THE PRIME TIMES

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EDITORIAL NOTE

In this second issue of The PRIME Times, we highlight 3 topics of interest: Dr. Ramzi Sabra sheds light on the rationale and purpose of teaching the medical humanities and including them in medical curricula, a practice that is increasingly adopted in medical schools around the world, and forms the basis for a series of courses at AUBFM highlighted in today's section: "Curricular Developments". Two other articles illustrate how technology has become a staple of modern curricula: Dr. Joumana Antoun, PRIME leader for Information Technology in Medical Education, provides an overview of the use of technology in medical education, as a prelude for coverage of specific approaches in more depth in later issues of the newsletter; Dr. Rana Sharara, PRIME leader for Simulation, introduces the use of simulation technology in medical education, both undergraduate and graduate, a practice that has gained favor in recent years for reasons explained in her article. The issue also contains our usual features related to research at AUBFM, interesting findings in the literature, and resources for medical educators. We hope you will enjoy and benefit from this issue, and we invite and encourage relevant contributions from interested readers, including their reflections, experiences, book reviews, etc., to our editorial office.

THE ROLE OF THE HUMANITIES IN MEDICAL EDUCATION

By Ramzi Sabra, MD, MHPE

"Paradoxically, the very values that shape medical practice as a scientific pursuit aiming to eradicate illness are also the values that undermine a moral medicine, producing doctors who objectify patients, where 'controllability and safety' overshadow empathy".

Alan Bleakley

The incorporation of the medical humanities in medical curricula has been steadily gaining ground over the past decades. Proponents of this view assert that teaching the humanities will produce physicians who are empathic, tolerant and humane, in an age when several studies have demonstrated a decline in medical students' empathy as they progress through medical school. AUBFM has joined leading institutions in the world by including the medical humanities as mandatory offerings within courses known as Physicians Patients and Society (PPS) which run from years 1 to 4 (see Curricular Developments in this issue). We here reflect on the purpose and value of the humanities in medical education.

The education of medical students is highly influenced by the socialization process that occurs within the clinical environment. Several authors and leading medical educators have reflected on how this process can potentially lead, unintentionally perhaps, to the objectification and dehumanization of the patient and of the student. An example of how institutional norms can negatively affect student development is the subtle realization that frequently, what is judged "worthwhile" to notice in the culture of the medical institution is "symptom expression", rather than the person expressing these symptoms, and the context in which these symptoms are expressed. Physicians adopt this attitude in order to reduce uncertainty and ambiguity and reach a correct diagnosis. The patients are thus objectified into "cases" that need to be presented succinctly and within a limited time, where the "chief complaint" takes precedence over the chief concerns of the patient. As a result, the student is taught to discard anything that might interfere with this efficient approach. This leads to a reduction in the students' sensibility (the ability to perceive, notice, and judge the patient's condition) and their sensitivity (the ability to be open to, and be affected by, the patient's condition); students are thus dehumanized as well. This is what Alan Bleakley meant in the quotation above (see further readings below).

Other arguments abound about the negative influence of factors such as the hierarchical and political structures in academic health centers, the nature of financial practice plans, the interference of third party payers, the high prevalence of burnout among faculty and learners, and others, on student development. The commercialization of medical practice, reflected in the increasing use of "client" or "customer" to mean "patient" and "service provider" to replace "doctor" is a telling symptom of the transformation of a humanitarian endeavor into a business transaction.

How might teaching of the humanities help prevent this unwelcome transformation?

Literature, art, history, and philosophy, among others, are referred to as the "humanities" because they deal with the human condition, using approaches that are analytical, critical or speculative. Their overall goal is to explore and explain human experience in an effort to understand human beings, their attitudes, thoughts, values and behavior. Understanding the human condition (e.g. that of the patient) and human beings in general (e.g., self, patients, co-workers), increases people's sensibility and sensitivity. The humanities educate the student to become a certain kind of person and doctor (rather than to perform specific functions expected of a doctor), and to regard patients as human beings rather than "cases" or mere receptacles for diseases. They thus nurture the development of empathy, tolerance, and compassion.

WHERE DOES IT HURT?

