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COMMENTARY



Medical humanities in medical education and practice

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Introduction

Wherever the art of Medicine is loved, there is also a love of Humanity (Hippocrates 2018)

What is Medical Humanities (MH) and why is it important for medical education today? In this Commentary, we will discuss these questions within the context of a literature overview, objectives of MH within medical education, and our own experience of teaching and conducting research in the field. Within this, we bring a global lens and consider emerging topics and what the future can hold for this fascinating field.

Medical Humanities is not new. As far back as the 1920s, Peabody (1927) famously claimed that “the secret of the care of the patient is in caring for the patient,” and fifty years later, Pellegrino (1984) believed that “medicine connects technical and moral questions in its clinical decisions: it is required to be both objective and compassionate. It sits between the sciences and the humanities being exclusively neither one nor the other but having some of the qualities of both.” Definitions of MH abound, and this, as Ahlzen (2007) mentions, is a sign of a thriving and mature discipline, similar to what occurred with medical ethics approximately thirty years ago. The following definitions, however, seem particularly pertinent: “an integrated, interdisciplinary, philosophical approach to recording and interpreting human experiences of illness, disability, and medical intervention...” (Evans 2002) and “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). MH draws on the “creative and intellectual strengths of diverse disciplines including literature, art, creative writing, drama, film, music, philosophy, ethical decision making, anthropology, and history in pursuit of medical educational goals” (Kirklin 2003).

In the bigger picture, we live in a rapidly changing world and stability or certainty do not seem to play a part in the 21st century life. This is never truer than within the medical field where the speed of technological advance is remarkable: nanotechnology, genome editing, robotics, 3D printing to name a few are changing not only how medical education and practice are conducted but how we see the world. Even within medicine, where great steps in technology have led and are leading to enormous leaps in medical care and an ever-increasing array of tools at the disposal of

medical practitioners in the quest to help, cure and care for their patients, fundamental questions arise and remain.

With this rapid advancement of technology in science and medicine, aligned with increasing pressures of productivity, are we able still to cultivate and preserve the necessary balance with humanistic care and caring? The art and science of medicine? Fundamental to all this is whether physicians and healthcare practitioners in general are equipped to deal with what their patients need in the 21st century, and whether indeed their education is geared to a prepared heart and mind. According to Heath (2016), “evidence-based medicine tempts us to try to describe people in terms of data from biomedical science: these are not and will never be, enough. Such evidence is essential but always insufficient for the care of patients. It gives us an alphabet but as clinicians, we remain unsure of the language.”

Within the sea of change in science and medicine, there has been increasing recognition that core elements of physicianship are “anchored” in the arts and humanities including forming deeper connections with patients, maintaining joy and meaning in medicine, and developing empathy and resilience (Mann 2017). Integration of humanities/arts into medical education, it is suggested, can support learners developing essential qualities such as professionalism, self-awareness, communication skills, and reflective practice (Mann 2017; Wald et al. 2015). According to Gordon (2005), the medical humanities can overcome the separation of clinical care from the “human sciences” and foster interdisciplinary teaching and research to optimize patient care through a more holistic approach. In line with this, Colvin et al. (2017) recently highlighted how MH can promote professionalism, social, and communication “competencies” in graduate medical education whilst Batistatou et al. (2010) propose MH as aiding construction of personal and professional values. Chiavaroli (2017) believes MH help constitute what it means to think like a doctor. Data are emerging on MH helping physicians and trainees cope with and reduce stress, mitigate burnout, foster resilience, and promote wellbeing (Gordon 2005; Wald et al. 2016, Wald et al. 2018). Mangione et al.'s (2018) multi-institutional US survey recently revealed medical students' exposure to the humanities correlating with positive personal qualities and reduced burnout.

In this Commentary, we suggest that inclusion of MH in medical education and practice can support integrating the humanistic with the scientific, ideally optimizing wellbeing

of both patients and professional caregivers. Our belief is that the MH have a significant role to play in bringing the necessary balance back to both medical education and practice. We now explore how this may be realized.

How

Physicians are poised at the interface between the scientific and lay cultures (Kleinman 1988)

How can the MH be introduced into medical curricula?

Various approaches and steps are being taken to reincorporate MH into medical education curricula around the world. Even though a degree of consensus exists that the MH need to be (re)introduced into medical education, the question still arises as to how; whether, for example, they should be integrated (Evans and Macnaughton 2006) or perhaps, optional.

An integrated, required MH curricular role in areas such as behavioral health, communication skills, cultural awareness, palliative care, and geriatrics has been described and illustrated by examples of how “humanities-based learning can occur alongside the basic and clinical sciences (e.g. end-of-life inquiry in anatomy; film, art, and literary representations of depression, schizophrenia, or autism in neuroscience) and in each of the clinical clerkships” (Shapiro et al. 2009, p. 195–6). In New Zealand, on the other hand, a MH elective became required for second-year students (Grant 2002).

