Happy Healers, Healthy Humans: A Wellness Curricular Model as a Means of Effecting Cultural Change, Reducing Burnout, and Improving Patient Outcomes

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Introduction

Current undergraduate medical education reform focuses on an integrated curriculum with an aim to lessen the divide between basic science, clinical science, and clinical practice[1]. A sweeping commonality amongst proposed innovations is mimicry of, and early exposure to, the clinical setting. Teamwork, early patient contact, and self-guided learning ensure increased student engagement while providing context for knowledge gained[2,3,4]. At the heart of these innovations is the desire for greater efficiency in content delivery, both in learning and teaching. In an age of rapidly expanding scientific understanding and body of information, developing an efficient curriculum is challenging, yet vitally important to ensure that students are fully prepared to care for their future patients. We argue that this focus on efficiency is too narrow, and it highlights a substantial issue underlying contemporary medical education and practice: namely, the disconnect between medicine's intrinsic values and those values which are practiced.

The AAMC endorses 15 core competencies as critical for the growth of a medical school applicant into a successful physician[5]. Of the 15 competencies, there are 11 that deal with communication, empathy, and self-awareness *[Figure 1]*. Upon matriculation, students are exposed to a culture that is often individualistic, unsupportive, immensely stressful, and money-centric, rather than patient-centric. This culture runs contrary to the applicants' original motivations for pursuing medicine as a career[6,7,8], and largely fails to cultivate the 11 competencies related to communication, empathy, and self-awareness. Schein describes the disconnect between the stated values of an organization and the organization's culture, and the negative impact that these inconsistencies can have upon members of the organization[9]. The medical community recognizes part of Schein's schema, though calls it something different: The "hidden curriculum," loosely defined as the culture of a medical learning environment[10], has a profound and potentially detrimental influence upon medical education[11,12,13,14]. The hidden curriculum is also noted for its intangibility and resistance to change[15,16]. Schein's schema is helpful for explaining these qualities and underscores the profound difference between what medical culture should be (supportive, compassionate, humanistic), and what medical culture often is (money-centric, unsupportive, stressful, individualistic).

Burnout and loss of empathy in medical students and physicians are symptoms of this problem[17,18] and illustrate the dangers of a medical culture disconnected from its core values: worsened patient outcomes, decreased physician performance, and a greater likelihood for physicians to leave practice[19,20,21]. Medical training and practice are extremely stressful[22], and with the demand for primary care physicians projected to far outstrip supply by the year 2020[23], the problem that burnout poses needs to be addressed with urgency. Students will need far greater preparation for the emotional challenges of the field than they have received in the past to deal with this looming burden.

Using Maslow's Hierarchy of Needs as an approximation for human motivation in the healthcare field[24], the difficulty of cultivating emotional skills in medical students and professionals becomes apparent. People are more likely to attend to their most basic needs before focusing on higher order mental tasks[25]. As such, medical students and professionals must have the skills to be well-rounded, healthy people before they can focus on developing emotional skills[26]. We propose a curricular model that emphasizes student and patient wellness as a means of facilitating communication, empathy, and self-awareness. This model will promote self-care as a means of improving patient care, and will cultivate the 11 neglected AAMC competencies. Medical schools will be able to implement this model by strategically applying resources to affect cultural change, with the end goal realigning the culture of medicine with its core values.

1. **Students**

1.1. Students will participate in a combination of required and additional optional activities. The required activities will not only aid in institutionalizing wellness, but will also ensure that all members of the student body are reached, not just those who are already interested in wellness.

1.2. Required Activities

1.2.1. Orientation will launch students into the curriculum, setting the framework for wellness-based learning. In addition to the traditional welcome, orientation will address wellness curriculum from the beginning, including a crash course in Cognitive Behavioral Therapy to introduce the concept of coping with stress[27], and a full day of The Healer's Art course[28]. This is a program developed by the Institute for the Study of Health and Illness, which encourages "in-depth sharing of experience, beliefs, aspirations and personal truths."[29] This orientation will allow students to begin their medical career with renewed commitment to their goals.

