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Research Article

Physician Death by Suicide: Problems Seeking Stakeholder Solutions

Introduction

Each year approximately 400 physicians die by suicide in the United States, leaving an estimated one million patients without their physicians [1-5]. Physicians are two to three times more likely to die by suicide than members of the general population and are more likely to die by suicide than other professionals [6,7]. Compounding the tragedy is that for decades we have been aware that medicine is the deadliest profession [8]. The earliest articles located for this review date to 1897 and 1921 [9] and the earliest specific data supporting the statement that physicians were at greater risk than other professionals was a 1927 review of 1921 death data [10]. More physicians in the United States died by suicide than by motor vehicle accidents, plane crashes, drowning, and homicides combined in the late 1960's [11] and the statistics could go on. Suffice it to say that the trend remains at best unchanged, and at worst worsening.

While there has been great focus on the management of individual level risk factors (identification and normalization of seeking medical and mental health care, mindfulness training, engagement in the creative arts, managing fatigue, building resilience, changing professional values, etc.), there has been relatively less attention paid to profession-wide issues that may serve as barriers to physician health and wellness such as credentialing and licensure inquiries. The time has come for that to change. In this article I will look briefly at some of the findings concerning risk factors, conclude that individual risk factor analysis is insufficient to address the problem, and discuss ways to lower the frequency of physician death by suicide, while improving the health of the physician workforce, by standardizing regulatory practice and physician peer support.

Findings from the existing literature on risk factors

Physician death by suicide is a relatively rare occurrence and study of the problem has been challenging. As far back as 1897, an editorial entitled "Suicide among Physicians" laid out some of the issues involved in the study of physician death by suicide [9]. First, case definition is problematic owing to the stigma associated with doctors taking their own lives. Second, the physicians' constant exposure to the sick and dying, coupled with knowledge of and access to lethal means are unique risk factors in the profession. Third, medicine is exceptional among the learned professions due to its often-extreme occupational demands.

Researchers continue to struggle with case definition because the distinction between accidental death by self-inflicted injury and intentional death by self-inflicted injury is arbitrary, raising the concern that accidental death is "concealed suicide" [5,8]. In recent data, physicians appeared to be more likely to die both by accident and suicide than other healthcare providers, other persons with more than six years of formal education after high school, and the general US population [12]. While many researchers have focused on acknowledged intentional self-injury, it may be time to analyze all self-inflicted deaths to look for clues about risk-taking behavior and suicide in physicians.

As might be predicted from the physician's early and then constant exposure to death and tragedy, risk for death by suicide appears to develop in medical school during the clinical years. Risk persists throughout physicians' early careers, peaking in midcareer [13,14] and becoming less common in later career, but then rising again as retirement approaches [15,16]. One half of all students experience burnout, and a similar number of practicing physicians experience feelings of exhaustion, loss of enthusiasm, cynicism and decreased personal accomplishment [17,18]. Students' anxiety and depression also may develop during this time of training, particularly as they transition from classroom education to the clinical years [19], within a society that fosters the erroneous belief among physicians that they are invincible or somehow invulnerable to illness [20].

Were exposure to death and tragedy a sufficient factor in physician suicide, one might expect to see differences in specialty and vulnerability to death by suicide. However, the data generally suggest that specialties in front line care, those with high levels of exposure to trauma, and those deemed outside the mainstream of medicine (e.g. researchers, academics, and psychiatrists) all have elevated rates of death by suicide [11,18,21-25]. Other studies note that anesthesiology is a specialty uniquely at increased risk due to easy access to pharmaceuticals rather than exposure to trauma. Regardless of specialty or practice setting, physicians who died by suicide frequently had more difficult, emotionally draining, and/or demanding patients throughout their careers and near the times of their deaths [7].

While it is true that the physician's intimate knowledge of anatomy and physiology informs his or her choice of lethal means and likely accounts for the low number of attempts versus deaths by suicide seen in US physicians, it does not fully account for means of death by known suicide. In the US male and female physicians who die by suicide most commonly die by gunshot wound and

this preference has been noted intermittently since 1920 [9,26]. Of those that die by overdose, many do not die of overdoses involving medications or drugs that they would use in their profession, though not all data agree [21].