Tension regarding how to place MH within medical curricula exists, and the argument that medical curriculum is already over-burdened is a strong one. Moreover, within this argument, false concepts of “soft skills” and “hard skills” appear. Nevertheless, even within this tension, reasonable proposals exist. Peterkin (2016) offers a “practical compromise” with twelve tips for a curricular model of curating arts and humanities-based themes slotted strategically into available teaching sessions. Kalra et al. (2016) use poetry within teaching pharmacology, while Wald et al.’s (2014) integration of MH (narrative medicine) within an electronic health record skills course is an example of a more holistic approach.

There is a great upsurge in MH curricula initiatives within medical education around the world. A recent American Association of Medical Colleges (AAMC) survey found that the majority of U.S. and Canadian medical schools have included MH programs. Some of these programs included such topics as reflective practice, professional identity formation, empathy, cultural humility, tolerance of ambiguity, critical thinking skills, literature and medicine, the history of medicine, and narrative writing (Todd 2016). Moreover, the consensus was greatly in favor of these initiatives; from 134 survey respondents (out of 146-member schools of the AAMC and the American Association of Colleges of Osteopathic Medicine), 70.8% offered required courses in humanities and 80.6% electives (Klugman 2017). Globally, recent reviews describe humanities and medical ethics as fundamental curricula components of medical schools in China (Kosik et al. 2014), Ireland (Patterson et al. 2016; Walsh and Murphy 2017),

and Israel (Reis et al. 2016) and emerging initiatives in India (Singh et al. 2017), for example.

How can MH in curricula be assessed?

As we introduce MH into medical curricula, how best might this be assessed? According to Fins et al. (2013), “we must adopt assessment tools that adequately capture what the humanities have to offer and encourage interdisciplinary collaboration that is sophisticated and rigorous.” Pfeiffer et al. (2016), however, encourage caution when tackling this topic, citing Shapiro et al.’s (2009) assertion that these [MH] “cannot be judged effectively by standards set for evaluating technical competency.” Along these lines, Belling (2010) in response to Ousager and Johannessen’s (2010) MH literature review outcome of “only 9 out of 245 studies provided evidence of long-term impact on future doctors’ attitudes and behavior with actual patients,” calls for the establishment of “effective and persuasive alternatives to the blunt tools of outcomes measurement.”

Kuper (2006) and Lake et al. (2015) emphasize the potential value of qualitative methods for MH assessment and there are strong claims for this, with Potash et al. (2014), for example, showing how qualitative analyses can reveal benefits of art-making with an increased understanding of self, patients, pain and suffering as well as the doctor role for Hong Kong medical students. Close observation with feedback and reflective portfolios to assess the process of learning in arts-based interventions has been suggested (Osman et al. 2018). Jones et al.’s (2017) qualitative study of creating art based on stories of illness encouraged students’ explorations of conceptions of the self, family and society, as well as illness and medical care, while enhancing the development of a “collaborative and patient-centered worldview” (p. 174). While acknowledging the necessity of including humanities in medical school curriculum, Korean students preferred not being tested on this topic (Hwang 2014). Formative assessment of medical students’ reflective writings has been described (Wald et al. 2010) with a recent qualitative analysis revealing a model of emerging professional identity formation (Wald et al. 2018).

There has also been some success with various mixed methods studies assessing the impact of MH within curricula, and we provide some examples here. Both Graham et al. (2016) and Shapiro et al. (2004) have shown how introducing MH into coursework has increased empathy score outcomes in U.S. medical students, while qualitative analyses revealed that University of Hong Kong medical students related the benefits of art-making to an increase in understanding in relation to self, patients, pain and suffering as well as the role of the doctor (Potash et al. 2014). Mixed methods assessment of an elective MH course on interpersonal communication skills (ICS), humor, and theater revealed positive, significant effect on both ICS and humor in terms of perceptions, attitudes, self-efficacy, and behavior (Karnieli-Miller et al. 2017). Qualitative and REFLECT rubric analyses of assigned reflective writings revealed merit and value of a MH module for first year UK medical students (Patterson et al. 2016). Along these lines, it is interesting to note how formal art observation training has been shown to improve medical students’ visual

diagnostic skills (Naghshineh et al. 2008; Gurwin et al. 2018). While a recent literature review supported the use of visual arts in medical education to facilitate teaching clinical excellence, the authors (Gelgoot et al. 2018) called for outcomes research. Colvin et al.'s (2017) study on the use of integrated MH workshops in addressing professionalism, social, and communication competencies is also noteworthy. However, Colvin et al. (2017) note difficulty in collecting objective data regarding improvement in professionalism and communication skills after curriculum completion. This may be an important limitation as Pattison (2003) comments, "Part of the essence of humanities is the sense of intrinsic value and non-measurable worth that may allow the emergence of pleasure, unexpected insight, and even wisdom" (p. 34).

Emerging topics in MH

Deep understanding is essential to humane healthcare (Downie 1994)

New topics and trends appear as MH becomes more established and we describe some of these below.

