. If done well, the best outcome will be eventual appreciation and gratitude that is often observed as recovery progresses.

The PHP model is supported by FSMB policy on physician impairment, AMA policy "2016 Physician Health Program Act," and also provides for a process for institutions to satisfy the requirements of The Joint Commission requirement (2008). The Joint Commission requirement, separate from the disciplinary process, provides medical staff and healthcare leaders with broad education about physician health; prevention of physical, psychiatric, and emotional illnesses as well as confidential diagnosis, treatment, and rehabilitation of physicians experiencing potentially impairing conditions.

12.16 PHP Challenges and Opportunities for Growth

PHPs have identified areas in which they want to enhance their services as well as positively influence the system and critical secondary stakeholders. Some of these include, but are not limited to:

1. *Funding*—To preserve the profession, and to ensure patient safety, PHPs are necessary and best positioned to provide exemplary services. Stakeholders of the healthcare system are needed to fully share in the funding of their state PHP. PHPs provide assurance and monitoring to hospital medical staffs, are a tremendous resource to the medical boards system, provide for much quicker intervention, and reduce the risk of malpractice. PHPs must be adequately funded to provide the scope of services needed. Likewise, the FSPHP needs to work collaboratively with the FSMB, the AMA, and others to ensure its own financial viability to fulfill its mission and best meet the needs of its member states.
2. *PHP Accountability, Consistency, and Excellence*—PHPs have common objectives yet each developed within the social/political structure and legal framework of their own state. The FSPHP promotes accountability, consistency, and excellence and works to create consistencies in terms of language, definitions, and standards. FSPHP Guidelines promote this goal. The FSPHP has developed

Performance Enhancement Review (PER) Guidelines for PHPs to promote PHP reviews and enhancement of services (Federation of State Physician Health Programs 2016). FSPHP strategic plans include an effort to seek funding for a FSPHP-endorsed PER Process aimed at providing an accountable, consistent, and objective state PHP review. Pending funding, PHPs will be able to utilize the PER Guidelines to assess their programs. These Guidelines envision a comprehensive and effective review and stress the importance of a qualified objective reviewer without conflicts of interest.

3. *Increased Access to Quality Evaluation and Treatment Centers*—While it is desirable to increase qualified treatment and evaluation options that are closer to physicians' homes, an even more important concern is to have treatment and evaluation centers with experience evaluating and treating physicians who are distinctive professionals in safety-sensitive roles. The centers need to be experienced in determining physicians' fitness to return to work. Abundant clinical experience has shown that outcomes are enhanced when physicians are treated with cohorts of other physicians. Further, insurance requirements for physicians to first fail at less expensive and less intrusive treatment before issuing approval of more intensive residential or outpatient treatment put more physicians at risk of relapse with all of the potential problems that entails. Efforts to lower the costs of care and to reduce the disruption to physicians' lives associated with PHP care management must be balanced with the long-standing commitment of the PHPs to maximize the long-term recovery of physicians with SUDs.

4. *Research*—Funding is needed for additional research to verify "best practices" for the evaluation, treatment, and monitoring of physicians and others in safety sensitive positions. Existing research clearly demonstrate physicians do extremely well in the PHP care management system. Yet, PHPs do not fully understand the salience of multiple issues at play in terms of comorbid illness, length of treatment, level of care, intensity of support and monitoring, frequency of drug testing, MAT, and a number of other variables. Prioritizing research around these and other questions could enhance the care not only of physicians but of the general population.

5. *Education*—PHPs recognize the continuum that can exist between physician wellness, life-work balance, a lack of joy in work, burnout, mental illness, addiction, and suicide. One of the most important activities of a PHP is to educate the profession (primary and secondary stakeholders) including medical students, residents, practicing physicians, healthcare administrators, hospitals, other healthcare organizations, and other interested parties regarding the prevention, early identification, and treatment of addiction and other potentially impairing illnesses affecting physicians. Areas emphasized include early recognition of the potentially impaired physician and the process of obtaining help. PHPs can also address critical challenges such as preventing suicide and burnout, destigmatizing treatment for SUDs and depression, as well as prescribing practices, communication skills, and lifestyle balance. Secondary stakeholders

need to understand how best to confront or to have that compassionate, yet crucial, conversation with a colleague in difficulty and how to engage the PHP. Education should begin in medical schools and continue throughout each state to maintain a crucial level of awareness. Inadequate funding can markedly diminish this critically important need.

6. *Conflicts of Interest*—PHPs are aware of potential conflicts of interest especially around their interface with state and national evaluation and treatment facilities. PHPs must avoid (a) any financial gain from these centers, (b) any appearance of impropriety, or (c) any use of PHP power to overtly or covertly exert undue influence over objective evaluation and treatment. Evaluation and treatment center services must be independent, professional, intellectually honest, and their findings and recommendations must not be compromised by any undue influence. Therefore, PHPs must watch diligently for any evaluation and treatment center that makes excessive treatment recommendations from which it may profit, thereby creating a conflict of interest for the center. Additionally, PHPs typically provide participants with a multitude of options for both evaluation and/or treatment.

7. *PHP Case Management Decisions*—PHPs typically rely on a multidisciplinary, multimodal team of experts to provide evaluation, treatment, and long-term care management. The PHPs and their governing boards are encouraged to have qualified leadership. Knowledgeable, involved physician health committees or teams of clinicians can provide invaluable input and expertise. FSPHP Guidelines must continue to be refined and followed by PHPs. Likewise, PHPs should establish an objective process by which a program participant can be heard and their concerns fully evaluated fairly and independently.

8. *PHP Structure and Contract with State Medical Boards/State Medical Associations*—The best structure for a PHP is as an independent corporation with its own dedicated, representative Board of Directors. PHP bylaws and organizational structures that include affiliation with the state medical board or medical associations should provide sufficient governance and PHP corporate independence to avoid conflict of interests to the PHP mission, funding, and services. The PHP Board of Directors must ensure program excellence and stability through: (a) exercising its fiduciary responsibility for oversight to ensure stable, reliable, and adequate funding; (b) governing the organization to carry out its mission with duty of care and loyalty in accordance with its bylaws; (c) overseeing the performance of the leadership; (d) disclosing other business involvements and other board memberships, both for-profit and nonprofit, including charitable ones; and, (e) being familiar with AMA, FSMB, and other policies on physician health.

9. *State Medical Practice Act/State Legislation*—Not all PHPs are specifically authorized via state legislation. At other times legislation may mandate the PHP services be open for public bid creating a financial disincentive to maintain quality in order to limit expense. PHPs have repeatedly demonstrated that a confidential tract is critical to early reporting before "illness" morphs into "impairment."

While most states offer such a track, increased consistency and clarity around the practice is needed. Likewise, more consistent contracts and memoranda of understanding between state PHPs and Medical Boards are needed to improve consistency from state to state. The AMA's 2016 Physician Health Program Act offers a consistent example for reference.

12.16.1 PHP Oversight

The majority of state PHPs are independent nonprofit organizations answerable to their independent boards of directors. Some PHPs remain affiliated in some way with their medical association or medical board. They are accountable to these organizations. Most PHPs have a contract with their state medical boards and are, therefore, also under their purview. PHPs must also be attentive to the opinions of their monitored licensees. Increasingly PHPs are utilizing surveys of both primary and secondary stakeholders with the goal of improving their services and meeting the needs of all involved.

12.17 Implications for the Future Treatment of Substance Use Disorders

The PHP model sets the bar in terms of the abstinence-based care of those with SUDs and has been extended to most healthcare professionals. Other professionals such as commercial pilots (the "HIMS" program) and attorneys (Commission on Lawyer Assistance Programs [CoLAP]) use a similar model of care management.

Many believe the PHP model should be adapted to the general population. Certainly this form of "care management" has advantages in working with distinct populations, including the five million Americans on parole and probation (DuPont and Humphreys 2011; Institute for Behavior and Health, Inc. 2014). Examples include HOPE Probation for felons (Hawken and Kleiman 2009; Institute for Behavior and Health, Inc. 2015) and the 24/7 Sobriety Project for repeat DUI offenders (Kilmer et al. 2013), as well as the growing community of drug courts which have proven advantageous and cost effective.

Some individuals and treatment centers are working on establishing their own care management models and incorporating technological advances via smartphones and/or computer programs designed to track and support sobriety. To be effective, efforts must be made to educate and include the most significant members of the physician's social network (e.g., spouse/partner) and to encourage interface with employers. Similarly, the "recovery coach" concept provides hands-on oversight and extended recovery support. Some PHPs are incorporating new ideas into their work, all of which should be studied and shared in the literature.

12.18 Patient Safety

All PHPs report patient safety as their top priority. Indeed, the symbiotic professional relationship that exists between most PHPs and their medical boards is possible only when boards embrace PHP monitoring as an added layer of public protection. The once-held fear that physicians recovering from these illnesses would place patients at added risk has been disproven. The Domino study in Washington State reported no instances of patient harm in a cohort of 292 physicians monitored over 11 years (Domino et al. 2005). The value of public protection provided by the PHP model of care management is immeasurable. Clearly, patients are safer when physicians with SUDs are successfully monitored by PHP programs than when SUDs among physicians go undetected and not treated.