1.2.2. Throughout the first four years of medical training, students will participate in Accountability Teams. The purpose of these teams is to establish goal-setting skills[30,31,32]. Teams will be comprised of first and second year students as learners, and led by third and fourth year students. They will be separated into two-week blocks, each focused on a particular aspect of the Positive Health Model[33]. The Positive Health Model is a simple visual representation of six aspects of wellness, which students use to "check-in" individually and with one another to address current needs and goals. The six aspects include physical wellness, mental well-being, spirituality, quality of life, social participation, and daily functioning *[Figure 2]*. The first week of Accountability will focus on setting an achievable goal in one of these

aspects, with examples provided by the student leaders (e.g., exercising for at least three days per week to improve physical wellness). The second week, students will touch base and discuss how they worked to achieve their broader, longitudinal goals (e.g., dealing with stress by working out regularly). At the beginning of the following two-week session, student leaders will answer questions from the previous block and then move on to the next wellness aspect. We encourage exposing vulnerabilities within student groups but recognize that this is a difficult process for some; therefore, students may choose to keep their goals private and share them with their Accountability Teams as they feel comfortable.

1.2.3. The clinical years of the curriculum will also include required reflection groups. These will be a safe place to address student emotions with the goal of exploring methods to build resilience. They will be modeled after the Balint Groups, in which "group members uncover different and new perceptions" through facilitated discussion[34]. This will reinforce the wellness-oriented culture shift we seek to achieve; encouraging sharing helps students and faculty connect by identifying and exploring shared experiences. Students will discuss moments of compassion, observed or experienced, as well as times when compassion was lacking from their perspective, and how to deal with these moments.

1.3. Optional Activities

1.3.1. The school will host a series of seminars focused on all aspects of the Positive Health Model. Two electives will be offered to students: an abridged version of The Healer's Art course, previously offered at orientation, and Called to Care, an online curriculum focused on fostering compassion and care for patients.[35] Interprofessional relationships and communications skills will be encouraged through regular patient simulations, in which students from various disciplines (nursing, public health, social work, medicine, etc.) will work together to assess and experience a patient case.

1.3.2. Optional activities will allow students the opportunity to earn a Wellness Certificate. The requirements for earning a certificate will be accrued over a four year period and are as follows: regular attendance at the seminar series, completion of The Healer's Art or Called to Care, leading an accountability group, and participating in longitudinal research.

2. **Compassionate Curriculum**

2.1. Necessary communication skills for physician training will be taught during special blocks called Communication Focus Weeks. Students will practice communicating with patients in interactive small and large groups. This will allow for critical feedback from patients, professors, and peers.

2.2. The curriculum will be a condensed systems-based curriculum, in which students learn regular physiology alongside pathology. Condensing the basic science curriculum will allow time and resources needed to implement the wellness initiatives we suggest, while maintaining a timeframe of two years of preclinical work.

2.3. Encouraging student wellness will be seamlessly intertwined within the system-based curriculum. A Wellness Day will take place during the introduction of each organ system. Wellness Days will consist of a Mental Health Check-in, a block-specific Wellness Activity, and an Interprofessional Presentation.

2.3.1. During the Mental Health Check-in, students will fill out the Positive Health Model in the Positive Health Model App, designed to track the longitudinal wellness experience. After assessing the model, they answer the following questions: In which area(s) do you succeed most? In which area(s) are you struggling the most? What is one action that you can take to improve your weakest area(s) of wellness?

2.3.2. The Wellness Activity will be different for each system. For example, students beginning the Cardiology block will be introduced to heart healthy exercises such as High-Intensity Interval Training, and they will participate in a physical fitness class where they may practice HIIT and learn its principles, gathering experience which they can then pass on to patients and other community members. As another example, a class on mindfulness and its ability to reduce anxiety will set the stage for students beginning to study Neurology.

2.4. The Interprofessional Presentation will illuminate how different members of a patient's care team contribute to the overall process. For example, a mental health social worker will speak to students about community resources for low-income psychiatric patients at the beginning of the Neurology system. During these presentations, students from different health professional programs are welcome to attend and ask questions.