The New World of the Medical Humanities

Source: https://wellcomecollection.org/wheredoesithurt

Educating students in the medical humanities is a process and an approach rather than a finite project. In contrast to other courses, there is no specific information that must be accumulated or mastered following which specific objectives or outcomes will have been met. Rather, there is a broadening of perspectives and a transformation that may allow students to see a truth that might have been hidden.

This holistic approach to medical education is particularly needed and relevant today when "competency-based education" has become the buzzword in academic circles. Despite its many benefits, this approach breaks down a physician's role into isolated competencies, a reductionist approach that threatens to relegate medical education into a series of finite measurable outcomes comprising the minimum knowledge and skills that are needed for professional training, instead of a truly transformative university education that impacts the person's whole being. The medical humanities counter this negative thrust and restore to medical education the essential goal of focusing on the students' and patient's humanity.

Another aspect of the humanities that is relevant for the development of medical students is their tolerance of ambiguity. While medical science may portray medicine as an exact science with clear cause-effect relationships, and while doctors and students feel much more comfortable working within that perspective, medical practice is actually fraught with uncertainty and ambiguity, e.g., relating to the patient's complaints, the correct diagnosis, the best treatment, the response or reaction of the patients and/or family, etc. Failure to realize that fact may be at the origin of the disconnection between physicians and patients that is a frequent complaint of patients. Failure to admit uncertainty may also lead to medical errors. Students should learn not to fear ambiguity and to be able to deal with it constructively. It is indeed interesting that in surveys of graduating students, those who scored high on intolerance of ambiguity showed significantly greater negative attitudes to underserved and poor patients. Arts and humanities promote critical thinking and reflection; they even thrive on ambiguity, being equally (if not more) concerned with identifying problems as with solving them. Thus, they promote a tolerance of ambiguity and an ability to deal with it.

All the above may be considered the intrinsic value of the humanities for medical education. But teaching of the medical humanities also has an instrumental value, i.e., it can help students gain specific skills important for the practice of medicine. For example, studying art and literature may improve one's observational skills and the ability to interpret and analyze representations (e.g. a painting, a text). The relevance of this to the skills of "reading" and interpreting patients' expressions, body language, situations, stories and even silences, is evident.

" WHEREVER THE ART OF MEDICINE IS LOVED, THERE IS ALSO A LOVE OF HUMANITY. "

Hippocrates

Appreciation of art exposes the central role of emotions and personal background in interpreting what is presented, illustrating that multiple perspectives exist for the same artwork. Thus, it breeds humility, tolerance, and empathy, and exposes the limits of one's knowledge and perspective. Furthermore, the arts allow one to appreciate how imagination and intuition can lead to interpretation, understanding, and knowledge. In medicine, it is not enough to practice scientifically – though it is surely essential, because humans acquire knowledge in more than one way; many times it is intuitive, imaginative, and requires pattern recognition and similarity, rather than being always systematic, scientific, and logical.

Literature, like art, reveals the significance of human emotions, but also the complexity of human beings and the commonality of the human condition (anxieties, concerns, passions, frailties...), and, therefore, can lead to a better understanding of people. Literature also improves one's use of language, which in medicine must be precise and clear; it allows one to describe accurately and reflect on experiences as a means of learning. Finally, patients are essentially story-tellers, so the better one is at interpreting stories, the better the care one can provide.

A study of history, particularly history of medicine, shows how thinking about health and disease developed through the ages, reveals the origins of practices, and highlights the great discoveries, thus providing students with a deeper understanding of the present, and how and why things developed in a certain way. It reveals the nature and limitations of human knowledge exposing the fallibility associated with medical knowledge, and once again emphasizing the uncertainty and ambiguity that accompany the practice of medicine. Importantly, it reveals truths about the profession, differentiating what is permanent or constant from what is transitory or changing. Finally, it exposes the very rich heritage of medicine. In short, it helps the student to internalize the values of the profession and as a result develop a professional identity.

