

Medical Humanities Teaching in North American Allopathic and Osteopathic Medical Schools

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Published online: 7 November 2017
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Abstract Although the AAMC requires annual reporting of medical humanities teaching, most literature is based on single-school case reports and studies using information reported on schools' websites. This study sought to discover what medical humanities is offered in North American allopathic and osteopathic undergraduate medical schools. An 18-question, semi-structured survey was distributed to all 146 (as of June 2016) member schools of the American Association of Medical Colleges and the American Association of Colleges of Osteopathic Medicine. The survey sought information on required and elective humanities content, hours of humanities instruction, types of disciplines, participation rates, and humanities administrative structure. The survey was completed by 134 schools (145 AAMC; 31 AACOM). 70.8% of schools offered required and 80.6% offered electives in humanities. Global health and writing were the most common disciplines. Schools required 43.9 mean (MD 45.4; DO 37.1) and 30 (MD 29; DO 37.5) median hours in humanities. In the first two years, most humanities are integrated into other course work; most electives are offered as stand-alone classes. 50.0% of schools report only 0–25% of students participating in humanities electives. Presence of a certificate, concentration or arts journal increased likelihood of humanities content but decreased mean hours. Schools with a medical humanities MA had a higher number of required humanities hours. Medical humanities content in undergraduate curriculum is lower than is indicated in the AAMC annual report. Schools with a formal structure have a greater humanities presence in the curriculum and are taken by more students.

Keywords Medical education · Health humanities · Medical humanities · Curriculum

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Purpose

Medical humanities is “an interdisciplinary field concerned with understanding the human condition of health and illness in order to create knowledgeable and sensitive health care providers, patients, and family caregivers” (Klugman 2017). Medical humanities first emerged in undergraduate medical education as a history of medicine course at Western Reserve University School of Medicine (today Case Western Reserve University School of Medicine) in 1952. The very first department of humanities in medicine appeared at Pennsylvania State School of Medicine in 1967 (Bleakley and Jones 2014). The Medical Humanities has been a growing field in undergraduate medical education and even in baccalaureate education (Berry et al. 2016). In 2011, the Liaison Committee on Medical Education (LCME) reported there were fifteen departments, nine centers, and four associate/assistant deans of ethics and humanities at North American medical schools (Barzansky 2012). The 2015–2016 annual American Association of Medical Colleges (AAMC) curriculum report shows that 88.8% (119 out of 134) of MD-granting schools indicated that they taught Medical Humanities in the required and 72.5% (103 out of 142) in the elective curriculum (AAMC 2017). This percent has been decreasing for the last three years.

Descriptions and evaluations of the humanities in medical schools are mostly case studies about programs, courses, or activities. A special 2003 issue of *Academic Medicine* presented forty-one medical humanities programs at medical schools throughout the world (Dittrich 2003). These were mostly descriptive case reports with no analysis across the reports. Other articles describe specific projects, assignments, and the application of humanities to teaching clinical skills (Klugman et al. 2011; George et al. 2016; Perry et al. 2011; Self et al. 1993; Calman et al. 1988; Perakis 1989) and outcome assessments (George et al. 2016; Klugman et al. 2011; Graham et al. 2016; Goodwin and Machin 2016; Bleakley 2015; Evans and Greaves 2001).

Few studies have examined the state of medical humanities education. Lam et al. (2015) provided a literature and website review to learn that fourteen out of seventeen Canadian medical schools offer humanities in their curricula but did not collect specifics about those offerings. Except for the annual AAMC report, studies to date rely on published literature or reviews of websites rather than asking questions directly to the medical schools. This approach is problematic because it relies on marketing information rather than actual offerings. No article offered a comparative analysis of humanities offerings across medical schools, and no information is available on humanities in DO schools. The current study examined curricular offerings in the humanities, arts, and social sciences in undergraduate medical education. This project did not examine the value of the humanities in medical education nor their effect on students, physicians or patient outcomes.