Evidence of job problems around the time of death was more common in physicians who died by suicide than other suicide victims [15,26,27]. As physician behavior has been subject to increased scrutiny in recent years, more physicians have been referred for fitness for duty evaluations, peer conversations about behavior, and formal or informal sanction [28]. Disciplinary actions, litigation, and actual or perceived sanction by healthcare systems, licensing boards, and professional organizations have all been associated with death by suicide. Though the groups are not mutually exclusive, physicians referred for performance problems were more likely to have substance use disorders and less likely than members of the general population to have diagnoses of mood and anxiety problems [29], while physicians who died by suicide were more likely acutely distressed at the time of death, albeit not necessarily in the midst of an acute crisis.

General occupational factors that have been associated with death by suicide across professions include overworking, shift work, social isolation, competitiveness, job instability, and exposure to health risks in the work environment [30]. Although no single occupational factor has been correlated with physician death by suicide, many areas of medicine have all of the above listed common risk factors, likely accounting for some of the increased risk seen in medicine across situations.

The issue of overwork has been noted in the literature since Dr. Hubbard commented in 1927: "This record seems to indicate that the occupational strain is greater in medicine than in any of the other professions. Should not our scheme of medical practice, as relates to hours and relief, be revised…?" [10]. Yet it was not until 2003 that the American College of Graduate Medical Education required that duty hours be limited to 80 hours and shifts limited to 16-24 hours for trainees. There are now fatigue-monitoring programs for medical trainees in an attempt to mitigate the requirement for overworking. However, no such system exists for attending or consultant physicians [31].

The relationship of overwork with physician anxiety, depression and burnout is complex. It is likely equally true that those physicians with anxiety and depression overwork and that overworked physicians have more anxiety and depression. In addition to long work hours, anxiety and depression in physicians have been associated frequent night shifts, and frequent workplace violence [32], both of which are additional occupational risk factors for suicide.

Physicians who may be at risk are more likely to be individualistic [33] and highly disciplined, with high levels of self-criticism [34]. While sometimes noted to be inflexible, they may also display highly desirable traits such as perfectionism, idealism, and empathy [33,35]. When these personality factors combine with long hours and conflicted family relationships, physicians may be more vulnerable to the effects of life stresses than their similarly situated professional peers [15]. They also more likely suffer substance use and mood disorders, as well as medical problems, for which they typically both blame and treat themselves [11,33]. Risk appears highest when real life situations offer no possibility of success [11].

A personal sense that medicine is a calling is an apparent mitigating factor in physician burnout [36], and potentially death by suicide. The reality of the practice of medicine may, however, not live up to the expectations generated by such a sense of calling. When the difference between lived experience and the expectation of practicing medicine is great and irreconcilable, idealism and calling may then serve as drivers of physician suicide, particularly in early career [37].

Physicians do not avail themselves of treatment because they are reticent to seek help [6,33,38] and tend to engage in self-treatment [39]. In addition once engaged in treatments, physicians tend to underutilize services [33,40,41]. For example, physicians who died by suicide were at least as likely to have known mental health problems when compared to all suicide victims [26]. However, they were less likely to have antidepressant medications detected on post mortem toxicology [26], while being more likely to have benzodiazepines and barbiturates detected [26].