To conclude, doctors deal with complex human beings bearing diseases that manifest as illnesses that are unique to each individual and that are colored by the patient's experience, values, background, culture, and emotions. The doctor's role to heal the whole patient – in addition to curing the disease – requires an understanding of the human condition, and this can best be facilitated by the study of the medical humanities. The aim of the PPS courses offered at AUBFM is to offer a glimpse into that rich world and provide students with those essential skills, revealing, in the process, the depth and breadth of medicine as a discipline, which most students have probably not appreciated. This makes their education more profound and their perspectives broader. Hopefully, it will prompt them to explore these fields and approaches further and apply the attitudes and skills they have learned in their practice.

Further Reading:
- Macnaughton, J. The humanities in medical education: context, outcomes and structures. J Med Ethics: Medical Humanities 2000; 26: 23–30.
- Bleakley, A. Medical Humanities and Medical Education: how the medical humanities can shape better doctors. Routledge Advances in the Medical Humanities. 2015 Routledge, London and New York.

SKILLS, KNOWLEDGE, AND ATTITUDES THAT CAN BE ACQUIRED BY STUDYING THE MEDICAL HUMANITIES:

- **Interpret messages** in different forms (visual, auditory, written...) from patients and everyone they deal with
- **Use language** precisely
- **Communicate** with others effectively
- **Deal** with other perspectives and differences of opinions
- **Understand** the subjective experiences of others
- **Reflect on experiences** to learn from them and be transformed to the better
- **Distinguish** between disease and illness; objective and subjective cures
- **Articulate and defend** one's personal views and values
- **Describe** one's view of a morally good life and how it integrates into and is congruent with their professional life
- **Acquire the general skills** associated with a higher university education: reasoning, tolerance of ambiguity, creativity and imagination
- **Realize** that humans (patients and doctors) share an awareness of human vulnerability, mortality, and transcendence
- **Treat patients** as ends not only as means to gain education

TECHNOLOGY IN MEDICAL EDUCATION

By Jumana Antoun, MD

Medical schools are now facing Generation Y or Millennial students (born between 1982-2002). Generation Y is accustomed to technology and multitasking. They prefer to work in groups with hands-on experiences and may not value reading or listening to lectures in the traditional manner. Instead, students prefer learning in more creative and interactive ways. To capture and maintain their attention, the learning experience has to be adapted to their nature and skills, and out of the ordinary.

In order to meet the younger generations' learning expectations, many teaching activities need to evolve from the traditional lecture to more collaborative learning with immediate feedback. Some examples include the "flipped classroom" approach, team-based learning and case-based discussions. The aforementioned activities can be done either though face-to-face interaction or by using technology. For example, in inter-professional education, where learners belong to different programs, wikis or online forums can serve as tools to facilitate teamwork and collaboration. An online course on Infection Control or Patient Safety can be of benefit for medical students who are rotating in different clerkships or locations. These methods help the learner study at his/her own pace and time.

Source: http://www.medgadget.com/2015/07/microsoft-and-case-western-reserve-introduce-hololens-augmented-reality-for-medical-education.html

Source: http://www.educationnews.org/technology/technology-companies-spurring-a-revolution-in-medical-education/
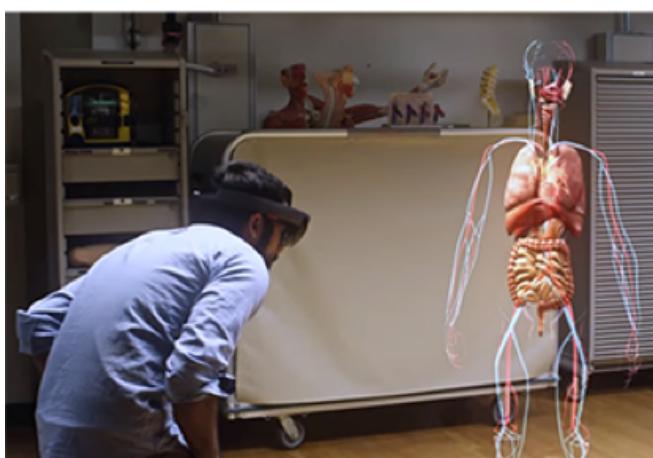
The effective use of technology is dependent on faculty readiness. It is only natural that faculty would fear the use of technology. It is new and not always reliable, and it takes a good amount of investment to properly understand its use and potential. However, this should not be a deterrent. When it comes to lifelong learning, faculty members should act as role models for students. As faculty, we are constantly faced with advances in technology in the workplace and we tend to learn how to use them efficiently. Our commitment to education should follow the same line of thought. We should be willing to learn and adopt new technologies as educational tools.