Methods

With a student’s assistance, I developed a structured, eighteen-question survey that asked what disciplines were taught as medical humanities, the number of hours and format of instruction, whether such topics are required or elective, any additional programs (art journals, medical humanities pathway/concentration), and percent of the class that takes humanities courses. In addition, three comment spaces allowed for unstructured additional text describing the school’s programs.

I sent a Qualtrics survey link to every member medical school of the American Association of Medical Colleges (AAMC) and American Association of Colleges of Osteopathic Medicine (AACOM) as of June 2016. The invitation email was addressed to the dean of the medical school, senior education official, and director of any medical humanities or bioethics curriculum. By using a single email to all three people, I hoped to minimize the number of multiple entries. From June 2016 to January 2017, schools were sent an initial invitation and up to two reminders.

Using Excel and SPSS 24, I analyzed the data for descriptive statistics and evaluated free response comments.

Results

Respondents completed the survey 145 times. In ten instances, there were multiple submissions from one school. In nine of those instances only one attempt had been completed. In the one case with multiple completions, the more complete response was used. Of the 176 institutions invited (145 AAMC; 31 AACOM), 134 completed the survey (115 AAMC; 19 AACOM) for a response rate of 76.1% (79.3% AAMC; 61.3% AACOM).

Ninety-five (70.9%) respondents stated that they have required medical humanities content, and 108 (80.6%) have elective curriculum. Table 1 shows how the claim of humanities curriculum break down between MD and DO programs. The numbers decrease when the question switches from “do you have humanities curriculum” to “what do you teach in your humanities curriculum?” In the second question, 60% of MD schools claim required curricula and 80% offer electives/selectives in medical humanities. As seen in Table 2, the most common required disciplines taught as humanities are global health (52.2%), followed by writing (50.4%). All other humanities disciplines are required in less than half of schools. In regards to electives and selectives, the most commonly offered is writing and art (65.2%): With the exception of “Other,” each discipline is offered in more than 50% of schools.

In DO schools, 74% have required curricula and 53% offer electives. The most common required disciplines taught (see Table 2) are global health (73.7%), followed by literature and writing (68.4%). Except for “Other,” humanities are required in more than half of the schools surveyed but electives are generally offered in less than half.

I asked respondents about the format of humanities teaching: integrated, part of a clinical rotation, a stand-alone course, a humanities requirement from which students must select among choices, or not offered. Of the 95 schools that answered, required humanities content is mostly “integrated into a doctoring practice course.” Very few DO or MD schools offered required humanities in clinical rotations or as a stand-alone course. Of the 108 schools that responded, the majority offered electives as stand-alone courses. With the exception of global health, almost none offer humanities in clinical rotations (Table 3).

Table 1 Percent of schools claiming humanities curriculum

	Required	Elective
MD (<i>n</i> =115)	70.4% (81)	85.2% (98)
DO (<i>n</i> =19)	74.4% (15)	52.6% (10)
Total (<i>n</i> =134)	70.8% (95)	80.6% (108)

Table 2 Disciplines taught as humanities

	MD (<i>n</i> =115)		DO (<i>n</i> =19)	
	Required	Elective/selective	Required	Elective/selective
Art	47.0% (54)	65.2% (75)	47.4% (9)	47.4% (9)
Film	44.4% (51)	60.0% (69)	57.9% (11)	42.1% (8)
Global health	52.2% (60)	64.3% (74)	73.7% (14)	52.6% (10)
History	46.1% (53)	59.1% (68)	57.9% (11)	42.1% (8)
Literature	48.7% (56)	68.7% (79)	68.4% (13)	42.1% (8)
Philosophy	47.8% (55)	53.9% (62)	63.2% (12)	47.4% (9)
Poetry	44.3% (51)	54.8% (63)	63.2% (12)	42.1% (8)
Religion	46.1% (53)	51.3% (59)	63.2% (12)	42.1% (8)
Writing	50.4% (58)	65.2% (75)	68.4% (13)	47.4% (9)
Other	12.2% (14)	17.4% (20)	26.3% (5)	10.5% (2)