Unfortunately, there is great variation in the care that physicians receive. Physician care providers are generally uncomfortable in treating other physicians and likely give inferior care to their colleagues, a situation famously known as "V.I.P. Syndrome" [41, 42]. Symptoms of V.I. P. Syndrome include making special appointment times, failing to document medications accurately, skipping "routine" parts of care, ceding medical judgment in the case to the physician-patient, and providing care in social and work situations as opposed to the clinical situation. In order to provide the best possible care to physician-patients, treating physicians should take ownership of medical judgment in the case with appropriate input from the physician-patient, as with any patient. Communication should be clear and should involve those participating in the patient's care. If care is to be delivered outside a provider's regular business hours then an extension in those hours should be sought so that the office is staffed to be able to handle the medical needs of the individual and provide the best possible care. While some physician-patients will demand that no record be kept, best practices in the area would be to document as the provider would on any other patient, secure that record appropriately, and retain it as dictated by policy and procedure. A real-time record of care is safest for the physician-patient, and this documentation would facilitate answering questions related to the course of symptoms, impact on occupational functioning and compliance with treatment should such questions arise in the future.

The above best practices would seem obvious to most physicians. Why then would physician-patients and physician-providers be hesitant to engage in the above listed best practices?

Traditional interventions and regulatory disincentives

Provider and patient physicians frequently share similar fears of medical board and practice repercussions for the physician-patient. In order to avoid disclosure requirement, the physician provider may then fail to document to the standard of care, may encourage the patient to hide his or her condition, will sometimes make a minimal

diagnosis, fail to provide consistent follow-up, and/or use inferior treatment options. Evidence for mandated disclosure and lack of confidentiality as primary drivers of physician poor heath also comes from the Colorado Physicians Health Program (CPHP). In personal communications, Dr. Doris Gundersen, Medical Director of the CPHP and Immediate Past President of the Federation of State Physician Health Programs (FSPHP), reported that when a confidential option was added to the CPHP program, the pattern of referrals shifted from predominantly mandated complaint-driven referrals to self-reported voluntary referrals. In other words, physicians sought help when the fear of being punished by regulatory bodies was addressed. They were then seen earlier in the courses of their illnesses and follow-up data suggested that treated physicians were at reduced (not increased) risk of medical malpractice action [43].

The Americans with Disabilities Act (ADA) has succeeded in limiting the questions regulatory bodies and other stakeholders are able to ask about the status of having a legally protected disability. Notwithstanding, licensure, credentialing, and medical malpractice insurance applications routinely ask physicians to self-report whether they have ever been "evaluated or recommended for treatment for, diagnosed with, or treated for any [substance abuse], sexual addiction, or a mental illness." While a few states and organizations limit this reporting to conditions that have resulted in disability, most do not place any limits on such reporting requirements [44, 45] and it is the great variation in practice that leaves physicians uncertain. Despite of this reality, some authors suggest that physicians overestimate limits in confidentiality. However, these authors offer no specific suggestions or reassurances were made apart from saying that physicians should familiarize themselves with prevailing standards and protections [46].

Improving physician wellness

Ideas for physician wellness programs applicable to the individual also come from that 1897 editorial cited previously and include finding pleasure in simple things in life and continuing to stay engaged in life outside of medicine even when fatigued and working an erratic schedule [7]. The physician was also advised to develop coping mechanisms to deal with difficult colleagues and ungrateful patients. The author goes on to suggest that if it is not possible for the physician to deal with the demands of the profession, and "the urge toward death comes," that the physician leave the practice of medicine rather than die by suicide [7].

While this may be sound advice for some distressed physicians, there is much more to be done than controlling personal risk factors. Medical schools should examine the number of contact hours required of students in a traditionally inflexible curriculum, as well as the utility of grading in hierarchical fashion that makes needless lines of distinction amongst the exceptional, as opposed to emphasizing competence. This kind of system would allow students some flexibility in choosing areas of focus without fearing being less excellent in other areas [47]. It would also help students extract an educational experience that they value. Regardless of the ultimate career path that students choose, the experience of being in an educational system in which they actively pursued individualized interests could improve their engagement in lifelong learning whether students ultimately choose to practice clinical medicine, pursue biomedical research, or opt for another career path.

Mentoring is also a way in which medical students form their identities as physicians. They seem intuitively drawn to attending physicians who are good diagnosticians, approachable, and create a low stress learning and practice environment through the use of humor, alliances with other staff, patience, and skill in translating difficult concepts for patients, families, learners, and staff [48,49]. Adding to this mix of skills, modeling in work-life balance and self-care may well facilitate the development and maintenance of these skills by students before they select a specialty.