12.19 Malpractice Claims and Physicians Monitored with Potentially Impairing Illness

It has long been believed within the PHP community that monitored physicians and those who had been in monitoring experienced less risk of malpractice. Unpublished research appeared to support this premise. A study published by the Colorado PHP lends credence to this belief (Brooks et al. 2013). This study coordinated with the Colorado Physicians Insurance Company reviewed pre- and post-PHP malpractice risk from a cohort of 818 physicians monitored for a broad range of potentially impairing illnesses. As expected, it found that post-PHP malpractice risk was significantly lower than pre-PHP involvement. More importantly, post-PHP monitoring revealed malpractice risk rates 20% lower than a matched cohort of state physicians.

12.20 Physician Stress and Burnout

The extent of burnout in medicine is alarming, much more so than in the general population (Shanafelt et al. 2012). (Burnout is generally defined as a syndrome caused by chronic exposure to workplace stressors, resulting in mental and physical exhaustion, disengagement from patients, and a diminished sense of personal accomplishment or meaning in one's work. See also Chap. 1.) In a study of medical students from seven different universities, 50% of medical students met criteria for burnout and 10% were experiencing suicidal ideation (Dyrbye et al. 2008). Among American surgeons, a large national study surveyed 24,922 surgeons of whom 7905 responded (Shanafelt et al. 2009). Forty percent (40%) met criteria for burnout, 30% for depression, and 28% had quality of life measures one-half standard deviation below the norm. Strong predictors of burnout included subspecialty, children younger than 21, compensation based solely on billing, and a spouse who is a healthcare professional. A more recent study comparing 2011 and 2014 surveys revealed burnout rates to be higher for all specialties. Nearly a dozen specialties increased greater than 10% and the work/life balance satisfaction declined from 48.5 to 40.9%. This burnout was

more prevalent when compared to the working population, even when adjusted for age, sex, hours worked, and educational level (Shanafelt et al. 2015).

Physician burnout is a growing concern and serious problem because it is strongly associated with quality of care, medical errors, poor prescribing habits, patient compliance, patient satisfaction, and medical malpractice suits. Moreover, burnout is a risk factor for substance use disorders, behavioral problems, mental illness, and suicide.

12.21 Physician Suicide

The tragedy of physicians dying by suicide is discussed extensively in Chap. 4. With the well-known risk factors of suicide, including mental illness, addiction, lack of access to care, and continued support of others, PHPs essentially provide suicide mitigation to an inherently "at risk population." In addition, a small study by Vanderbilt's Comprehensive Assessment Program reported that among physicians receiving a fitness-for-duty evaluation subsequent suicidal behaviors were strongly associated with being found unfit to practice (86% vs. 33%), being in solo practice (71% vs. 33%), and chronic use of benzodiazepines (57% vs. 11%) (Iannelli et al. 2014).

Historically, physicians with a SUD or mental illness have feared acknowledging a problem (Carr 2008b). Physicians believe they lack the time needed to get help; and they fear the loss of confidentiality and unwanted intervention, such as hospitalization. In addition, the physicians themselves may view mental illness or addiction as a matter of personal character and resist the patient role. The medical education process can inadvertently train physicians to ignore their own healthcare needs. More importantly, physicians fear such an acknowledgement may impact their reputation, engender prejudice, or even result in medical licensure board disciplinary action. Indeed, a study of state medical boards confirmed that 37% of state medical boards believed a diagnosis of mental illness (e.g., major depression) without a complaint or evidence of functional impairment constituted sufficient grounds for reportable board disciplinary action (Hendin et al. 2007). In addition, 37% of these boards acknowledged it treated medical care differently than psychiatric care. Such an approach has a chilling effect on physicians. Fortunately, the work of the state PHPs continues to make inroads and increasing numbers of medical boards have changed their policy around this issue.

12.22 FSPHP, PHPs, and Prevention Initiatives

The FSPHP leadership recognizes the serious concerns of physician SUDs, suicide, depression, stress, and burnout as discussed above. Other areas that warrant additional attention include, but are not limited to, the unique issues faced by women in medicine, professionalism, boundary training, the aging physician, malpractice stress, as well as relationships in general and the medical marriage in particular. Along these lines, continued discussion to shift the culture of medicine's role by introducing institutional and personal solutions into the profession that encourage

physician self-care is crucial to more effectively address the mounting impediments to well-being and balance.

FSPHP identifies funding needs at both the organizational and the state level to more readily facilitate the goal of "accountability, consistency, and excellence" across state PHPs as well as its ability to forge alliances committed to studying and mitigating these serious concerns. Ultimately, FSPHP hopes to engage organized medicine at the state and national levels with the goal of increased awareness, prevention, and added emphasis on balanced lifestyles and wellness.

12.23 The House of Medicine and PHPs Today

Since the call from FSMB and the AMA for the creation of PHPs, impressive progress has been made. In 1985 the AMA passed the "Model Impaired Physician Treatment Act" (American Medical Association 1985). In June 2016 the AMA took another major step forward in passing the "Physician Health Programs Act"—an update to the 1985 Act. This Act provides uniform privacy and confidentiality; PHP immunity from civil suit and peer review protection; seeks to remove all obstacles to early referral to a PHP; prohibits discrimination against recovering physicians and other licensed healthcare professionals at all levels; mandates adequate funding and specifically authorizes state funding; and requires PHP reporting of physicians who could pose a danger to the public.

12.24 Conclusion

The PHP model of care management has proven highly effective—saving lives, families, and careers. Many recovering physicians are dedicated to effectively address these illnesses in their own patients, an added benefit to their patients and their communities. PHPs began addressing physician addiction over four decades ago. Today they assist physicians with a broad range of potentially impairing healthcare conditions with the goal of enhanced public safety through physician rehabilitation, prior to the later stages of illness and the associated, adverse disciplinary processes of times past. They promote physician recovery while protecting patients from potentially impaired physicians. The PHP model is a success story of communication and collaboration within organized medicine that has been of incalculable benefit to all concerned, especially to patients. PHPs skillfully balance confidentiality versus public protection, illness versus impairment, and treatment of illness versus board sanctions. Physicians who would have been lost to their communities and left alone with an active, potentially impairing and often fatal illness have been restored to health and service. Public and patient safety has been enhanced. PHPs are uniquely and expertly positioned to combat burnout, substance use disorders, and mental illness and are well-positioned to improve the health of physicians and preserve the profession. Adequately funded and supported, PHPs stand poised to contribute substantially to the challenges still faced by the house of

medicine. In addition, this unique system of care management provides a template for improving SUD outcomes in all patients with the potential for making recovery, not relapse, the expected outcome of treatment (DuPont et al. 2015; DuPont 2016; McLellan 2016).

The PHP model of care management has established a new and far more hopeful standard for making sustained recovery the expected outcome of the treatment of substance use disorders. This distinctive model of care has inspired a promising "new paradigm" for the management of SUDs that has broad relevance to the treatment of these often intractable illnesses in the evolving healthcare system (DuPont and Humphreys 2011; Institute for Behavior and Health, Inc. 2014). Dramatic changes are occurring in healthcare as it aspires to move away from isolated brief episodes of care to create an integrated full continuum of care. This continuum spans from SUD prevention through intervention, SUD treatment, and long-term monitoring to prevent and to identify relapse to substance use (U.S. Department of Health and Human Services (HHS), Office of the Surgeon General 2016; DuPont et al. 2015). This hopeful new development of early intervention, treatment, long-term monitoring, and contingency management with accountability has been inspired by the PHP experience in the provision of assistance and guidance over the past four decades.

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Organization-Level Interventions to Promote Physician Health and Well-Being: From Taking Care of Physicians to Giving Care to Patients

13

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Contents

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Abstract

Physician burnout is not simply a problem of problematic physicians. It is a worldwide, workplace-related phenomenon, shaped by systemic and individual factors. To address modifiable risk factors and promote physician engagement, satisfaction, and well-being, both individual and organizational interventions are needed. Enhancing individual resiliency is necessary but not sufficient, and it can inadvertently shift sole responsibility onto physicians. Conversely, when organizations visibly acknowledge and address workplace factors, they legitimize the burden on physicians and share responsibility for mitigating those factors. Organizational interventions target six major work-related factors: (1) work overload relative to the time available, (2) insufficient autonomy with loss of both discretionary time and input into decisions affecting patient care, (3) a non-supportive interpersonal work environment, (4) incentives tied to productivity, based on increased fiscal and performance monitoring, with diminishing respect and appreciation, (5) perceived organizational injustice, and (6) misaligned values between physicians and their organizations. Organizational culture and individual physicians differ across healthcare systems and clinical units. Thus, while burnout is global, interventions are local. Participatory organizational interventions are effective and address local conditions. They are designed, customized, and implemented by physicians based on the work factors they identify as being most important to the functioning of their clinical units and well-being. Leaders have good reason to support organizational interventions, because engaged and healthy physicians will support their triple aim of improving the healthcare of populations, enhancing their patients' experience of care, and reducing costs. The fourth aim of improving the experience of providing care calls upon organizations to embrace physician health and well-being as a core value and goal.