*Other includes social sciences, theater, ethics, culture, interprofessional medicine, economics, playwriting, dance, and music

For the eighty schools reporting on hours of required instruction (66 MD and 14 DO), the average total number of hours in required humanities instruction over all four years of undergraduate medical education is 43.9 (see Table 4) with a median of 30. The most hours of humanities instruction are found in the first two years of school (20.2 and 18.6), followed by a large decrease in the second two years (8.8 and 8.2). MD schools offer more average humanities hours (mean 45.4; range 2–269) than DO schools (mean 37.1; range 4–103). DO schools have higher median (37.5) hours of humanities hours than MD schools (29 h). The number of MD hours decreases each year whereas in DO schools, the second year has the most hours, followed by the first, fourth and third years of instruction. Of the ten programs with more than 100 h of instruction over all four years, eight have centers or programs in medical humanities and one had a National Endowment for the Humanities grant to develop their humanities curriculum; one is a DO program and three are recent (since 2012) medical schools. Considering the large difference between mean and median in MD schools, removing the nine time intensive programs from calculations leads to an overall mean of 29.5 h and a median of 24 h.

Table 5 shows “what percent of the class participates in humanities electives/selectives?” About one-half of the 97 responding schools have less than a quarter of the class enroll in a humanities elective course. Less than 9% of schools have more than 50% of students enroll in humanities elective courses.

For the seventeen schools with a humanities concentration, pathway, or concentration, 70.6% (12 schools) had required curriculum and 100% (17) offered electives. In terms of hours of instructions, schools with a formal focus in humanities structure had a mean of 55 and median of 30 h, while the other 70 reporting schools without a focus had a mean of 42.5 h and a median of 30 h. Of these schools, 58.8% (10) reported that 0–25% of the class enrolled in electives and 23.5% (4) reported 26–50% enrolled (compared to 50.0% (67) of all other schools reporting 0–25% participation and 13.4% (18) reporting 26–50% participation).

For the forty-six programs that indicated they have an art journal, 82.6% (38) had required humanities curriculum and 100% (46) had elective curriculum. The mean number of hours of humanities instruction were 40.9 h compared with a median of 20 h (compared to 46.1 mean and 30.5 median for other reporting institutions). In these schools, 58.7% (27) of students enrolled in humanities electives (versus 50% overall). Of the twelve schools reporting more

Table 3 Instructional setting by humanities discipline

	Required (n=95)				Elective/selective (n=108)				
	Integrated into a doctoring practice course	Part of clinical rotations	Stand-alone Course	Students must select from a list of humanities course	Not offered	Integrated into a doctoring practice course	Part of clinical rotation	Stand-alone course	Not offered
Art	22.1% (21)	2.1% (2)	2.1% (2)	11.6% (11)	28.5% (27)	7.4% (8)	1.9% (2)	43.5% (47)	25% (27)
Film	23.2% (22)	1.1% (1)	4.2% (4)	12.6% (12)	24.2% (23)	12.0% (13)	0.0% (0)	26.9% (29)	32.4% (35)
Global health	38.9% (37)	6.3% (6)	8.4% (8)	13.7% (13)	10.5% (10)	12.0% (13)	12.0% (13)	46.3% (50)	7.4% (8)
History	32.6% (31)	1.1% (1)	6.3% (6)	10.5% (10)	16.8% (16)	13.0% (14)	0.0% (0)	42.6% (46)	14.8% (16)
Literature	29.5% (28)	2.1% (2)	3.2% (3)	15.8% (15)	22.1% (21)	6.5% (7)	0.0% (0)	57.4% (62)	16.7% (18)
Philosophy	28.45 (27)	3.2% (3)	9.5% (9)	5.3% (5)	24.2% (23)	10.2% (11)	1.9% (2)	29.6% (32)	24.0% (26)
Poetry	20.0% (19)	0.0% (0)	2.1% (2)	11.6% (11)	32.6% (31)	9.3% (10)	0.0% (0)	25.0% (27)	31.5% (34)
Religion	35.7% (34)	1.1% (1)	2.1% (2)	7.4% (7)	22.1% (21)	13.0% (14)	1.9% (2)	23.2% (25)	24.1% (26)
Writing	45.3% (43)	10.5% (10)	5.3% (5)	7.4% (7)	6.3% (6)	13.8% (15)	3.7% (4)	45.4% (49)	14.8% (16)
Other*	6.3% (6)	2.1% (2)	6.3% (6)	2.1% (2)	3.2% (3)	0.9% (1)	1.9% (2)	13.0% (14)	4.6% (5)

