Medical Schools Should Admit More Guitar Players

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Like Mangione and his colleagues, we believe humanities are indespensable to medical education and practice. It is at best unwise, and at worst impossible, to practice medicine without the attitudes, skills, and behaviors toward which medical humanities curricula aim (such as deep listening, empathy, and ethics). Not only do we personally believe in this work, we are also privileged to enjoy the support of our institution, which likely allots more curricular time to humanities than any other US medical school.[1]

But teaching medical humanities is only a beginning—it is also important to evaluate whether such curricula are effective. And here, the trouble begins, for there is no consensus about what outcomes humanities ought to be aiming for[2–4] or how to determine if the goals have been achieved.

So, when given the opportunity to review and comment on Mangione's outcome study of medical student exposure to humanities, we were elated. In their study, Mangione and his colleagues administered a survey to 739 medical students, asking them questions about their exposure to the humanities and administering scales for a variety of outcomes: wisdom, empathy, tolerance for ambiguity, emotional intelligence, self-efficacy, burnout, and visual-spatial skills.[5] To gauge exposure to the humanities, students were asked to indicate on a scale of 0 "never" to 4 "daily" how often they engaged in the following humanities activities: visual arts, singing, playing musical instruments, listening to music, dancing, writing for pleasure, reading for pleasure, attending theater, going to museums/galleries, and attending concerts. So far, so good; if exposure to humanities produces wise, empathic, emotionally intelligent doctors, this would have important implications for medicine. Indeed, the authors found that humanities exposure was significantly related to all ten of the identified outcomes and related most strongly to tolerance for ambiguity, empathy, and wisdom.[5]

In discussing the implications of their findings, Mangione et al. framed their results primarily around curriculum. They conclude "Hence, if we wish to create wiser, more tolerant, empathetic and resilient physicians, we might want to reintegrate the humanities in medical education."[5]. Though we agree wholly with this sentiment—that humanities in medical education may help support the development of humanistic physicians—the conclusion is not supported by their study. Quite simply, to draw such a conclusion would require an entirely different research design.

Rather, we believe their findings are most applicable to medical school admissions. If the medical education community believes that it is better for medical students to have high levels of the personal qualities Mangione et al. measured, then it makes good sense to take a close look at the admission process. This would not obviate the need for medical humanities curricula—the two go together—but why would we *not* try to set ourselves off on the right foot by admitting students who seem to come with a propensity for the skills and attributes we ultimately seek? This begs a question, however; if (and it is a big if) we have reliable measures for empathy, wisdom, emotional intelligence, and so on, then why not simply ask the questions directly during the preadmission process, rather than relying on surrogate measures such as the amount of time applicants spend playing the guitar or drawing? After all, the authors have not made the case that measuring these attributes directly is unfeasible or overly burdensome.

A separate argument would need to be made for the value of humanities in the medical curriculum. Although there is general agreement about the importance of humanities for medical education, the evidence base for such curricula is weak.[2] Ideally, a multi-site study comparing agreed upon outcomes is necessary—this would allow us to compare students from schools that have ample humanities curricula against schools that have scant humanities curricula. Though there would certainly be confounders (differences in admission criteria between schools, for one), this type of comparative outcome study is sorely needed if we are to develop best practices for medical humanities curricula.

We also identified some issues with the study design and methodology that have implications for the interpretation and generalizability of the results. First, the 23.8% response rate coupled with the lack of data about non-respondents raises questions about biases, particularly a concern that respondents may have been more likely to be "humanities-friendly" than non-respondents. Relatedly, correlation is not causation, and there is a significant chicken and egg problem (which the authors do identify): students who report higher humanities exposure have more empathy, but we do not know which way it goes. Does the humanities exposure cause the increase in empathy or do individuals with high levels of empathy find themselves drawn to humanities experiences? This matters if

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we are to draw meaningful conclusions about the role humanities interventions should play in medical admissions and education.

Many medical schools share the common goal of cultivating humanistic physicians. Unfortunately, it is not yet clear how to get there. While Mangione's study does not provide a definitive road map, the findings do suggest an opportunity to refocus some of our efforts on the overlooked area of admissions. Accordingly, more work should be done to explore the impact of humanities in the formal curriculum and also whether and how to support current students in their private practice of humanities activities. We look forward to seeing what comes next.

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Compliance with Ethical Standards:

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REFERENCES

1. **Klugman CM.** Medical humanities teaching in North American allopathic and osteopathic medical schools. J Med Humanit. 2017; online first.
2. **Ousager J, Johannessen H**. Humanities in undergraduate medical education: A literature review. Acad Med. 2010; 85(6): 988–998.
3. **Doukas DJ, McCullough LB, Wear S**, PRIME Investigators. Perspective: Medical education in medical ethics and humanities as the foundation for developing medical professionalism. Acad Med. 2012; 87(3):334–41.
4. **Perry M, Maffulli N, Wilson S, Morrissey D**. The effectiveness of arts-based interventions in medical education: A literature review. Med Educ. 2011; 45: 141–148.
5. **Mangione S, Chakraborti C, Staltari G, Harrison R, Tunkel AR, Liou KT**. Medical students' exposure to the humanities correlates with positive personal qualities and reduced burnout: A multi-institutional U.S. survey. JGIM.. https://doi.org/10.1007/s11606-017-4275-8.