13.1   Introduction

The sheer number of physicians affected by burnout, 50% in the USA (Shanafelt et al. 2015a), argues against it being a simple problem of problematic physicians. Burnout does not occur in a vacuum. Rather, it results from chronic exposure to stressors embedded in the workplace (Maslach et al. 2001). While these stressors certainly interact with the individual characteristics of vulnerable physicians, they can also overwhelm the personal resources of otherwise healthy and resilient physicians. Accordingly, interventions to prevent burnout and promote the well-being of physicians necessarily combine two major strategies. The first involves organizational interventions that target modifiable workplace stressors associated with burnout. The second helps physicians learn new self-care strategies and develop personal resiliency to manage the unavoidable stress in their lives.

Overall, physician burnout is a workplace-related phenomenon that occurs in a sociocultural context, shaped by a complex interplay of systemic and individual factors (see Fig. 13.1). The organizational and individual factors are amenable to interventions which can occur in the workplace. Physicians and organizations share responsibility
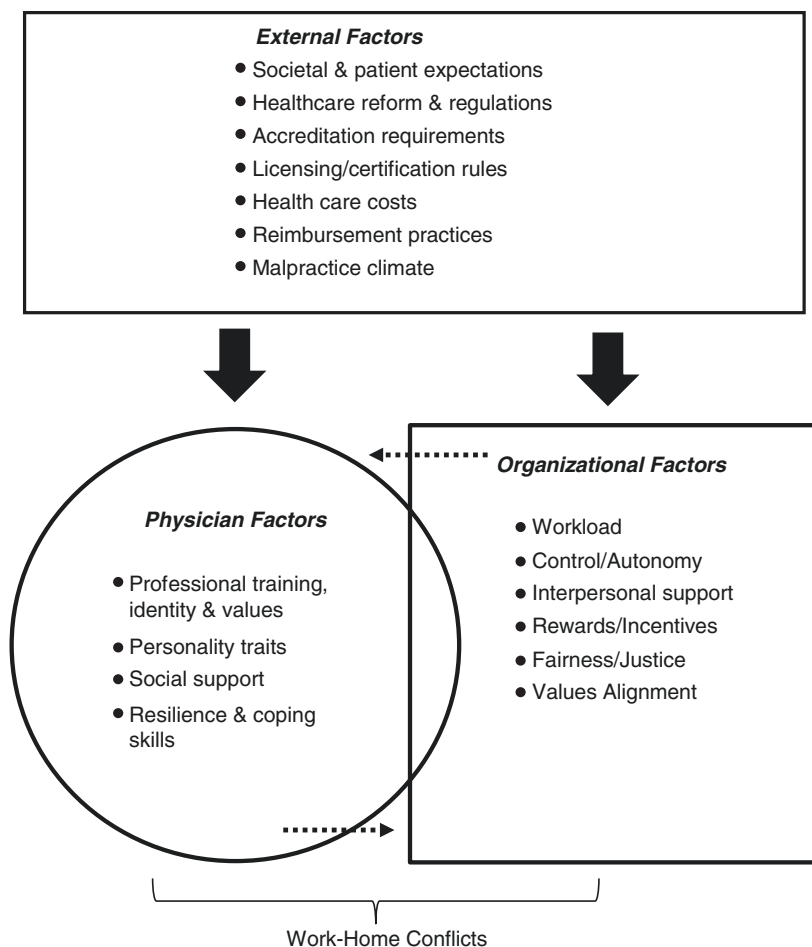
Fig. 13.1 Factors associated with physician burnout. Physician burnout results from individual and systemic factors. Systemic factors include the immediate organizational/workplace environment as well as factors external to the organization (DeChant and Shannon 2016). Together, organizational factors and external factors form the sociocultural context for burnout (represented by *rectangular shapes*). External factors exert pressure on both the organizational workplace and individual physicians (*large downward arrows*). Physicians are represented by a *circle*, a metaphor for fitting a round peg into a *square*, organizational hole. However, the closer the alignment and fit between physicians and their organizational workplaces (represented by *dotted arrows*), the better able they can respond to challenges from systemic factors external to the organization. Work-home conflicts lie at the interface between workplace factors (time demands and resources) and physician factors (personal life, social support)

for these interventions to improve and protect their well-being. By collaborating together, they are most likely to achieve their common goals of providing high-quality and patient-friendly care in a cost-effective manner (Swensen et al. 2016). External factors such as healthcare reform and reimbursement policies are shaped by societal and political forces. They exert considerable pressure on individuals and their organizations. Unfortunately, these forces persist despite workplace interventions.

This article will review (1) workplace factors associated with physician burnout, (2) the effectiveness of organization-level interventions, (3) the business case for organizational interventions, and (4) suggestions for implementing them. In addition to *burnout*, organizational factors affecting physician *satisfaction*, *engagement*, and *well-being* are also included in this review, because these are desired outcomes for organizational interventions. (See Appendix for descriptions of these terms.)

13.2 Workplace Factors Associated with Physician Burnout

Knowledge of work-related risk factors for burnout helps to identify targets for organizational interventions. Most studies of factors associated with burnout are cross-sectional in their design, so evidence for causation is limited. For example, perceived time pressure to accomplish one's work may contribute to burnout, but burnout may contribute to feeling pressured and overwhelmed at work as well. Nevertheless, with that caveat in mind and for the purposes of this discussion, it is simpler to write about, and reasonable to infer, that the workplace factors discussed below are risk factors if not causes for physician burnout.

13.2.1 Major Workplace-Related Risk Factors

Workplace-related risk factors have been summarized across multiple studies and reviews, some specific to physician trainees (Prins et al. 2007; Ishak et al. 2009; Dyrbye and Shanafelt 2016; Raj 2016), practicing physicians (Lee et al. 2013; Amoafo et al. 2015), and various specialties (Arora et al. 2013a, b; Kumar 2011; Hlubocky et al. 2016; Oskrochi et al. 2016; Pulcrano et al. 2016). Medical students face their own training-related environmental stressors (Dyrbye and Shanafelt 2016) indicating that postgraduate physician burnout is a developmental process with distal as well as proximal factors. Studies also have focused on different types of practice environments (Heponiemi et al. 2011), such as academic settings (Gabbe et al. 2002; Johns and Ossoff 2005), ambulatory care clinics, inpatient units, and rural or urban regions. Nevertheless, many factors are common across career stage, specialty, and setting. Six major categories of workplace-related drivers of burnout are described below (Maslach et al. 2001; Studer 2015).

1. ***Work overload*** for physicians can result from the actual number of hours or shifts worked (Amoafo et al. 2015; Pulcrano et al. 2016) and from *perceived* job demands. The latter includes time pressure and pace of work (Babbott et al. 2014; Friedberg et al. 2013; Linzer et al. 2009), chaotic work conditions and workflow inefficiency (Linzer et al. 2009), administrative and clerical burden (Woolhandler and Himmelstein 2014), and user-unfriendly electronic health record (EHR) software (Babbott et al. 2014; Friedberg et al. 2013; Shanafelt et al. 2016a). Work overload also contributes to work-home conflicts, a prominent contributor to physician burnout (Bakker et al. 2011). For example, Linzer

et al. (2001) reported that the effect of work hours on burnout was mediated by work-home interference in both the USA and the Netherlands. Likewise, Keeton et al. (2007) found that satisfaction with work-life balance was related to total weekly hours worked, total weekly hours on call, and control over schedule and hours worked. Other studies suggest that perceived workload is more important than actual workload (Shirom et al. 2010; Eckleberry-Hunt et al. 2016).

2. *Lack of autonomy or control* plays an important role in physician burnout (Lee et al. 2013), satisfaction (Heponiemi et al. 2011; Friedberg et al. 2013; Scheurer et al., 2009), and well-being (Raj 2016). Autonomy involves input into decision-making processes including administrative decisions affecting patient care, one's schedule (Keeton et al. 2007), and the amount of time spent on preferred and meaningful activities. One study found that physicians who spent at least 20% of their time doing work activities that were most meaningful to them had lower burnout rates (Shanafelt et al. 2009).

3. *Insufficient rewards* or ineffective incentives can be divided into financial and nonfinancial. Nonfinancial rewards can be further divided into social and intrinsic rewards (Maslach et al. 2001). Many studies confirm that there is a relationship between physicians' income and their levels of burnout or job satisfaction (Pulcrano et al. 2016; Scheurer et al. 2009). Anticipated debt among trainees is also associated with burnout (Prins et al. 2007). Income stability and fairness in compensation are also important factors (Friedberg et al. 2013). However, in certain situations or when income exceeds a certain monetary level, financial incentives can lose effectiveness, while intrinsic rewards assume more value (Judson et al. 2015). This is especially true when incentives based on seeing more patients conflict with the intrinsic motivation of physicians to provide high-quality care. In terms of nonfinancial rewards, opportunities for professional development and learning new skills are important (Stark 2014). A critical component of job satisfaction for physicians are the social rewards of feeling valued and respected by the organization for their expertise and contributions in improving the lives of patients, which costs the organization very little. For example, the two most important factors to feeling engaged at work, endorsed by 1666 US physicians, were (1) "Respect for my competency and skills" and (2) "Feeling that my opinions and ideas are valued" (Stark 2014). Physicians derive meaning, joy, and a sense of accomplishment from using their knowledge, skills, and expertise caring for patients (Sinsky et al. 2013).