There is evidence that educational technologies have enhanced learning in medical education. However, faculty should be judicious in using technology as a tool that should not necessarily replace good content based on sound educational theories. Faculty members should be able to decide when and how to use the best type of technology and not just use technology for the sake of using it.

In the upcoming issues, we will discuss different technologies that can be used in medical education. The list includes: clickers, multimedia, blended learning, virtual patients, social media, wikis, and online forums, among others.

RESOURCES FOR MEDICAL EDUCATORS

MedEdPORTAL Publications (https://www.mededportal.org)
MedEdPORTAL Publications is a free, open-access publication service covering health professions education, provided by the Association for Medical Education in Europe (AMEE) in collaboration with the American Dental Education Association and the American Psychological Association. It provides a venue for the publication of work that is not considered traditional research, but nonetheless, requires as much diligence, creativity and scholarship. Included are modules for teaching and learning, learner assessment, and program evaluation, faculty development workshops, syllabi, lectures, simulation exercises, audio and video material, among others. Normally, all modules have been pretested before publication and are thus considered ready for implementation by the user. All submissions undergo a peer review process grounded in the tenets of educational scholarship. Publications of this sort are considered demonstrations of scholarship for faculty in educational tracks and can support faculty advancement decisions. Faculty in education tracks are encouraged to transform their educational contributions to scholarly works and disseminate them to the wider community of medical educators. PRIME can provide help and counsel.

SIMULATION TECHNOLOGY IN LEARNING MEDICINE

By Rana Sharara, MD

Adults don't learn like children. Many theories have looked at how adults learn, most important of which is Kolb's Adult Learning theory. Kolb believed that adults are independent and self-directing; they value learning that integrates with the demand of their daily life and they are more interested in immediate, problem-centered approaches than in the subject-centered ones.

Medical Simulation is based on the adult learning theory. It provides a hands-on experience in a non-threatening environment away from real patient care. During simulation scenarios, adults experiment, reflect, and conceptualize.

Medical simulation covers a whole spectrum of methods ranging from standardized patients to high-fidelity in-situ simulation and virtual reality. Low fidelity simulation includes part-task trainers (like IV arms, central line practice and pelvic trainers) and low fidelity mannequins, while high fidelity simulation (most popular) includes high fidelity mannequins (on site or in the simulation lab).

Learners are activated as they cycle through their emotions from anxiety to alertness and curiosity and finally to satisfaction. As a result, learning becomes active and fun. The most important stage of a medical simulation scenario or the "pivot point" is debriefing. Debriefing happens at the end of a scenario, where learners review their own actions and get to reflect on them. This exercise turns what could have been a passive learning experience into an active one resulting in a behavioral change and hence leading to the retention of knowledge.

Medical simulation has been proven safe and effective. It improves patient safety, especially for multidisciplinary team training. In addition, it addresses ACGME competencies in patient care, medical knowledge, professionalism, system-based practice and communication skills. It can be applied to medical students teaching (part task trainers) to residents and fellows training (low and high fidelity) as well as faculty development (high fidelity and virtual reality).

Source: http://www.medsim.uci.edu

Simulation is also excellent for practice based learning, quality improvement projects, knowledge retention, and deliberate practice (practice on demand). It allows:
• Routine training for emergencies
• Training for teamwork
• Establishing environments that allow the discussion of errors without punishment
• Testing new safety procedure
• Assessing competence
• Testing the usability of devices
• Investigating human performance

In simulation, the learning paradigm is not based on the apprenticeship model of "see one, do one" but rather on a progressive approach that moves the student or trainee along a path from **Knows to Knows How to Shows How to Does.**

Medical simulation is an expensive technology that requires a lot of resources, manpower, and personnel training. It is time-consuming and not effective if performed by non-experts.