While being a physician is a strong professional identification, the full-time practice of clinical care or biomedical research may not be suitable for every person or for every stage of professional life. If students see their education as valuable and applicable to many possible career choices, then they may feel at greater liberty to choose other paths when an initial plan proves a poor fit for their skills, dispositions or life plans. In addition to providing an education with multiple possible occupational outcomes, the incorporation of creative outlets for self-reflection and self-expression may facilitate the confronting of vulnerabilities, fears, doubts, and losses as well as insights and evolving strengths in a way that enhances adaptation and resilience [50], regardless of job or career choices. In addition to creative outlets, explicitly teaching skills such as stress reduction, correction of cognitive distortions, and priority setting based on the fact that an individual's physical and emotional energy, as well as capacity for learning, are limited resources in need of allocation and renewal would likely be useful [47]. A culture shift from endurance to engagement in education [47] may well shape the expectations of these students as they enter a workplace in which physician employment that values seeing patients quickly is currently increasing while physician autonomy in deciding the appropriate treatment for each patient is decreasing.

Mental health evaluation and care have seen great advances suggesting it is time to rework the definitions of health and wellness. In years past, it may have made sense for mental health to be the *absence* of a diagnosis. However, today it is more useful and prudent to define mental health as *managed* mental health conditions instead of *absence* of mental health diagnoses. While there are some conditions that are progressive and respond poorly to treatment, the bulk of mental health conditions are treatable and manageable without the threat of risking a livelihood because of adverse licensure, credentialing, or insurance coverage determinations. It is only when we consistently normalize the process of identifying symptom and seeking care that we stand a chance at motivating physicians to identify physical and emotional symptoms in need of intervention and follow the oft-cited advice that physicians establish regular sources of healthcare, as is often suggested (e.g. [46]). While some regulatory bodies have taken this or a similar approach, most have not yet differentiated a diagnosis from a disabling condition in any consistent way.

Since mandated reporting of mental health conditions to licensure and credentialing bodies has repeatedly been cited as the greatest barrier to physician health and wellness, United States regulators should consider ways to standardize the questions that

are permissible in licensure and credentialing application processes, as well as the responses allowed by individual medical boards and credentialing organizations. Standardization of these questions, and the range of possible responses, by each credentialing and licensing authority, in a manner consistent with the gains made by the Americans with Disabilities Act would decrease physician fears of seeking treatment and would likely improve the quality of the physician work force without compromising patient safety or sacrificing the ability to respond to complaints of impairment that might arise. This standardization would also make it more likely that physicians would intervene with their colleagues, rather than ignore them, when they see stress symptom such as changes in practice, constant hurriedness, self-doubt, indecisiveness, and sadness [11].

Part of the fear of licensure, credentialing and insurance outcomes is related to disclosure of personal information but other concerns in include how the agency receiving the disclosure will respond to it. In fact there is great variance between states in the level of disclosure required and the responses to physician disclosures. While variation in the practices and levels of expertise of physician health programs in the United States has been implicated in physician death by suicide [51, 52], a study systematically examining the issue did not support this assertion [53]. In fact, just the opposite may be true. The CPHP's experience since implementing confidential and voluntary services would seem to suggest that when PHPs adhere to best practices and offer confidential services the outcomes are positive regarding physician health outcomes, as well as protection of the public.

The licensure application in the state of Colorado provides an example of systematic efforts to improve physician wellness. The application asks physicians whether at the time of application or in the previous five years they have been "diagnosed with or treated for a condition that significantly disturbs [their] cognition, behavior, or motor function," specifying "bipolar disorder, severe major depression, schizophrenia, or other major psychotic disorder, a neurological illness, or sleep disorder." Physicians are able to answer "no" to this question if their "behavior or condition is already known to the CPHP" and they are compliant with "all of CPHP's requirements for evaluation, treatment, and/or monitoring" [54]. The CPHP is funded in part by a peer-assisted fee that all physicians licensed in the state of Colorado pay, totaling 75% of all funds available. The CPHP offers free and confidential services to medical students and physicians in Colorado [55].