4. *Breakdown of community* or lack of workplace social support refers to the quality of interpersonal relationships at work, including those with leadership, supervisors, physician colleagues, other clinicians, and support staff (Prins et al. 2007; Friedberg and Chen 2013; Scheurer et al. 2009; Shanafelt et al. 2015b). While physicians value autonomy and independence, feeling isolated and having to do everything with no help contributes to burnout. A supportive interpersonal work environment is based on respect, trust, confidentiality, transparency, effective communication, collaborative teamwork, and common goals. Unfortunately, time pressures and dependence on expedient electronic communications reduce opportunities for face-to-face and "curbside" building of professional

relationships. Workplace support is crucial to prevent burnout associated with exposure to workplace violence and traumatic adverse events (Zafar et al. 2016). In a study of Egyptian physicians, 91.6% and 10.5% admitted being exposed to verbal and physical work-related violence, respectively, which was significantly related to burnout (Abdo et al. 2015).

5. *Absence of fairness* is also known as a lack of organizational justice, of which four forms are described (MacLeod 2015). *Procedural* justice refers to how decisions are made in the organization and whether input is solicited from those people most affected. Without this, physicians feel disrespected and experience a lack of control. *Informational* justice refers to having access to all the available data needed to inform decision-making. *Distributive* justice refers to the distribution of resources, including income and other rewards, in a transparently equitable manner. *Interpersonal* justice refers to an interpersonal work environment characterized by respect and collaboration. Organizational justice varies across practice settings. A study of Finnish physicians, for example, found higher levels of organizational justice for those working in the private vs. public sector, and it mediated physician well-being in the private sector (Heponiemi et al. 2011).

6. *Conflicting values* can be contrasted with the goal of *aligning* values between physicians and their organizations. In one study of 449 US physicians, only 14.2% reported a strong alignment with leadership values, which was significantly correlated with burnout and dissatisfaction (Linzer et al. 2009). As professionals, physicians are bound to a code of ethics, including, "A physician shall, while caring for a patient, regard responsibility to the patient as paramount" (Brotherton et al. 2016). Medical ethics also compel physicians to provide competent medical care. Thus, physicians can feel caught in the middle, when they perceive organizations as more interested in the bottom line and *quantity of productivity* than in the *quality of care* provided (Miller 2016). To the extent this holds true for an organization, the risk for burnout increases. When physicians violate their core professional values, because of organizational restrictions, they are likely to feel distress (Campbell et al. 2016). Similarly, they feel burned out and dissatisfied when they perceive the organization to have a low emphasis on quality (Linzer et al. 2009). Studer (2015) argues that the most powerful driver of burnout is the perception by physicians that systemic factors interfere with their ability to provide the best possible patient care. Support comes from a Rand study concluding that physician dissatisfaction is associated with perceived obstacles to providing high quality care (Friedberg et al. 2013).

In a variation of these categories, Shanafelt and Noseworthy (2017) elaborated seven drivers of burnout or engagement: (1) workload and job demands, (2) efficiency and resources to mitigate workload and demands, (3) control and flexibility, (4) meaning in work, an intrinsic reward and motivator, (5) social support and community at work, (6) organizational culture and values, including organizational justice, and (7) work-life integration. In their conceptualization, each of these dimensions is shaped by individual, clinical work unit, organizational, and national factors.

13.2.2 Models of Work-Related Factors and Burnout

Given the complexity and overlap among workplace factors, several models of burnout have been proposed to understand their relationships to one another. The three models described below are not exhaustive. What they have in common is a mismatch between what physicians expect from the organization to do their work well and what the organization is doing to facilitate their work (Fig. 13.2). The first two models start with job demands such as clinical workload, time pressure, team dysfunction, and excessive administrative tasks. (1) The demand/control model (Hernandez-Gaytan et al. 2013; Karasek et al. 1981), later extended as the demand/control/support model (Johnson and Hall 1988), emphasizes the importance of job control and coworker support to mitigate job demands. (2) The job demand/resources model (Bakker et al. 2011; Lee et al. 2010) accounts for resources in addition to job autonomy and supportive workplace relationships, such as individual resiliency skills and social support at home. It hypothesizes that burnout results from excessive job demands which overpower both work and personal resources needed to do the job. (3) The effort/reward imbalance model (Siegrist and Li 2016) posits that burnout occurs when the effort expended at work exceeds the financial and nonfinancial rewards received in turn.

Risk Factors
Work Demands
Effort

Protective Factors
Control (Autonomy)
Resources
Rewards

Fig. 13.2 Models of burnout. Three common models of burnout resulting from a mismatch or imbalance between risk and protective organizational factors. The (1) job demands/control model (Hernandez-Gaytan et al. 2013; Karasek et al. 1981) and (2) job demands/resources model (Bakker et al. 2011; Lee et al. 2010) posit that burnout occurs when job demands outweigh (1) work-related autonomy and (2) the resources to do the job well, respectively. The (3) effort/reward imbalance model (Siegrist and Li 2016) posits that burnout results when the effort required and expended to do the job outweighs the financial and nonfinancial rewards

13.3   Organization-Level Interventions

Organization-level interventions can focus on patient care teams, divisions and departments, or the larger organizational system. Interventions have common elements, but they are also specific to different specialties, workplace settings (e.g., inpatient vs. outpatient), and the culture of various organizations that employ or partner with physicians. Accordingly, one size does not fit all. Burnout may be global across cultures, but interventions are local.

An organization can support physician health and well-being in two major ways.

The traditional approach to supporting physician health and well-being has been to provide access to health education and programs, health facilities, training in stress and time management, and approaches to enhance resiliency. Providing such resources is necessary but rarely sufficient to address burnout, because it does not address the organizational factors that contribute to burnout. Moreover, focusing exclusively on the individual physician will likely be met with cynicism, distrust, and disengagement, because the organization will appear disinterested in the workplace drivers of burnout. Organizations willing to acknowledge and accept responsibility for their own contributions to burnout will also legitimize the problem, thereby reducing the secrecy and self-blame that affected physicians frequently feel.

Second, and more effective, an organization can work collaboratively with physicians to improve their work environment, make the best use of their time, solicit their input into decision-making, and create a culture of collegiality, fairness, teamwork, and respect. Organizational interventions are thought to produce longer-lasting change than individual interventions alone because they address systemic factors and the etiology of burnout, i.e., chronic exposure to work-related stress.

Interventions may be conceived as primary, secondary, or tertiary. Primary interventions are proactive and aim to prevent burnout in the first place. Primary interventions are directed at those 50% of US physicians who report few or no symptoms or burnout (Shanafelt et al. 2015a). Such physicians may be coping well, but should still be asked about their work-related stressors and what would help them feel more engaged at work. Organizational endorsement of physician well-being as a core value to improve the quality of patient care is an ideal example of a primary intervention. Primary interventions are more enduring and system-wide, involve relationship building between physicians and their organizations (Kreindler et al. 2014), and provide the basis for other interventions. Secondary interventions address low-to-moderate levels of burnout. They are more iterative and evolve over time to improve workflow inefficiencies and relationships in a constantly changing healthcare environment. They target unit-specific factors that physicians have identified as most important to them. Tertiary interventions help physicians and trainees who have severe burnout or burnout that is complicated by depression, trauma, and substance use disorders, and who may present as disruptive or impaired (Brooks et al. 2011; Mata et al. 2015). Tertiary interventions focus on individuals, and organizations must have confidential structures and processes for identifying, treating, and monitoring those affected (Baker and Sen 2016). The focus of this section is on primary/secondary interventions.

13.3.1 A Review of Reviews

The evidence for organization-level interventions is encouraging. In the most comprehensive review and meta-analysis to date, West and colleagues (2016) examined 20 organization-level interventions, including 17 cohort studies and 3 randomized controlled trials. Panagioti et al. (2017) reviewed 19 studies, including 8 organization-directed interventions. Both reviews concluded that organizational interventions were more effective than individual ones when the outcome variable was overall burnout. West et al. also noted that no one intervention was known to be better than any others.

For medical educators, a few reviews focus only on medical students and/or physician trainees (Williams et al. 2015; Wasson et al. 2016). Other reviews either were not directed specifically at physicians (Awa et al. 2010; Ruotsalainen et al. 2014; Dreison et al. 2016) or did not include organizational interventions (Regehr et al. 2014; Murray et al. 2016). They are mentioned here because (1) physicians work in teams with other healthcare professionals (2) organizational interventions directed at other healthcare professionals may potentially be adapted to physicians, and (3) individual interventions can be combined with organizational interventions.

Shanafelt and Noseworthy (2017) offered these general strategies for targeted organizational interventions:

- Cultivate community at work
- Use rewards and incentives wisely
- Promote flexibility and work-life integration
- Align values and strengthen culture
- Provide resources to promote resilience and self-care

This remainder of this section is organized according to the six major workplace factors described above that contribute to physician burnout: workload, autonomy, rewards, interpersonal workplace support, organizational justice, and alignment of values.

13.3.2 Interventions to Address Workload

Workload-targeted interventions can address objective factors such as work schedules (the number of duty hours or shifts worked) or perceived work overload due to workflow inefficiencies and time pressures.

Work Schedules: Two randomized interventions in US academic centers investigated the effects of alternative hospital work schedules with positive effects on reducing burnout. One compared a 2- versus 4-week inpatient attending physician rotation on burnout and found that the 2-week rotation resulted in less burnout, perceived stress, and better job control (Lucas et al. 2012). The second study of attending physicians and residents compared alternative half-month rotations in

intensive care units: working a continuous schedule of every day for a half month versus working an interrupted schedule of 5 consecutive days with weekend cross-coverage. When working the interrupted schedule, physicians had lower burnout, job distress, and work-home imbalance than working the continuous schedule (Ali et al. 2011).

