Medical Student Deaths by Suicide: The Importance of Transparency

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Abstract

In this Invited Commentary, the authors present a call to action regarding the paucity of data related to medical student deaths by suicide. They review the limited literature on medical student suicide and suggest that no comprehensive study has ever occurred. They believe that the available data are too limited to conclude what the rate of death by suicide is among medical students compared with their age-matched peers. The authors speculate that the lack of accurate data may be related both to reluctance on the part of schools to report deaths by suicide and to the failure of national organizations like the Association of American Medical Colleges, Accreditation Council for Graduate Medical Education, and Liaison Committee on Medical Education to mandate reporting. The authors believe that without reliable data, the medical education community will never be able to determine whether any trends or predictors are connected to medical student death by suicide and that, as a result, intervening in a meaningful way will remain impossible. The authors call on the national organizing bodies of medical education to mandate reporting of deaths by suicide, and to create and maintain a database for tracking and studying these events. They advocate for public access to unidentified data, linking medical schools to the number of deaths by suicide, as another method of creating accountability and influencing medical school behavior in addressing this tragic phenomenon.

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The day Kathryn took her own life was a day of reckoning.[1] All of us—students, staff, and faculty—had no choice but to confront our own mortality, as well as the reality that we were working and learning in an environment of our own creation that was wholly unsuited to nurturing the well-being of students, staff, and physicians. Like trainees and administrators at every other medical school in the United States, we had been aware of the national rates of burnout and depression among members of our profession. Tragically, the loss of a life was necessary to mobilize our school community and others into studying the phenomenon of medical student suicide and helping to launch a necessary national discussion. Here we review the limited literature on medical student suicide, present our preliminary data on suicides among U.S. medical students from 2008 through 2017, and call on our medical school colleagues to action.

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In 2017, the National Academy of Medicine highlighted burnout, mental health, and well-being as a top priority, bringing together an impressive group of participants representing leadership from every corner of academic medicine and clinical practice.[2] Those of us working and learning in medicine are now flooded with data on rates of depression, burnout, and suicidal ideation and their effect on physicians, physicians in training, and patients. We know how many doctors take their lives every year, we know the rates of burnout at every level of training, and we know how often medical students think about suicide.[3,4] As scientists and physicians who rely on the scientific method, we recognize that without these data, we are lost. Without data, we would have no way of gauging the extent of the problem, measuring the impact of our interventions, or recognizing welcome (or worrisome) trends.

There is one glaring omission from this flood of information: national rates of death by suicide among medical students.

Limited Literature on Suicide Among U.S. Medical Students

To our knowledge, only five national surveys of medical student suicides have ever been published, and these studies have reported conflicting data. Only three of these surveys[5–7] have focused specifically on medical student suicide rates; the other two[8,9] report information on medical student suicide only as a component of a larger overall study on medical student mortality. All five of these studies are similar in that their investigators ascertained information by administering surveys (by mail, telephone, or e-mail) to deans at each medical school.

The earliest study on this topic that we found examined medical deaths from 1947 to 1967.[8] Of the 163 deaths reported by 50 (of 65) schools during this time frame, 31 (19%) were suicides; suicide was the second most common cause of death in medical students after accidents.[8] In a follow-up study, Everson and Fraumeni,[9] using data from reports of attrition sent to the Association of American Medical Colleges (AAMC), found that of the 55 reported medical student deaths from 1967 to 1971, 5 (9%) were suicides.

Shortly after Everson and Fraumeni published their study, Pepitone-Arreola-Rockwell and coinvestigators[6] found, using data from 88 (of 116 possible) schools from 1974 to 1981, that 52 medical students had committed suicide (34 male, 9 female, 9 unreported). The annual rate was 18.4 suicides per 100,000 students per year.[6] This high rate of medical student suicide departed significantly from the two previous studies. Hays and colleagues[5] continued this trend of regular examination of medical student suicides, looking at

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deaths from 1989 to 1994. According to their study of 101 (of 126) U.S. medical schools, the suicide rate was again very low. They reported 15 suicides (14 male students and 1 female; 12 students were Caucasian, 2 were Middle Eastern, and 1 was Hispanic).

After the study by Hays and colleagues, there was a 15-year gap in research on the topic of medical student suicide. Most recently, Cheng and colleagues[7] examined the deaths at 92 (of 133) U.S. medical schools from 2006 to 2011. They reported 6 medical student suicides, or 2.3 per 100,000 students. Four of the students were male and 2 female; 5 were Caucasian, and 1 was Asian. The authors provided further detail, reporting that 2 suicides occurred each in the first, second, and third years of medical school and that the methods of suicide (of the 5 known) were gunshot (n = 2), hanging (n = 2), and overdose (n = 1).[7]

Preliminary Data on Suicides Among U.S. Medical Students From 2008 to 2017

To begin to fill the gap on research into medical student suicide, we conducted our own preliminary research. We obtained contact information for 100 students, each representing a U.S. MD-granting medical school that has an MD/PhD program (of 112 total in the country). We sent a survey electronically to student representatives at each of these 100 schools, asking them to distribute it to their MD/PhD peers. Specifically, the survey asked respondents if any medical student deaths or suicides occurred during their time at the institution. Additional information obtained included years the suicides occurred, as well as sex and ethnicity of the deceased students. We intentionally kept the survey brief to increase the odds of its completion. We postulated that, compared to school administrations, students have higher expectations of accountability regarding the deaths of their peers and that, among learners, MD/PhD students would be an ideal population to survey because they have the longest institutional memory, often spending 7 to 9 years enrolled at their school. To our knowledge, no other investigations have asked students directly to report on rates of suicide. We recorded school names for response rate tracking only. If multiple students from an institution reported the same suicide, we counted it only once.