*Other includes social sciences, theater, ethics, culture, interprofessional medicine, economics, playwriting, dance, and music

Table 4 Hours of required humanities curriculum

		Year 1	Year 2	Year 3	Year 4	Total
MD (<i>n</i> =66)	Mean	21.0	18.5	9.4	8.8	45.4
	Median	11	11	6	8.5	29
DO (<i>n</i> =14)	Mean	16.4	19.2	4.5	5.34	37.1
	Median	16.5	18.5	3.5	5.5	37.5
TOTAL (<i>n</i> =80)	Mean	20.2	18.6	8.8	8.2	43.9
	Median	11	11	6	8.5	30

Table 5 Percent of medical school students participating in humanities electives/selectives

(<i>n</i> =78)	MD	DO	Total
0-25%	54.0% (62)	26.3% (5)	50.0% (67)
26-50%	13.0% (15)	15.8% (3)	13.4% (18)
51-75%	5.2% (6)	5.3% (1)	5.2% (7)
76-100%	3.5% (4)	5.3% (1)	3.7% (5)

than 50% student enrollment in electives, nine (75.0%) have an arts journal, and one of the twelve is considering starting a journal. *Seven* schools currently without journals indicated that they are developing one.

Seven of the responding institutions offer a master's degree in medical humanities. Analysis included degrees in "medical humanities and ethics" but excluded those only in bioethics. Of schools with an MA, 71.4% (5) had required and 85.7% (6) had elective curriculum. The MA schools also have many more average required hours (62.2) and a higher median (36) than non-MA schools (42 average hours; 29 median hours). MA schools have slightly higher hours of instruction in the first two years but have fewer hours in years three and four. All schools with MA programs said that 0-25% of their class participates in humanities elective curriculum.

Thirty-three schools offered comments in the free response sections of the survey. Most of the comments were explanations to responses in the structured questions, but some offered themes in the state of medical humanities education at their school. Thirteen responses dealt with the theme of "what we've lost." Respondents talked about reductions in medical humanities faculty time and numbers, revised curricula that left little to no time for humanities, loss of administrative support, and loss of funding. Fourteen comments discussed the loss of independent humanities coursework into integrated curricula. Three schools discussed how the humanities were now subsumed under clinical ethics (which they distinguished from philosophical ethics) curricula and four expressed hope for more humanities in the future.

Conclusion

When the AAMC asks schools if they offer "medical humanities," 88.8% said they require studies in this area, and 72.5% say they offer electives (AAMC 2017). These numbers are nearly the exact reverse of what the same MD schools reported in this survey (70.4% required; 85.2% elective). However, when schools are asked what disciplines they teach as medical humanities, the presence in the curriculum drops to below 50% (except for global health which

the AAMC measures separately). This indicates that schools may be checking boxes on required forms without understanding what the medical humanities actually is.

While global health and writing are the most popular disciplines reported, global health is not a humanities discipline though some schools may consider it as such. The survey did not ask what kind of writing so that may capture reflective, fiction, creative non-fiction or scientific journal article writing. As reported in the comments, there is a movement away from discrete medical humanities coursework and sessions toward an integrated approach where it is hoped that some humanities remain in the curriculum. However, such integration leads to a decrease in curricular time available for humanities as shown by the decreasing percent of schools over the last several years who have required medical humanities as reported to the AAMC (2017). Integration may pose the greatest risk to the loss of humanities in medical schools.