Duty Hour Reform: The effectiveness of US duty hour reform (DHR) on patient care, resident well-being, and resident education continues to be debated due to conflicting evidence. DHR for US residents exemplifies a widespread, national organizational intervention, mandated by the Accreditation Council for Graduate Medical Education (ACGME) (Rosenbaum and Lamas 2012). Responding initially to a well-publicized patient death attributed to an error by exhausted residents, DHR was designed to improve patient safety and decrease medical errors, as well as to mitigate resident fatigue, promote their sleep, and enhance their well-being and education. In 2003, residents were limited to an 80-h work week. In 2011, additional reform mandated no more than 16-h and 24-h work periods for interns and second-year residents, respectively, and at least 1 day off per week averaged over a 4-week period (Greenberg and Borus 2016; Mansukhani et al. 2012)[1]. Consequently, individual graduate medical education programs implemented their own policies and strategies to be in compliance. In the USA, these changes resulted in estimated costs between $1.1 and $1.6 billion per year to provide coverage for hours previously worked by residents in excess of DHR limits (Law et al. 2014). Similar duty hour restrictions were mandated in Europe (European Working Time Directive) and Canada.

A large number of reviews of DHR have been published (Greenberg and Borus 2016; Mansukhani et al. 2012; Law et al. 2014; Reed et al. 2010; Moonesinghe et al. 2011; Philibert et al. 2013; Bolster and Rourke 2015; Lin et al. 2016), including some that are specialty-specific (Ahmed et al. 2014; Leafloor et al. 2015; Bina et al. 2016) and others that include European countries and/or Canada as well as New Zealand, Australia, and Hong Kong (Law et al. 2014; Moonesinghe et al. 2011; Ahmed et al. 2014; Bina et al. 2016). As one reviewer of 83 studies noted, "It is not possible to make an unqualified statement that patient care has been improved by the implementation of the duty-hour limits." (Philibert et al. 2013). Another review of 27 studies which measured patient care, resident wellness, and/or resident education as outcomes of DHR found favorable effects in only 40%, 24%, and 14% of studies, respectively (Bolster and Rourke 2015). Similar reviews focusing on surgery (Ahmed et al. 2014) and neurosurgery (Bina et al. 2016) also point to a low degree of evidence that DHR has benefited training. Flexibility in duty hours by giving surgical residents discretion (autonomy) may be a better approach than mandating the same requirements across all specialties. For example, Philbert et al. (2013) concluded in their review that duty hour limits had positive effects in medical specialties on patient safety and quality of care, but negative effects in surgical specialties.

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[1] As this book was going to press, ACGME announced that it would remove the 16-h limit for interns and extend it to 24 h.

Unfortunately, simply reducing hours has not solved the problems for which it was designed, and resident burnout remains a significant problem. Reducing hours alone without addressing other burnout drivers such as workplace inefficiencies, excessive workload, and insufficient support may explain in part the persistent problem of resident burnout. Added to these is an unintended consequence of DHR: some residents feel compelled to lie about their duty hour reporting in order to fulfill their professional obligations to patients. Noncompliance with accurately reporting duty hours ranges across studies from 13 to 90% (Law et al. 2014). The result is distress due to conflicting values. Consequently, neither residents nor faculty are enthusiastic about recent changes (Greenberg and Borus 2016). In contrast to these negative results, West and colleagues (2016) reviewed six controlled studies of DHR and found a significant positive effect on reducing overall burnout.

Are there lessons to be gained from duty hour reform that can inform organizational interventions in general? *First*, a single tragedy such as a patient death or a physician suicide can mobilize and provide windows of opportunity for organizational changes. *Second*, top-down, mandatory regulations for how organizations must structure working conditions may not allow for adequate flexibility to adapt interventions to local conditions, different specialties, and variation across rotations during residency training. *Third*, while moderately strong evidence supported the number of duty hours as a risk factor for resident sleep deprivation and patient safety, controlled trials of duty hour reductions and their optimal implementation were virtually nonexistent prior to duty hour reform (Rosenbaum and Lamas 2012). Certainly, conducting and replicating controlled trials are important before generalizing interventions across sites nationally.

Fourth, leaders and organizations charged with designing and implementing interventions must remain cognizant of the complexity of systems, where well-intended changes in one factor (such as duty hour reduction) may unmask other untoward consequences, such as mortality due to interruptions in continuity of care as physicians "handoff" their patients at shift's end (Denson et al. 2015). Duty hour limits also compress work into fewer hours (Philibert et al. 2013). Increasing time pressure without addressing the autonomy and flexibility to control one's work schedule leads to burnout. Moreover, fewer work hours do not necessarily translate into more time sleeping (Sen et al. 2013), unless physicians utilize the opportunity for sleep in the face of competing off-duty priorities. *Fifth*, mandatory interventions can be costly monetarily and in terms of unintended consequences. *Lastly*, interventions may take up to 4 years before positive outcomes are measurable as in a study by Vadera et al. (2015) regarding the effects of duty hour reform on medical error reduction.

13.3.3 Interventions to Address Autonomy

Participatory organizational interventions empower physicians to address their own workplace concerns, which likely increases their autonomy. For example, a randomized controlled trial in oncology wards involved physicians, nurses, and radiotherapy assistants who worked together in teams. Interventions were

participatory, meaning that teams discussed their sources of job stress together with team counselors, who then helped them to design, implement, evaluate, and reformulate action plans targeted at their collective stressors as a team. The program consisted of 6 monthly sessions each lasting 3 h and showed a decrease in burnout subscales at 6 and 12 months (Le Blanc et al. 2007). Although the intervention ostensibly addressed team collaboration and functioning, measures of job control and workload, as well as social support among teams, improved as burnout improved. Organizations can also support flexibility in scheduling work hours; for example, at the beginning and end of the day to enable physician-parents to drop off their children or pick them up from school or daycare.

13.3.4 Interventions Using Rewards

One intervention being used successfully at Stanford University is the "time bank." Physicians often engage in activities not rewarded, such as covering shifts for other physicians, serving on committees, and mentoring others. With the time bank, pre-designated activities are rewarded with credits, which can be used to pay for time-saving services. These services could be home-delivered gourmet meals, housekeeping or yard work, shopping, etc. The time bank directly compensates services that will free physicians' time, instead of giving them money directly.

13.3.5 Interventions to Improve the Interpersonal Work Environment

The team-based intervention which increased autonomy (described above) also improved social support (Le Blanc et al. 2007). Another study randomly assigned physicians working in primary care clinics to an intervention versus control condition (Linzer et al. 2015). The intervention groups could choose among several interventions that best suited their needs, and some chose to work on communication within their multidisciplinary teams. Physicians participating in communication interventions were three times as likely to show improvement in satisfaction than physicians in the control group.

13.3.6 Interventions to Improve Organizational Justice

Interventions that target the interpersonal work environment with leaders and supervisors will likely improve interpersonal justice. Interventions that improve autonomy by providing input into decisions affecting patient care should improve procedural justice. Making overall justice an organizational value is one interventional strategy, but requires that justice is actionable (i.e., "walk" in addition to "talk"). Organizational interventions that specifically target justice or measure it as an outcome in healthcare are virtually nonexistent at this time. In the manufacturing field, however, a randomized controlled trial of leadership training involved a single

90-min session of lecture, group discussion, and role play activities. It found an increase in interpersonal justice among employees with the lowest baseline scores (Nakamura et al. 2016). Leadership training and collaborating with executive leaders are deemed important for reducing physician burnout as well (Swensen et al. 2016; Shanafelt and Noseworthy 2017).

13.3.7 Interventions to Align Values

Many organizations make their mission and values explicit, which is a good place to start for alignment. The values at the University of Michigan Health System (recently renamed Michigan Medicine) are: (1) Caring for patients as its first priority, (2) Teamwork to care for patients, (3) Integrity with patients and each other (including trust and adhering to the highest ethical standards), (4) Innovation (research into new solutions to improve the problems of patients and society), and (5) Excellence in patient care. These are strong, admirable values which embody quality patient care as a common denominator. Moreover, teamwork and integrity can be directly linked to the interpersonal work environment and organizational justice, which are important for reducing burnout and improving job satisfaction.

When organizations are developing their values, they should be encouraged to include the health and well-being of healthcare professionals. The business case for doing so is reviewed below. In short, valuing and supporting professional health and well-being is essential for achieving the mission and goals of the organization. How this is written into organizational values will depend on individual organizations, but one example is: "Caring for patients is our first priority. Caring about the health and well-being of our clinicians is essential for achieving this priority." After agreeing on the value of physicians' health and well-being, leadership accepts responsibility for how their decisions will impact on this value. Then discussion can focus on other targeted interventions.