This example suggests two important aspects that contribute to a systematic effort to improve physician health. First, the phrasing of the question itself encompasses a time frame and a specificity that is not represented in the more generalized "ever evaluated or recommended for treatment for, diagnosed with, or treated for any [substance abuse], sexual addiction, or a mental illness." Secondly, by making the applicant aware of a "known to CPHP" policy, the transparency between CPHP and the licensing board is apparent. In turn, this caveat to the question may contribute to a culture of openness among physician-providers, physician organizations, and physician-patients.

While practices such as these are becoming more common, they are not yet universal amongst states, credentialing bodies, and insurers in the United States. Regardless of actual practices used by particular licensure, credentialing and insuring bodies, it is the uncertainty that weighs on the minds of trainees and physicians and serves as a disincentive to disclosing symptoms and seeking treatment.

Complaints, litigation, adverse events, and negative attention generally have been associated with increased risk of physician anxiety, depression, and suicide. Formal and informal monitoring of physicians increased in 2008 after Joint Commission guidelines extended the responsibility for physician monitoring to institutions in which physicians may work [27]. Physicians facing adverse professional events often feel ostracized and at the mercy of an investigation that not only exposes their identities but could also result in restriction of practice or loss of licensure prior to a finding of guilt or negligence. These processes can become quite prolonged, sometimes lasting years. Once a physician is under this kind of scrutiny, even the simplest of tasks may become overwhelming and indecision may creep in to daily decisions. Requirements for a presumption of competence and consistent due process in proving incompetence for physicians might diminish the specter of medical board action [56]. Litigation support services, access to attorneys for consultation, confidential treatment, and confidential peer support are all effective in enhancing coping but variably available to physicians.

In a recent report commissioned by the United Kingdom's General Medical Counsel (GMC) the particular issue of physician vulnerability during fitness for duties inquiry was examined in detail. Among the consultant's recommendations was the establishment of a National Support Service (NSS) for physicians and medical students [56]. Such a service would accept voluntary referrals as well as referrals for performance-related concerns and ensure a timely initial evaluation. There would be one medical director overseeing operations and investigations would follow a case management model that would include the physician. The service would be proactive in providing confidential services to physician self-identifying health needs. The NSS would not report to the GMC if the physician poses no risk to the public, is aware of health issues, has insight into the impact of the issue on practice, and seeks appropriate care with which the physician complies [56].

Peers and other stakeholders

Physician advocacy organizations provide opportunities for physicians to come together to discuss, refine, and reaffirm standards for clinical competence and professionalism [57]. These organizations should have a greater role in providing mentorship, collegial outreach, and advocacy for reasonable work and coverage hours for physician members in the United States. The British Medical Association (BMA), for example, specifically defines collective bargaining as central to mission in a way that physician advocacy groups in the United States do not. The power of this identity may be seen in the choice of the GMC to pilot a program in which the BMA provided outreach to physicians subject to practice complaints in the form of anonymous 24-hour per day counseling services and access to physician advisors for peer support though the existing Doctors for Doctors program [58]. This program confirmed beliefs that other physicians were the most acceptable source of support for troubled physicians and the program reviewer made recommendations for

increasing access to the service and monitoring program consistence and quality [59]. Importantly, the information learned by the BMA through involvement in this program, as well as that learned from providing anonymous and confidential self-referred services through the Doctors for Doctors program, can then inform the role of occupational factors in physician health and the positions then taken in collective bargaining situations.

Other studies also indicate that peers are the most acceptable sources of support for physicians [60], yet in the United States there are no consistent programs for peer support through advocacy organizations. These organizations have, to varying degrees, been complicit with the exploitation of physicians by employers, escalating demands of maintenance of licensure, and lack of standardized responses of medical boards to physician reports of mental health symptoms. Just as these organizations frequently provide continuing medical education events and bring together physicians in diverse work settings across a number of jurisdictions, so they stand to impact multiple jurisdictions were they to leverage their numbers in the service of improving work conditions, facilitating mentorship, performing active collegial outreach for physicians, and providing peer support measures such as the Doctors for Doctors program. These programs might then be in a position to interface with or provide guidance and additional resources for state licensing and physician health programs.