The teaching and learning paradigm in medical education has shifted to more active learning, encouraging deliberate practice and safer medical care. The Simulation Program at AUBFM and AUBMC will be launched in less than a year with those principles as pillars.
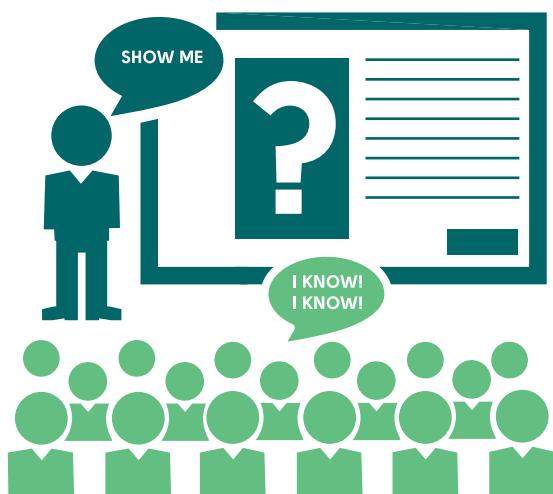
RESEARCH IN MEDICAL EDUCATION AT AUBFM: FOSTERING TEAM WORK

As part of the Impact Curriculum, Team Based Learning (TBL) was implemented in all courses in years 1 and 2 of the curriculum. This is an approach that is proposed to enhance active learning, application of concepts, problem solving, and teamwork skills. Yet, little evidence exists to support the last claim. This recently published research* addressed whether team performance skills are indeed improved by such a learning approach. A validated team performance scale (TPS) and peer evaluation forms for communication skills, professionalism and personal development were filled by students at different time points during the two years. Results showed that students positively evaluated most TBL sessions as promoters of critical thinking and appreciated the self-learning experience. In addition, there was a sustained and cumulative improvement in teamwork skills over time. These improved skills remained with students even after redistributing them into new teams. Similar improvement was noted over time in students' scores following peer evaluations of communication skills, professionalism, and personal development. The results support the suggestion, previously unsubstantiated by evidence, that TBL improves medical students' team dynamics and their perceived self-learning, problem solving and communication skills, as well as their professionalism and personal development.

* Zgheib, N.K., Dimassi, Z., Bou Akl, I., Badr, K.F., Sabra, R. The long-term impact of team-based learning on medical students' team performance scores and on their peer evaluation scores. Medical Teacher, 15 March 2016, Pages 1-8

CURRICULAR DEVELOPMENTS - NEW COURSES: PHYSICIANS PATIENTS AND SOCIETY

By Maya Hajj Hasan, BS
Research Assistant at the Salim El-Hoss Bioethics and Professionalism Program

Making "Good" Doctors: Bioethics and Medical Humanities at the AUBFM

Every year a class of doctors graduates from the American University of Beirut Faculty of Medicine (AUBFM). But what does society expect from these doctors-in-training? Is it still enough to treat patients and send them on their way? The Physicians, Patients, and Society (PPS) courses developed by the Salim-El Hoss Bioethics and Professionalism Program, AUBFM provide medical students with the comprehensive knowledge they need to become healers in the entire sense of the word: healers who see and interact with the patient behind the disease, with the loved ones behind the patient, and with society as a whole.

The PPS program extends from the first year in medical school and continues until the last, beginning with PPS1, which is comprised of four modules: medicine and history, art history, narrative medicine, and the first caring spotlight experience (CSE 1). This course provides students with extensive knowledge about the humanities and their relation to medicine, and through this knowledge engenders a better understanding of emotion, what it means to be a patient, and more importantly what it means to be human. During the highlight of the CSE 1course, students are instructed to shadow a patient and discuss the experience in a written reflection. CSE 1 is meant to strengthen empathy in students through highly experiential learning. Based on the course evaluations, it seems to be achieving its objectives A student explained, "Viewing things from a different perspective can really make a difference, and I'm thankful I got to understand and look at it from the patient's view. I learned things that I'm sure no book can explain. Experience was the best teacher and the lessons I gained will be carried for life." The module gives students the opportunity to experience things from the other side of the stethoscope. Another student elaborated that "compared to the other courses I took this block, PPS puts us in the position of the patient, where we are encouraged to feel and think about what a patient is feeling when in a diseased state, opposed to the rest of the courses which approach medicine more objectively than subjectively. This course has really opened my eyes and made me appreciate how patients feel."