Where value alignment sometimes goes awry is when finances are a "hidden" mission or value of an organization. (Hidden in the sense that they are not overtly stated in the mission and values statement of the organization, but not too hidden because visible actions of leadership are financially driven.) This is a setup for accusing the organization of being more interested in money than its care of patients. The triple aim of healthcare includes reducing costs (Fig. 13.3). Importantly, providing cost-effective healthcare is not the same as improving the bottom the line of an organization, so it does not have to be hidden. Physicians obviously understand and accept that no medical practice is sustainable without revenue exceeding expense. So if their organization fails, everyone does, but the aim of reducing costs needs to flexible. There are times, for example, when (1) providing the best possible care is not cost-effective, (2) it conflicts with organization-endorsed practice guidelines, or (3) physicians have to spend excessive time obtaining authorization for evidence-based treatment. In these circumstances, physicians believe by virtue of their extended training, professional expertise, and direct knowledge of the patient that they are most qualified to make the best diagnostic and treatment decisions. The physician's autonomy is jeopardized in these
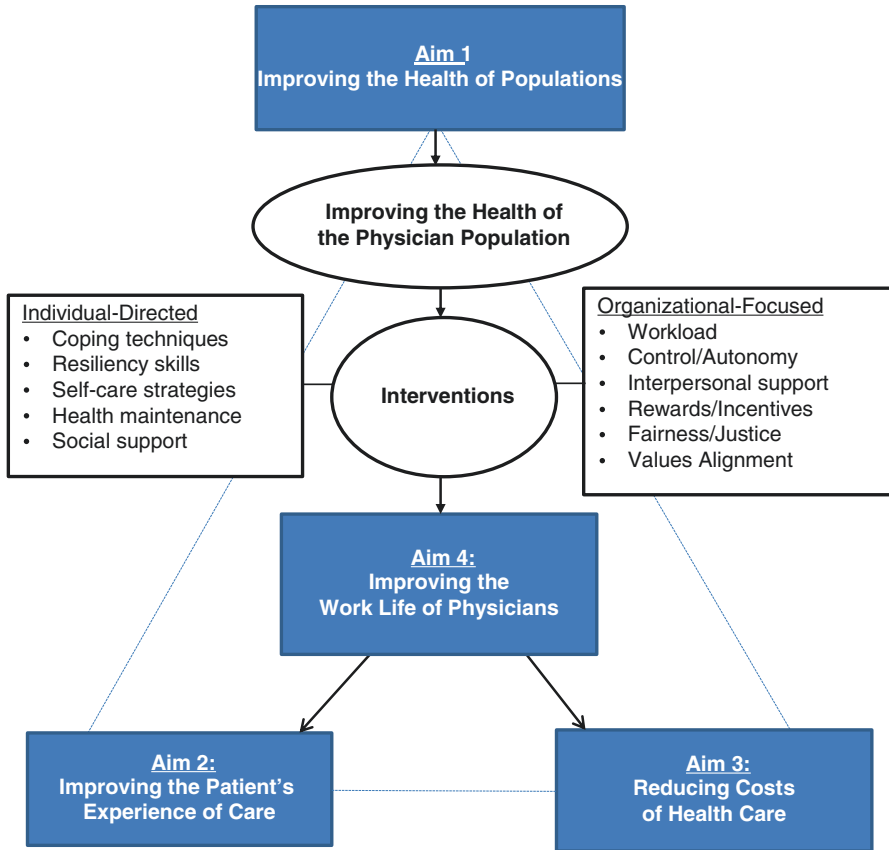
Fig. 13.3 From triple aim to quadruple aim in healthcare (Bodenheimer and Sinsky 2014). The quadruple aim of healthcare as described by Bodenheimer and Sinsky (2014) consists of the original triple aim of Berwick—improving the health of populations, improving the patient's experience of care, and reducing costs—and the fourth aim of improving *the experience of providing care*, measured by physician satisfaction, well-being, and engagement. As presented here, the population targeted in Aim 1 comprises physicians. Interventions can be directed at individual physicians or focused on the organization. The business case for organizational interventions is that improving the health, well-being, and work life of physicians will in turn improve the patient's experience of care (Aim 2) and reduce organizational costs (Aim 3). Although the figure focuses on physicians, the experience of providing care applies to all healthcare professionals

circumstances, and the way in which organizations acknowledge and address these conflicts in values will affect physician satisfaction.

13.4   The Business Case for Organizations to Intervene

The bottom line is that engaged and satisfied physicians provide higher quality and safer patient care at less expense to the organization than those with burnout (Scheepers et al. 2015).

13.4.1 Patient Satisfaction and Safe, High Quality Care

At a time when reimbursement in the USA increasingly depends on measures of patient satisfaction and quality of care (i.e., value-based reimbursement), the relationship between burnout and these patient outcomes is crucial for organizational revenues. Therefore, it is organizationally relevant that physician burnout and dissatisfaction are associated with lower scores for satisfaction among patients (Scheepers et al. 2015; Halbesleben and Rathert 2008; Anagnostopoulos et al. 2012). In addition, physician burnout was associated with longer recovery times as estimated by their patients following hospital discharge (Halbesleben and Rathert 2008).

Physicians with burnout or job dissatisfaction are also more likely than other physicians to perceive themselves as (1) providing lower quality of care (Klein et al. 2010; DeVoe et al. 2002) and (2) making more medical errors (West et al. 2006; Williams et al. 2007; Kang et al. 2013). Depression is also associated with a perception of increased medical errors (West et al. 2006; Shanafelt et al. 2010). These studies of *self-reported or perceived errors* are supported by two studies which demonstrated increased rates of *chart-verified errors* in house officers endorsing depression or psychological distress (Fahrenkopf et al. 2008; Houston and Allt 1997).

Other studies also found relationships between physician well-being and objective measures of care quality. For example, Linzer et al. (2009) found that alignment between physicians' and leadership values predicted both higher care quality and lower error rates for diabetic patients as well as less burnout and dissatisfaction. In two studies reviewed by Scheepers et al. (2015) job satisfaction among physicians was associated with objective measures of patient adherence to treatment and appropriate prescribing practices. Finally, a study on physician well-being showed that physicians' own personal, preventive health practices were related to those practiced by their patients (Frank et al. 2013). This study indicates that physicians who take care of their own health more successfully influence their patients to take care of theirs.

In summary, physician satisfaction and well-being are related to patient satisfaction, higher quality of care, fewer medical errors, and patients' own personal health practices.

13.4.2 Lower Organizational Costs

Organizational costs due to burnout result from (1) decreased physician productivity (Dewa et al. 2014a) due to diminished work ability and sick leave, (2) replacement costs due to physician attrition or turnover, and (3) costs due to medical errors and patient dissatisfaction, including malpractice lawsuits, as well as disruptive behaviors (see also Chap. 3).

1. *Decreased physician productivity*. A systematic review in 2014 found that burnout was associated with self-reported lower ability to work in one study and increased sick leave in one of two studies (Dewa et al. 2014a). Further evidence comes from a 2-year longitudinal study of Finnish physicians showing that short-term sick leave was predicted by feeling overloaded by work in men, and

low job control in all physicians, while long-term sick leave was related to more on-call days in men, and to both low job control and teamwork problems in all physicians (Kivimaki et al. 2001).

2. ***Physician turnover costs***. When physicians leave their jobs, organizations have replacement costs of recruitment, relocation, hiring, and training new physicians. Organizations also lose revenue until a new physician can generate optimal revenue from seeing a full complement of patients. Misra-Hebert (2004) cited studies published in 1992 and 1998 that estimated lost revenues from a departing physician ranged from $400,000 to $2,000,000, likely depending on factors such as specialty, experience, and time to recruit. In 1999, Buchbinder et al. estimated replacement costs due to primary care physician turnover in the USA to range from $236,000 for general and family practitioners to $245,128 and $265,000 for general internists and pediatricians, respectively. In 2004, Waldman et al. (2004) found in a US academic setting an annual turnover rate of 9% and estimated that the cost to hire and train one new physician as well as lost productivity during that process was between $154,333 and $185,254. However, they suggested that recruiting a physician for a senior position could easily exceed $500,000. In 2005 dollars, Schloss et al. (2009) calculated expenses by specialty in another US academic setting, based on an average annual turnover rate of 6.4%. They reported that generalists cost $115,544 to replace, medical specialists $286,503, and surgical specialists $587,125. Dewa et al. (2014b) focused on national costs of physician burnout in Canada using data from 2007 to 2008, which they estimated at $213.1 million due to early retirement and $27.9 million due to reduced clinical hours.

In summary, replacement costs vary widely depending on the circumstances, but organizations make considerable investments in hiring new physicians. Therefore, the money spent on interventions to increase physician retention must be weighed against the costs of attrition due to burnout and dissatisfaction.

Most surveys of physician turnover ask physicians about their intention to leave practice or medicine altogether. Some longitudinal studies demonstrate that actual turnover or reduction in hours is predicted by baseline levels of physician dissatisfaction and intention to leave (Hann et al. 2011; Buchbinder et al. 2001; Shanafelt et al. 2016b). The reasons physicians give for intending to leave practice include burnout, job dissatisfaction, or both (Misra-Hebert et al. 2004; Buchbinder et al. 1999; Lindfors et al. 2009). Other reasons reflect the six known organizational risk factors for burnout as mentioned above:

(a) *Excessive workload*, chaotic workflow pace (Linzer et al. 2009), or time pressure in relation to electronic medical records (Babbott et al. 2014; Silver et al. 2016) and dissatisfaction with work-life balance (Shanafelt et al. 2014).

(b) *Restricted job autonomy* (Linzer et al. 2009; Misra-Hebert et al. 2004; Lindfors et al. 2009).