1. **Intersections between global health and MH**
In the 21st century, medical education is concerned with the global outlook and thus global health initiatives and leadership are becoming increasingly important. In line with this, Adhikari (2007) highlights how MH can contribute to the development of a "global physician" as "incorporating language, art, music and history into the understanding of a culture allows one to design effective global health support for a community" (<https://globalhealth.duke.edu/media/news/mellon-grant-supports-exploration-global-health-humanities>, quoting D. Clements).
2. **Broadening the MH span**
Also of consequence is an increased integration of MH into various healthcare professions educational curricula, including pharmacy (Ishikawa 2017), nursing (Freeman and Bays 2007; McKie et al. 2008), dentistry (Zahra and Dunton 2017), and physical therapy doctoral education (Manago and Gisbert 2017). In the workplace, MH has a role for "interdisciplinary understanding and cooperation" (Pattison 2003) as well as for "colleagues to interact outside typical disciplinary and hierarchical divides (e.g. promoting teamwork between physicians and nurses, surgery and anesthesia, patients and clinicians)" (Katz 2014, p. 612).
3. **Use of Technology**
Technology-enhanced learning has also come to the fore recently in helping to integrate MH into curricula and some examples are the digitization of a MH session for undergraduate medical education (D'Alessandro and Frager 2017), a blended learning curriculum approach (Sechenov University 2018), as well as an arts-based mobile app (BEAM, i.e. Bedside Education in the Art of Medicine) aimed at promoting reflection on a patient's human experience of illness (Chisolm 2017). Effective use of combined humanities modalities such as photography and narrative (Wald and Weiner 2009) and abstract art and narrative (Karkabi et al. 2014) are topics for future inquiry.

4. **MH in Pre-health Education**
The expansion of MH or "health humanities" (Crawford et al. 2015) in pre-health education is gaining traction, with the Journal of Medical Humanities, for example, recently devoting a special themed issue to this topic (Berry et al. 2017). Barron (2017, p. 482) emphasizes that using MH at such an early stage in the medical educational ladder with pre-health professions students can "shape their understanding of medicine not just as a career but also as a vocational calling."
5. **MH throughout the professional life trajectory**
Just as it is of interest to introduce MH at an early stage in the health professional's education, the same is true of continuing with this implementation throughout their lifelong career trajectory. A faculty development program used guided narrative writing to promote reflection and empathy among practicing physicians (Misra-Hebert et al. 2012) for example and increased empathy scores post-interprofessional narrative medicine program in Taiwan were sustained over 1.5 years (Chen et al. 2017).
6. **MH and Resilience/Wellbeing**
The role of MH in clinician (and trainee) resilience and compassionate practice is gaining appreciation within current concerns about health care professions student and practitioner wellbeing (Wald et al. 2016). In this context, reflective writing can be a "resiliency workout" within professional identity formation (Wald et al. 2015) and mandala art-making with reflective writing has been suggested as a "reflective activity to provide insight into evolving professional identity and the psychological state of students," potentially helping educators nurture students' wellbeing (Potash et al. 2016). Cultivating self-awareness and reflection on one's own experience as well as patients' experiences for meaning-making through narrative medicine can promote health professional wellbeing (Sands et al. 2008). Moreover, benefits extend beyond healthcare professionals as positive effects of art, art therapy, and literature/reflective writing for patient wellness are well documented (Safar 2014; Barnes 2015; Pennebaker and Smyth 2016) including art for cancer care (Kirshbaum et al. 2017). Benefits of MH can even extend to family caregivers (DiGangi 2015; Wald 2016).

Further research in effective implementation of MH within medical and more generally health professions education, faculty development, and outcomes is needed. Given the emphasis on competency-based education, consideration of how actual competency requirements can be met through MH educational initiatives is of interest (Shapiro 2012).

Conclusions

Integrating science and the humanities for 'critical realism' may be a new version of reality providing a central pillar between two seemingly unbridgeable worlds: the physical basis of our existence and the experience of living (Appleby et al. 2017)

This Commentary can only offer a taste of this ever-growing and ever-evolving field but in it we have tried to incorporate some of the opportunities and challenges with

MH curriculum implementation and evaluation as well as emerging topics. Perhaps more importantly, we have tried to show how these “seemingly unbridgeable worlds” need to be linked.

Dualism still exists in medicine; “the two sides of the consultation” as Heath (2016) notes, disease versus illness, objectivity versus subjectivity, technical versus existential, science versus poetry, and so on. We acknowledge the importance of both sides of the coin and that both are given their due value. Within this, we believe it is essential that medical students are taught, from early stages of their training and throughout their careers, that practicing medicine can never be black and white, and that grappling with the gray, uncertainty and doubt will always be present within the “messiness of professional practice” (Schon 1983) and human complexity. We hope that inclusion of the MH can support the imperative of medical education to respond to this and help to provide the necessary framework for cultivating competent and compassionate physicians.

We look forward to further development and integration of MH within health professions education and practice throughout the professional life cycle and learning more about its impact on patient care and on practitioners, educators, and researchers. While data are emerging about humanities training associated with improved physician-ship, further research is needed. We hope that this Commentary, as well as the growth in international MH symposia, will help support such initiatives and encourage international collaboration.

I hope we can recognize that we and our patients are first and foremost people, and that in matters of joy and sufferings and life and death, we must engage the humanities to bring a fuller, human picture to medicine (Liao 2017)

Disclosure statement

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the article.

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