In the second year of medical school, medical students join PPS2, which also consists of four modules. During the bioethics and patient care module, students develop the acuity for thinking about moral issues in the healthcare setting and formulate sound moral arguments to engage in discussion about these moral issues. The skills they learn during this module culminate in a mock Medical Center Ethics Committee (MCEC), which is meant to closely simulate the advisory board appointed by the hospital to review ethical issues that may arise during patient care (an advisory board they may be a part of one day). The students are then given two ethical cases and are instructed to discuss them in detail and provide their recommendations at the end of the mock ethical session. The second module, palliative care, exposes students to scenarios where patients are gravely ill. Here, the focus is no longer on treating and managing disease, but rather targets the patients themselves: their quality of life and their patient experience. The third module, spirituality in medicine, takes students beyond the psycho-social needs of the patient to consider a facet that is often ignored or neglected: their spiritual needs.

CSE 2 is another learning experience outside the classroom where students are instructed to shadow a nurse for a day at one of the inpatient care units. The experience illustrates the importance of the role nurses play in healthcare, as well as the relationship between the physician and the nurse. Students receive a first-hand experience whereby the best outcomes for patients result from clear communication and collaborative team-work between doctors and nurses. They then are expected to hopefully extend this paradigm beyond nurses and onto all healthcare professionals. One student said that the course "introduces us to lessons that will help us handle our future experiences as physicians and brings to light many things that some of us have never even thought of or considered. It makes the students truly understand why physicians are called doctors. There is an entire spectrum of work that is expected from a physician so that he/she deserves the title of a doctor, and this course highlights this point to perfection."

During their third year, medical students attend PPS3 course through which they are introduced to a plethora of medical ethical issues. The course includes but is not limited to: ethics in public health, medical errors, the relationship between the physician and the drug industry, organ donation, and bioethics in obstetrics. At the end of the course, students are instructed to prepare and present an edutainment (amalgam of education-entertainment) video or documentary on a bioethics topic of their choice. The best submissions are then premiered at the multimedia SHBPP festival. When asked about the course, a student commented, "The course was beautifully prepared; it made us aware of ethical issues and rules that we were unaware of and could not read in any textbook." At the end of the course, students become familiarized with ethical issues that arise in the practice of medicine and the various approaches to ethical decision making. This coincides with the beginning of clinical work in the hospital for students, who can thus combine their immediate patient experiences with what they have learned in the PPS courses during their first three years.

The culmination of the three PPS courses is the fourth one, PPS4. Newly introduced this year, PPS4 runs as a part of the Family Medicine rotation. Once again students learn out-of-class at two resource centers, Tahaddi and Karagheusian. Students are placed outside the tertiary care setting in disadvantaged communities, giving them the opportunity to strengthen all the skills they learned during their first three years of medical school through on-the-ground interactions. The Physicians, Patients, and Society program is really one of a kind, combining in-class learning and first-hand experiences that help make well-rounded healers.

RECENT INTERESTING LITERATURE
LECTURE ATTENDANCE: DIFFERING PERCEPTIONS BETWEEN FACULTY AND STUDENTS

A study done at Washington University School of Medicine revealed significant differences in the attitudes among teaching faculty and medical students regarding preclinical classroom attendance. Students were significantly more likely to support free choice among learning opportunities (90% vs. 41%, p <.0001) including regularly missing class for research and community service activities (70% vs. 14%, p <.0001); they considered lecture videos an adequate substitute for attendance (70% vs. 15%, p <.0001). Students also considered that class-going was primarily for the purpose of learning factual material; faculty, however, viewed it as serving important functions in the professional socialization process, and considered attendance related to professionalism (88% vs 68% P<0.0001). The findings of this study in a single center in the USA likely resonate elsewhere including AUBFM, and emphasize that students and faculty have different expectations of the classroom experience. The authors provide suggestions to overcome this discrepancy, including mutual understanding and faculty training in active learning approaches.

Allyson R. Zazulia and Patricia Goldhoff., Faculty and medical student attitudes about preclinical classroom attendance. Teaching and Learning in Medicine: An International Journal 2014, 26:4, 327-334. http://www.tandfonline.com/doi/full/10.1080/10401334.2014.945028