In the United States, the Federation of State Medical Boards is a private non-profit organization and describes itself as "the national resource and voice on behalf of the state medical boards in their protection of the public." It loosely oversees many diverse practices at the level of the states. The Federation of State Physician Health Programs developed in recognition of a need highlighted by the American Medical Association (AMA) for objective and consistent monitoring and treatment of physicians with a wide range of health conditions. Data from CPHP suggest that physicians who had been monitored by CPHP for any reason had lower malpractice risk than the general population of physicians in Colorado [61]. When this finding is combined with the previous data on the decrease in the number of mandated referrals and increase in number of voluntary referrals when confidential services were made available, the way forward would seem clear. While states might oppose losing some level of local control, the Federations could be empowered to standardize the practices of states in a manner consistent with best practices and develop a standardized data collection processes to inform physician suicide prevention efforts.

The national physician advocacy organizations, offering physician education and support, would then have a national partner in the promotion of physician health and professionalism. Such standardization would also result in clear communications to physicians regarding reportable conditions and treatments as well as the range of possible consequences for self-reporting of stresses and health conditions, reporting of complaints by patients and reporting performance concerns by credentialing bodies and other third parties. It would also provide a mechanism for national standardization of best practices in physician peer support. These best practices could then serve as templates for the development of specific local services by employers, educators, and care providers in concert with local branches of advocacy organizations.

Conclusion

Physician death by suicide is an addressable problem using common sense approaches that reach beyond the individual. Physicians have ethical responsibilities to support each other in addition to policing the profession. We have operationalized, and complied with others regarding the policing the profession. The time is ripe to balance the needs and interests of physicians in high quality confidential treatment [20,62,63] with those of public safety, and to preserve the confidentiality of proceedings against physicians until such time as there is a finding of incompetence requiring disclosure to protect the public. In the United States, the Federation of State Medical Boards, Federation of State Physician Health Programs, and physician advocacy groups have critical roles to play in improving physician health and decreasing physician death by suicide.

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References

1. (2016) Fact about physician depression and suicide. American Foundation for Suicide Prevention, www.afsp.org/our-work/education/physician-medical-student-depression-suicideprevention/. Last accessed April 9, 2016.
2. Wible P (2014) When doctors commit suicide it's often hushed up. *Washington Post*. July 14.
3. Wible P (2014) Physician suicide 101: secrets, lies and solutions. Medscape #834434.
4. Carpenter LM, Swerdlow AJ, Fear NT (1997) Mortality of doctors in different specialties: findings from a cohort of 20000 NHS hospital consultants. Occup Environ Med 54: 388-395.
5. (1973) Letter: Doctors who suicide. Aust N Z J Psychiatry 7: 298.
6. (1986) Physician mortality and suicide. Results and implications of the AMA-APA Pilot Study. AMA Council on Scientific Affairs. Conn Med 50: 37-43.
7. (1987) Results and implications of the AMA-APA physician mortality project: Stage II. JAMA 257: 2949-2953.
8. Legha RK (2012) A history of physician suicide in America. J Med Humanit 33: 219-244.
9. (1897) Editorial. Suicide among physicians. Medical and Surgical Reporter 27:271-3 and (1921) Deaths of physicians in 1920. Pennsylvania Medical Journal, February citing JAMA 76: 41.
10. Hubbard SD (1927) Suicide among physicians. Am J Public Health 857.
11. Ross M (1971) Suicide among physicians. Psychiatry Med 2: 189-198.
12. Blecker S, Johnson NJ, Altekruse S, Horwitz LI (2016) Association of occupation as a physician with likelihood of dying in a hospital. JAMA 315: 301-303.
13. Burrows GD (1976) Stress and distress in middle age - The mental health of doctors. Aust Fam Physician 5: 1203, 1205-6, 1209-1210.
14. Dyrbye LN, Varkey P, Boone SL, Satele DV, Sloan JA, et al. (2013) Physician satisfaction and burnout at different career stages. Mayo Clin Proc 88: 1358-1367.