(c) *Less work-related social support*, frequent conflicts with superiors and coworkers (Lindfors et al. 2009), and an experience of racial discrimination (Nunez-Smith et al. 2009).

(d) *Inadequate rewards* contribute to burnout and potential rewards such as professional development opportunities are associated with intentions to stay (Misra-Hebert et al. 2004).

(e) *Organizational injustice* (Lindfors et al. 2009; Heponiemi et al. 2013).

(f) *Misalignment of physician and organizational values* (Linzer et al. 2009; Misra-Hebert et al. 2004).

3. *Medical malpractice costs*. The relationship between burnout and malpractice is reciprocal. As discussed above, burnout is associated with patient dissatisfaction, medical errors, and lower quality of care, all of which in turn are associated with malpractice claims. Conversely, malpractice cases are highly stressful for physicians and can lead to burnout (Balch et al. 2011; Chen et al. 2013; Fileni et al. 2007). In one study, physicians cited many of the workplace factors known to be associated with burnout as contributing to malpractice-associated diagnostic errors: excessive workload, insufficient time for quality work, and a tense and uncooperative work environment (Fileni et al. 2007). Even when not resulting in a malpractice claim, these errors take their toll on patients, physicians, other staff, and organizational resources.

In summary, physician burnout is costly to organizations in terms of decreased safety and quality of care, patient satisfaction, sick leave, impaired ability to work, replacement costs (at a time when a physician shortage is predicted in the USA), and malpractice costs. Physician burnout is also associated with depression, suicidal thoughts and behaviors, and substance use disorders (Oskrochi et al. 2016; Wurm et al. 2016; Lheureux et al. 2016). Thus, there is also an ethical imperative for organizations to address the causes of burnout.

13.5 Implementation of a Physician Well-Being Initiative

Maslach et al. (2001), who pioneered burnout research, commented that organizational interventions have immense potential value, but are difficult to implement. There is no one right way to implement interventions, but a stepwise process can optimize success. The steps described here are neither exhaustive nor the best way for every organization, so other models and strategies should be consulted. For example, DeChant and Shannon (2016) gave several case examples of organizations implementing interventions using a lean improvement process, while Sinsky et al. (2013) visited well-functioning primary care practices to observe how interventions were implemented.

Swensen et al. (2016) recommended the following steps:

- **Listen** to physicians for their drivers of burnout (e.g., surveys and meetings with frontline physicians)
- **Act** using a participatory approach that empowers physicians to design and implement interventions targeted at their priority, unit-specific burnout drivers. Monitor outcomes and recognize successful multidisciplinary teams
- **Develop** and support physician leaders for intervention teams
- **Repeat** process in a quality improvement manner

Similarly, Shanafelt and Noseworthy (2017) identified the following strategies for implementing organizational interventions:

- Acknowledge and assess the problem
- Harness the power of leadership
- Develop and implement targeted interventions
- Facilitate and fund organizational science (developing and disseminating evidence-based strategies for reducing burnout and enhancing engagement in the organization)

Other authors can also be consulted (Gritz et al. 2009; Gautam 2009; Hernandez and Thomas 2015).

The four steps described below are for consideration to provide a framework when implementing a Physician Well-Being Initiative de novo.

13.5.1 Step 1: Gather Support from Leadership and Front-Line Physicians

Physicians: Within a given organization, there may already be physicians who are involved or interested in doing work on physician health and well-being activities. These individuals may or may not already know each other, so a snowball technique can be used to identify and network them. Their interests and activities should be ascertained as well as their willingness to join a network of interested physicians for sharing ideas, exchanging educational materials and readings, and playing a role in the next steps described below. Bringing these physicians together is a way to build community around physician health and well-being.

Leaders: Some organizational leaders may already have interest in or concerns about physician health and well-being. They should be identified, approached, and asked about other leaders to gather as much leadership support as needed. After making the business case and agreeing on common goals (see above), securing their visible commitment and concrete resources is essential. Fig. 13.3 shows how the three traditional aims of healthcare institutions—improving the health of populations, improving the patient's experience of care, and reducing the costs of healthcare—known as the triple aim, dovetail with physician well-being as the fourth or quadruple aim (Bodenheimer and Sinsky 2014).

13.5.2 Step 2: Form a Working Task Force from the Network of Supportive Physicians

The task force is formed from the network of interested physicians with leadership support. The task force will accomplish specific activities:

- Taking an inventory of what the organization may already have in place to address burnout and its work-related factors, including policies, procedures, and resources.

- Asking physicians to identify the root causes of burnout among physicians and their clinical units, by conducting one or more surveys to assess their needs and stressors. Surveys provide baseline measures. A customized questionnaire—adapted for each organization's unique culture, leaders, and frontline physicians—can be derived from existing, validated and standardized instruments, balancing survey length with the need for information.
- Analyzing and disseminating information from the survey to physicians and leaders with a commitment to address the top issues.
- Obtaining and utilizing other baseline metrics that leadership already monitors such as quality and safety, patient satisfaction and complaints, physician/employee satisfaction, and attrition rates, as well as the frequency and costs of malpractice claims.
- Determine the scope of the physician health and well-being initiative, which could include any or all of the following:
  - Education and prevention.
  - Cultivating an organizational and professional culture that emphasizes physician health and well-being as an organizational aim and value.
  - Resiliency training and wellness activities that time-pressured physicians will utilize.
  - Interventions (1) to reduce burnout and disruptive behaviors (Samenow et al. 2013; Speck et al. 2014), increase engagement, and improve physician health and well-being, (2) to decrease distress due to bad patient outcomes, medical errors, and malpractice claims (Balch et al. 2011), (3) to identify and treat mental health and substance use disorders with the potential to cause impairment (Baker and Sen 2016; Pitt et al. 2004), and (4) to decrease stigma and increase access to mental health services (Gold et al. 2016). Consider physician-specific assistance programs if physicians do not utilize the organization's general employee assistance program.
- Transition to a Committee for Physician Health and Well-Being after initially discussing its purpose, goals, structure, and support. Some of the activities mentioned above are already mandated by The Joint Commission Requirements (e.g., MS.11.01.01 for health concerns as well as identifying and managing behaviors that undermine a culture of safety). The Committee suggested here should specifically address physician health and well-being by advocating for and facilitating organizational interventions and resiliency building to prevent burnout.

13.5.3 Step 3: Establish a Committee for Physician Health and Well-Being

Using the recommendations from the Task Force:

- Determine where the committee will fit in the organizational structure and which other groups it will interact with.
- Establish budget support and administrative/clerical support to fulfill its activities.

- Determine the size and composition of committee, how often it will meet (at least monthly to start), and establish a process and criteria for selecting committee members. While organizational leaders may serve on the Task Force, their inclusion in this committee will depend on its scope. Physicians will not refer themselves to a committee which includes people who can exercise any power over their job status and career.
- Discuss leadership of the committee and the roles of leaders and members.
- Affirm a vision, purpose, and goals for the committee, align committee values with organizational ones.
- Agree on confidentiality rules and protection as a Quality Assurance activity if possible.
- Review survey results and pertinent literature as a basis for the next step.

13.5.4 Step 4: Select, Prioritize, and Implement Interventions

- Identify and help individuals, teams, clinical units, departments, and divisions to design and develop interventions based on their interest, motivation, leadership support, and data regarding burnout and contributing work factors.
- Priority will be given to interventions with goals that meet SMART criteria (specific, measurable, attainable, realistic, and timely), both in terms of functional improvement of the clinical unit and participant well-being and engagement.
- Interventions will ideally be implemented using (a) a participatory approach with a designated physician leader and multidisciplinary team and (b) an iterative, continuous quality improvement approach. These two approaches are based on research demonstrating that physicians engaged in improvement projects of their own choice have decreased burnout scores post-intervention (Linzer et al. 2015).

13.6 Conclusions

The workplace environment is fraught with difficulties for physicians that contribute to stress and burnout. Among them are (1) work overload relative to the time available and workflow inefficiency due in part to user-unfriendly electronic health records, (2) diminished autonomy and control with loss of discretionary time and input into decisions affecting patient care, (3) unsupportive, interpersonal work environments, (4) incentives tied to productivity, based on increased fiscal and performance monitoring, with reduced respect and appreciation, (5) perceived organizational injustice, and (6) conflicting professional and organizational values. These changes in the workplace result from external factors such as healthcare reform as well as the organization's response to those factors. Individual factors also contribute to burnout and interact with organizational factors, resulting in a mismatch between physicians and their organizations. Accordingly, a two-pronged approach to mitigating burnout requires interventions that (1) target organizational risk factors contributing to burnout and (2) increase resiliency. Resilience is necessary, but

insufficient to address the most powerful factors confronting otherwise healthy physicians. Moreover, focusing only on physician resilience inadvertently places all the responsibility (and blame) on individual physicians. Organizational acknowledgment of contributing workplace factors is a first step toward sharing the burden of responsibility and helps to alleviate the shame and secrecy of individual physicians who may be struggling. Thus, organizational interventions are necessarily a collaboration between physicians and their organizations. This calls upon organizations to include physician health and well-being as a core value and goal, accompanied by visible action. Both physicians and their organizations will benefit, because physicians engaged in work that is meaningful to them results in improved quality of care and reduced costs. In addition to being good for business, organizations have an ethical imperative to take good care of their physicians to reduce burnout and its associated negative effects, including the tragedy of suicides. Likewise, physicians have an ethical imperative to take good care of themselves for the good of their patients. This shared imperative for physicians and organizations may be summarized most succinctly as: *Take care to give care*.