By percent, more DO schools require medical humanities in the curriculum than MD schools, and there is a small differential between mean and median hours, suggesting that instruction is more similar among schools. This difference may be due to the different philosophies between allopathic and osteopathic medicine. Osteopathy takes a more holistic perspective in viewing and treating the patient, a viewpoint that may be presented through the humanities. Because the humanities are a greater portion of the required curriculum, there is less need to offer electives. Alternatively, DO schools may be new to adopting elective humanities (Hoff et al. 2014). When it comes to electives, MD programs have more options than DO schools. The large disparity between mean and median hours of humanities of instruction in MD schools suggests that a few programs have a large number of hours. More than 50% of programs have fewer than twenty-nine hours of humanities curriculum over all four years. Neither MD nor DO programs offer much medical humanities in the clinical years (three and four) compared to the pre-clinical years. Consider that except for writing and global health, fewer than 2% of medical humanities experiences are available in clinical rotations. Although the medical humanities are often touted as a response to hidden curriculum that decreases empathy and communication skills, this material is not being offered when students are experiencing their biggest challenges in these areas.

In fact, even within a medical school that offers electives, only a quarter of the class is usually taking advantage of the humanities courses. The numbers are lower in DO schools, but those programs do have more humanities in the required curriculum. However, having a formal humanities concentration, pathway or certificate led to greater student participation in electives (82.3% versus 72.3% for all others). The lack of participation in electives could be due to a student's not choosing these options, lack of options from which to choose, inconvenient scheduling, or a hidden curriculum that dissuades students from humanities electives in favor of additional scientific or clinical time.

Schools with a humanities focus (pathway, concentration or certificate) or an arts journal report decreased required hours. A school with a concentration, pathway or certificate has fewer mean hours (38.5 versus 55) but similar median hours (30 versus 30) suggesting that there is greater saturation among all schools rather than having a few schools with a large number of hours. When a school has an art journal, it has a similar mean number of required hours (40.9 versus 46.1), but a much lower number of median hours (20 versus 30.5). More schools with art journals are likelier to have required humanities content (86.2% versus 70.8%), and all of those schools have electives. The schools may be counting participation in the journal as an elective which could explain the high percent with a writing program.

The presence of a medical humanities MA program does not change the likelihood of a school having required or elective undergraduate medical curricula, but it does increase the number of

required hours of humanities instruction (mean 62.2 h; median 36 versus mean 42; median 29 for non-MA schools). Similarly, schools with a humanities center or program have more hours of humanities teaching. Perhaps when a school invests in these graduate programs and administrative structures, there are champions advocating for additional hours of instruction. Consider that most electives are offered as stand-alone courses, meaning that one or more faculty members have enough interest in the area to design and offer these classes outside of the core curriculum. Centers and programs are often encouraged to offer electives as a way to capture more education RVUs (or teaching credits). Humanities courses may exist when there is a dedicated advocate for them or a financial incentive.

There are several limitations to this study. This was a self-report survey, and thus data are reliant on the person completing the survey having detailed knowledge of the curriculum at hand when completing the questions. There could be participation bias in that the schools that did not respond to the survey or to particular questions may lack humanities content in the curriculum. Given the disparity in reporting between having medical humanities in the curriculum and what humanities disciplines are in the curriculum, it would have been helpful to ask respondents to define “medical humanities.” Also, the survey did not ask who teaches the medical humanities aspect of the curriculum—a humanities PhD (or MD/PhD), or an MD with an interest or undergraduate degree in the humanities discipline—which would be a valuable question for future study.

Acknowledgements I would like to acknowledge Alexa Zajecka for her assistance in designing the survey as well as Nicole Tolwin, MSN, RN and Joseph Reses, MD, MS for their assistance in statistics.

Funding There was no funding for this study.

Compliance with Ethical Standards

Conflict of Interest Klugman is a consultant for Otsuka Pharmaceuticals.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was not required for this study because it was determined to be exempt by the institutional review board. However, the first question of the survey presented information similar to what would be found on a consent document and asked the respondent to indicate if she or he agreed to participate.

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