15. Rose KD, Rosow I (1973) Physicians who kill themselves. Arch Gen Psychiatry 29: 800- 805.

16. Carr GD (2008) Physician suicide--a problem for our time. J Miss State Med Assoc 49: 308-312.

17. Dyrbye LN, Thomas MR, Massie FS, Power DV, Eacker A, Harper W, et al. (2008) Burnout and suicidal ideation among U.S. medical students. Ann Intern Med 149: 334-341.

18. Shanafelt TD, Boone S, Tan L, Dyrbye LN, Sotile W, et al. (2012) Burnout and satisfaction with work-life balance among US physicians relative to the general US population. Arch Intern Med 172: 1377-1385.

19. Jafari N, Loghmani A, Montazeri A (2012) Mental health of medical students in different levels of training. Int J Prev Med 3: S107-112.

20. Hassan TM, Asmer MS, Mazhar N, Munshi T, Tran T, et al. (2016) Canadian physicians' attitudes towards accessing mental health resources. Psychiatry J 2016: 6.

21. Hikiji W, Fukunaga T (2014) Suicide of physicians in the special wards of Tokyo Metropolitan area. J Forensic Leg Med 22: 37-40.

22. Hawton K, Clements A, Sakarovitch C, Simkin S, Deeks JJ (2001) Suicide in doctors: a study of risk according to gender, seniority and specialty in medical practitioners in England and Wales, 1979-1995. J Epidemiol Community Health 55: 296-300.

23. Eckleberry-Hunt J, Lick D (2015) Physician depression and suicide: A shared responsibility. Teach Learn Med 27: 341-345.

24. Rich CL, Pitts FN, Jr (1980) Suicide by psychiatrists: a study of medical specialists among 18,730 consecutive physician deaths during a five-year period, 1967-72. J Clin Psychiatry 41: 261-263.

25. Sheikhmoonesi F, Zarghami M (2014) Prevention of physicians' suicide. Iran J Psychiatry Behav Sci 8: 1-3.

26. Gold KJ, Sen A, Schwenk TL (2013) Details on suicide among US physicians: data from the National Violent Death Reporting System. Gen Hosp Psychiatry 35: 45-49.

27. Iannelli RJ, Finlayson AJ, Brown KP, Neufeld R, Gray R, et al. (2014) Suicidal behavior among physicians referred for fitness-for-duty evaluation. Gen Hosp Psychiatry 36: 732-736.

28. Finlayson AJ, Dietrich MS, Neufeld R, Roback H, Martin PR (2013) Restoring professionalism: the physician fitness-for-duty evaluation. Gen Hosp Psychiatry 35: 659-563.

29. Cottler LB, Ajinkya S, Merlo LJ, Nixon SJ, Ben Abdallah A, et al. (2013) Lifetime psychiatric and substance use disorders among impaired physicians in a physicians health program: comparison to a general treatment population: psychopathology of impaired physicians. J Addict Med 7:108-112.

30. GLOOM (2015) Top 11 professions with highest suicide rates. Mental Health Daily.

31. Wong B, Imrie K (2013) Why resident duty hours regulations must address attending physicians' workload. Academic Medicine. 88: 1209-1211.

32. Gong Y, Han T, Chen W, Dib HH, Yang G, et al. (2014) Prevalence of anxiety and depressive symptoms and related risk factors among physicians in China: a cross-sectional study. PLoS One 9: e103242.

33. Miller NM, McGowen RK (2000) The painful truth: physicians are not invincible. South Med J 93: 966-973.

34. Brown SD, Goske MJ, Johnson CM (2009) Beyond substance abuse: stress, burnout, and depression as causes of physician impairment and disruptive behavior. J Am Coll Radiol 6: 479-485.