Key Points

1. Three sets of risk factors contribute to physician burnout: individual, organizational, and external factors.
2. Work-related risk factors for burnout have been divided into six categories: (a) work overload, (b) insufficient autonomy or job control, (c) non-supportive interpersonal work environment, (d) ineffective rewards and incentives, (e) lack of fairness or organizational justice, and (f) misaligned values between physicians and their organizations. These factors are the targets of organizational interventions.
3. Models of burnout emphasize a mismatch between what physicians expect from organizations to do high-quality work and how the organization supports them to do their work.
4. The literature to date supports the efficacy of organizational interventions for improving physician burnout and job satisfaction.
5. Duty hour reform (DHR) in the USA is arguably the most widespread and well-studied of all organizational interventions. DHR targets workload and provides important lessons on (a) responding to sentinel events, (b) mandating interventions without the flexibility to adapt them to local conditions and different specialties, (c) conducting controlled trials prior to generalized implementation, (d) the need to monitor for unintended consequences of addressing one work factor when a complex system of factors contributes to outcomes, (e) financial costs, and (f) the time course of outcomes.
6. Participatory organizational interventions are designed, customized, and implemented by physicians based on the work factors they identify as being most important to the functioning of their clinical unit and their well-being. Baseline and follow-up measures of selected outcomes are necessary to assess the effectiveness of interventions and refine them as needed using a quality improvement process.

7. Leaders have good cause to support organizational interventions in order to enhance their patients' experience of care, improve safety and quality of care, and reduce their costs from decreased physician productivity, high turnover rates, and the adverse consequences of patient dissatisfaction and medical errors, including malpractice claims.

8. Both organizations and physicians have an ethical imperative to improve the workplace environment, not only to improve and safeguard patient care, but also to mitigate the high rates and consequences of physician burnout, including mental health and substance use disorders, and the tragedy of suicides.

Appendix: Constructs, Definitions, and Measures

Burnout, job satisfaction/dissatisfaction, engagement, and well-being are overlapping and correlated constructs. They differ in terms of positive (engagement, well-being) or negative (burnout, dissatisfaction) emphasis and measurement. When considering studies of burnout and related constructs, readers are encouraged to consider the study population (all physicians vs. specialty and subspecialty physicians, stage of career from training to pre-retirement, hospital vs. ambulatory care practice, academic vs. community and urban vs. rural settings, and country of origin); study methods (sampling, response rates, longitudinal vs. cross-sectional design, measurement tools, and multivariate analyses); and the dates of data collection because of cohort and environmental effects (Shanafelt et al. 2015a).

Burnout. The most dominant definition of burnout derives from the work of Maslach and colleagues (2001) who described it as a stress-induced, work-related syndrome characterized by (1) emotional exhaustion; (2) a negative reaction to the job, including cynicism and detachment from patients (called depersonalization); and (3) a decreased sense of personal accomplishment and feeling ineffective at doing what used to be meaningful work. Burnout is most commonly measured with the 22-item Maslach Burnout Inventory, a copyrighted instrument, although shortened versions and other instruments are also used. Some research has emphasized the greater importance of emotion exhaustion and cynicism than personal accomplishment. Many physicians are able to maintain their sense of efficacy under stressful work conditions.

Engagement. Physician engagement has been viewed on the same continuum as—and opposite of—burnout (Maslach et al. 2001). When 1666 US physicians were asked on a scale of 1–10 how important feeling engaged was to their job satisfaction, the average score was 8.0 indicating a high degree of importance (Stark 2014). As measured by the Utrecht Work Engagement Scale, it has three factors: vigor (feeling strong, energized, and motivated at work), dedication (feeling enthusiastic about, inspired by, and proud of work), and absorption (feeling happy when immersed and engrossed in work).

Satisfaction/Dissatisfaction. Multiple studies have shown that physician satisfaction is negatively correlated with burnout (Amoafo et al. 2015; Keeton et al. 2007; Williams et al. 2007; Arora et al. 2014). In the USA dissatisfaction has been increasing since the 1980s, initially associated with the spread of managed care and increasing malpractice insurance rates and claims. *Direct questions* about satisfaction may focus on one's current job, chosen specialty, or a career in medicine; income and benefits; personal time (satisfaction with work-home balance); enough time to see patients; and relationships with other physicians, staff, and patients (Shanafelt et al. 2015a; Friedberg et al. 2013). *Indirect questions* about career satisfaction may inquire about one's likelihood of recommending the profession to others, leaving one's current job, retiring altogether, or switching to another career or specialty within a certain period (ranging from 1 to 5 years). *Objective indicators* of satisfaction have included the number of applicants to medical schools over time, strikes by unionized physicians such as in the UK, and rates of physician turnover.

Well-Being. Wellness, well-being, and health are related constructs. *Health* was defined in 1948 by the World Health Organization (WHO) as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO 1948). *Mental health* is described as "… a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community… In this positive sense mental health is the foundation for well-being and effective functioning for an individual and for a community" (World Health Organization 2004). *Well-being* is described as a state of positive mental health to emphasize that it is not simply the absence of disease. Well-being is measured by physicians' overall evaluations of their lives (job and life satisfaction) and job-related emotional experiences (higher positive and lower negative affects). Well-being is also associated with better quality of patient care (Scheepers et al. 2015).

Joy in Practice and Happiness. This newer and evolving concept encompasses physician well-being, career satisfaction, and work engagement but further attempts to capture the essence and meaning of the physician's professional calling and the medical encounter itself, which is to cultivate a healing relationship with patients that facilitates provision of high-quality care (Sinsky et al. 2013). Any obstacles to doing so will contribute to burnout, disengagement, and dissatisfaction. Happiness may be linked to joy through its emphasis on career purpose and personal accomplishment (Eckleberry-Hunt et al. 2016).

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Afterword

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The contributions to this book together comprise a nuanced and thorough analysis of an evolving public health crisis. It may seem intuitive that in order to nurture health and wellness in their patients, physicians must themselves be able to maintain adequate mental health. The reality is that they suffer at staggering rates from burnout, psychological distress, and untreated mental illness. This may lead to decreased empathy and an increase in medical errors which can impact patient safety. Furthermore, the elevated rates of suicide indicate that physicians themselves are an at-risk population. It is a dire statistic to consider the loss of the equivalent of two medical school classes to suicide each year (see Chap. 4 on Suicidal Behaviors). This is not only a tragedy of human life and potential, it is an economic concern in the face of growing medical workforce shortages, which is further stressed by physicians prematurely leaving the field, cutting back hours, or experiencing decreased productivity due to burnout or untreated mental illness. These concerns are both urgent and relevant to the providers and recipients of healthcare across the USA as well as other countries.

A salient theme of this book is the complexity with which these issues play out at both the level of the individual and the system in which they train and work. Both will require intervention to effect meaningful change. Physician burnout and mental illness are multifactorial problems that involve individual factors common to many who enter medicine (including a "Type A" personality and indefinitely delayed gratification), as well as the culture or "hidden curriculum" of self-sacrifice. There are also organizational factors that contribute to the problem and provide barriers to treatment. Several chapters discussed a further complication in that physicians are less likely to seek treatment due to issues such as stigma and fears about whether it will affect medical licensure. This book examines the research to better understand

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these factors, an essential first step in order to be able to address this problem effectively.

There is a mandate from society to figure out the path forward with growing urgency. Just recently, the Accreditation Council for Graduate Medical Education (ACGME) responded by proposing guidelines for training programs to monitor and cultivate well-being in their trainees. The ACGME outlines residency requirements for all US postgraduate medical trainees and is a crucible through which all those physicians pass. They are therefore uniquely positioned to make upstream changes to the culture of medicine. The following is an excerpt from the ACGME's newly approved section in the Common Program Requirements (as of February 2017), which will take effect for the 2017–2018 academic year (Accreditation Council for Graduate Medical Education 2017):

> *"In the current health care environment, residents and faculty members are at increased risk for burnout and depression. Psychological, emotional, and physical well-being are critical in the development of the competent, caring, and resilient physician. Self-care is an important component of professionalism; it is also a skill that must be learned and nurtured in the context of other aspects of residency training. Programs and Sponsoring Institutions have the same responsibility to address well-being as they do to ensure other aspects of resident competence."*

In addition to the statement above, the ACGME proposes novel requirements for training programs to do the following: (a) foster the development of meaning that residents find in their training and work as a physician; (b) help them to manage administrative tasks; (c) screen for well-being; and (d) facilitate personal time for self-care and medical visits. The latter is also important for easing fatigue and restoring energy, and for attending to family matters and emergencies. If accepted into the 2017 program requirements, this change may lead to increased consideration of the well-being of residents and physicians in general at the institutional level. However, it is not clear that program directors and hospital administrators have the knowledge or means to make effective changes in response to this decree, which will be the biggest barrier to its success.

This book therefore comes at a key time, and its thoughtful analysis of these issues may serve as a guide for both the healthcare system and the physician or medical trainee. It is by fully understanding the scope and nature of these problems, across disciplines, that we can build forward momentum for both physicians and their patients.

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