We received responses from 446 students representing 78 MD/PhD programs (a 78% program response rate). Students reported a total of 54 unique deaths, including 34 suicides, from academic years 2008–2009 to 2017–2018. We received information on gender for 31 of the deaths by suicide and on race/ethnicity for 26. Students reported that 22 of the people who committed suicide were males and 9 were female; 15 were Caucasian, 4 Asian, 3 Middle Eastern, 3 Indian, and 1 African American. We calculated a prevalence of 6.19 suicides per 100,000 students during the 10 years examined.

A Call to Action

Although we cannot say with full confidence that our data are accurate and complete, they fall within the very wide range of medical student suicides reported over the past 70 years. Almost that entire range falls below both the age-adjusted rate of suicide in the United States (13.42 per 100,000) and the rate among adults aged 25–43 (16.49 for 100,000).[10]

Our preliminary data are critical for understanding and addressing suicide and mental illness. Medical educators and medical professionals have embarked on a national initiative to address burnout and mental health among medical trainees and practicing physicians—with profound implications for teaching, training, learning, and practice—despite having extremely limited and conflicting data for what is arguably the most significant manifestation of poor well-being. We believe that medical schools must be held accountable for the timely and accurate reporting of deaths by suicide among their students.

No reliable reporting mechanism is currently in place. To our knowledge, there is no mandate from the AAMC, the Accreditation Council for Graduate Medical Education (ACGME), or the Liaison Committee on Medical Education (LCME) that suicides be reported.

We believe that schools may not report suicides for a variety of reasons. These include legitimate concerns, such as the fear of copycat suicides and the importance of protecting the privacy of the students who are deceased and their families. However, some factors may have more to do with self-interest, such as concerns about what a publicly reported suicide might do to a school's recruitment, reputation, and ranking. In our opinion, there is no valid reason to avoid establishing a rigorous, data-driven approach to examining this national crisis. In fact, until the community has accurate data, medical educators and other stakeholders will not even know whether the current problem represents an acute crisis, a decades-long trend that has been neglected for generations, or an incidence of death by suicide that is no different from that of age-matched controls.

Medical student suicide is an area in dire need of further research. In addition to collecting and reporting the number of medical student suicides, we must also determine whether these deaths are linked to other variables, including, but not limited to:

- U.S. region
- Year in medical school
- Transitions in education
- Medical student demographics
- *U.S. News & World Report* rankings
- Attendance at a public vs. private school
- Mean student debt

Data indicating that resident suicides are more likely to occur in the first two years of residency and in specific months of the year provide essential information for residency program directors and others establishing interventions.[11] Similar data about medical student suicides could lead to much-needed interventions at the undergraduate medical education (UME) level.

Students, faculty, staff, and academic health center leaders should demand reliable and valid information about, as well as funding for research on, medical student suicides. The leaders of U.S. medical schools should be willing to report student deaths by suicide to a secure, central data repository that is managed by some combination of the AAMC, LCME, and/or ACGME. These organizations must find a way to analyze and share such data with schools, applicants, students, and the general public so that data can drive meaningful

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change. School deans, administrators, and leaders should use the available data, especially on the deaths at their schools, to do root cause analyses for every event, allowing the UME community to identify trends and predictors of deaths by suicide. Data on medical student suicides should be available and reviewed for every Clinical Learning Environment Review (CLER) visit by the ACGME and every (re)accreditation by the LCME—two existing mechanisms that are capable of holding institutions accountable for addressing suicide. Further, some of the data, perhaps just numbers of deaths by school, should be publicly available on the AAMC and ACGME websites. There is no substitute for public pressure in overcoming schools' concerns about reputation, recruitment, and rankings. Working groups, committees, and white papers are meaningless without a reliable means of measuring outcomes and progress. Anything less than public reporting and actual data to demonstrate improvement is a travesty of justice.

If educators fail to report and study medical student suicide, we predict an alternative approach—one that is fraught with the worrisome possibilities of inaccurate reporting and inadequate confidentiality. Medical students have been watching their friends and classmates die needlessly for years. They want information, accountability, and action. A grassroots effort among medical students to create an open-access, social-media-based reporting mechanism would not be an effective way to gather and report valid data, but it would certainly spur the medical education community into action if the community fails to act in a timely fashion.

We are united in advocating for one of these two approaches. We prefer accurate reporting and systematic investigation, but we are prepared to support a social-media-based, open-access information campaign if the community of educators fails to heed our call. We do not claim to represent students and faculty everywhere, nor even those at our own institution. We are, however, two members of the medical community who have a long institutional memory. One of us (B.M.L.) has just completed his seven-year MD/PhD training and is now an otolaryngology resident at Icahn School of Medicine at Mount Sinai. The other (D.M.) has been dean for medical education for over 13 years and a member of the faculty at Mount Sinai for almost 30 years. We believe that a reporting mandate linked to a secure and accurate database will allow medical schools and medical education governing bodies to begin the process of truly understanding—and addressing—deaths by suicide. Medical student suicides demand our urgent attention. Lives are literally at stake, and the time for action is now.

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