35. Graske J (2013) Improving the mental health of doctors. BMJ 327: s188.

36. Gunderman R (2012) The root of physician burnout. Health: The Atlantic.

37. Safinofsky I (1980) Suicide in doctors and wives of doctors. Can Fam Physician 26: 837-844.

38. Moutier C, Norcross W, Jong P, Norman M, Kirby B, et al. (2012) The suicide prevention and depression awareness program at the University of California, San Diego School of Medicine. Acad Med 87: 320-326.

39. Montgomery A, Bradley C, Rochfort A, Panagopoulou (2011) A review of selfmedication in physicians and medical students. Occupational Medicine. 61: 490-497.

40. Roy A (1985) Suicide in doctors. Psychiatr Clin North Am 8: 377-387.

41. Andrews LB (2014) Physician suicide. *Medscape* #806779.

42. Groves JE, Dunderdale BA, Stern TA (2002) Celebrity patients, vips, and potentates. Prim Care Companion J Clin Psychiatry 4: 215-223.

43. Gundersen D (August 2015 and April 2016) Personal communications.

44. Polfliet SJ (2008) A national analysis of medical licensure applications. J Am Acad Psychiatry Law 36: 369-374.

45. Schroeder R, Brazeau CM, Zackin F, Rovi S, Dickey J, et al. (2009) Do state medical board applications violate the americans with disabilities act? Acad Med 84: 776-781.

46. Gray RW (2013) Physician suicide rates show alarming need for education. Tenn Med 106: 27.

47. Slavin SJ, Schindler DL, Chibnall JT (2014) Medical student mental health 3.0: improving student wellness through curricular changes. Acad Med 89: 573-577.

48. Wright SM, Kern DE, Kolodner K, Howard DM, Brancati FL (1998) Attributes of excellent attending-physician role models. NEJM 339: 1986-1993.

49. Wright S, Wong A, Newill C (1997) The impact of role models on medical students. J Gen Intern Med 12: 53-56.

50. Genovese JM, Berek JS (2016) Can arts and communication programs improve physician wellness and mitigate physician suicide? J Clin Oncol 34: 1820-1822.

51. Wible P (2015) Do physician health programs increase physician suicide? Medscape.

52. Langan M (2015) Physician suicide and the elephant in the room. Disrupted Physician.

53. Finlayson AJ, Iannelli RJ, Brown KP, Neufeld RE, DuPont RL, et al. (2016) Re: physician suicide and physician health programs. Gen Hosp Psychiatry 40: 84-85.

54. Colorado Department of Regulatory Agencies, Colorado Medical Board: Physician Applications and Forms.

55. www.cphp.org/fees.

56. Horsfall S (2014) Doctors who commit suicide while under GMC fitness to practise investigation: Internal review. London: Graduate Medical Counsel.

57. Wynia MK, Papadakis MA, Sullivan WM, Hafferty FW (2014) More than a list of values and desired behaviors: a foundational understanding of medical professionalism. Academic Medicine 89: 712-714.

58. http://www.bma.org.uk/doctorsfordoctors.

59. http://www.gmc-uk.org/Report_of_the_pilot_of_the_doctor_support_service_60386786.pdf.

60. Hu YY, Fix ML, Hevelone ND, Lipsitz SR, Greenberg CC, et al. (2012) Physicians' needs in coping with emotional stressors: the case for peer support. Arch Surg 147: 212-217.

61. Brooks E, Gendel M, Gundersen D, Early S, Schirmacher R et al. (2013) Physician health programmes and malpractice claims: reducing risk through monitoring. Occup Med (Lond) 63: 274-280.

62. D'Eon M (2014) Is medical education hazardous to your health? Can Med Educ J 5: e1-e4.

63. Henderson M, Brooks SK, del Busso L, Chalder T, Harvet SB, et al. (2012) Shame! Self-stigmatisation as an obstacle to sick doctors return to work: a qualitative study. BMJ Open 2: e001776.

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