2.5. Increased patient involvement and discussion of patient care will also be incorporated into the curriculum. Real patients their families will be interviewed to introduce disease processes; those affected by the disease will discuss the challenges of living with their disease. These presentations will encourage patient engagement and foster empathy amongst training physicians for their future patients by putting a face to diseases endemic to the community. With a successful pilot of this project, students from other health disciplines will be encouraged to attend these discussions. With any discussion of lifestyle interventions, such as recommending smoking cessation, patients who have struggled with the described lifestyle intervention, and who are at various stages within the transtheoretical model (precontemplation, contemplation, preparation, action, maintenance and termination) will talk to students about the reality of those recommendations.[36] These classes will be both didactic, with students listening to patient stories and asking questions, as well as participatory: students will take what they learned from their patients and, using established Chronic Disease Self-Management Models, will engage in "highly participative" community classes to model to members of the community how to "manage their health and maintain active and fulfilling lives."[37]

3. **Learning Environments**

3.1. The physical space of the school will make wellness accessible and convenient to students, staff, and faculty. It will include a Wellness Café with an educational kitchen, a Nap Zone, a Community Garden, a full service Gym, and a Quiet Room for Mindfulness and Meditation. Wellness will be integrated into the learning environment, with spaces that make it easy to practice cooking, exercise, and meditation. The community will be invited to share the physical space during community cooking classes, with the goal of developing community partnerships by sharing meals.

3.2. These partnerships will allow the community itself to be another teaching-learning environment. Student-run clinics (headed by a faculty Student Clinic Coordinator) will be emphasized in the preclinical years in order to create context for what participants learn in the classroom. A mobile clinic will allow students to bring medical care to rural areas or areas that are distant from the school's hospital system. The school will have organized volunteer opportunities that will make it easy for students to interact with the community, including neighborhood health screenings. The goal of establishing these connections will be to develop shared experience and lasting empathy between students and patients.

4. **Faculty Development**

4.1. Faculty development will be essential for moving the culture of the school towards one of wellness and compassion. Initiatives will be overseen by a dedicated Associate Dean of Faculty Development. A reward system will be put in place to incentivize faculty participation in wellness development initiatives; it will consist of accruing points throughout the year for demonstrated efforts by faculty who go above and beyond to promoting wellness on campus. Points will be given for completing the Called to Care online modules or The Healer's Art elective, and attending or facilitating seminars for the student certificate series, community events, or the second portion of the Faculty Wellness Conference.

4.2. The Faculty Wellness Conference will be an annual weekend event. This will be open to faculty and staff. New faculty will be required to attend; existing faculty will be encouraged to do so. The first day of the program will be a Celebration of Teaching and Learning in Wellness. Financial resources from the school budget will be set aside for free food, "wellness swag," and various presentations in the TED-talk style, with innovative speakers giving presentations about "content in an immersive and focused environment."[38] This will conclude with an awards ceremony, honoring faculty who demonstrated effort towards making wellness a priority in the school and in the community. The second day of the program will take place in the same style as a typical medical conference, with break-out groups to accommodate the number of participants and allow for several concurrent programs so that faculty can choose to attend sessions that pique their interest. Emphasized throughout the day will be the concept of contemplative pedagogy, a method of mindfulness in the classroom.[39]

5. **Infrastructure**

5.1. Our wellness model will be spearheaded by the Dean of the Medical School, but will involve several additional positions, including the aforementioned Associate Dean of Faculty Development, as well as a Student Clinic Coordinator. This coordinator will be responsible for conducting group reflections for those participating in student-run clinics, and evaluating students based on the AAMC's core competencies and the school's own standards of empathetic student behavior in the professional environment.

5.2. Within the school's infrastructure will be a distinct Wellness Department. This will be directed by the Associate Dean of Wellness and managed by a full-time assistant. It will also include a Research Director, responsible for collecting data in order to measure the progress of the entire wellness initiative. Research Assistant roles will be filled by rotating students from different health professions. An internship in Marketing and Technology will be offered; the students rotating through this role would be responsible for employing social media to advertise community initiatives; sending bi-weekly update emails to students, faculty, and staff, detailing resources and opportunities in wellness; updating the Wellness Activities Calendar; and sending out community wellness notifications through the mass-texting application Red e App.

5.3. Central to the Wellness Department will be the integrated student and faculty Wellness Group, broken up into five different areas *[Figure 2]*. Each area will have two student representatives and one faculty member who will be responsible for encouraging participation in a specific area of wellness through school-sponsored activities.

6. **Technology and Research**

6.1. All wellness initiatives will be integrated throughout the school's website. The website will make a calendar of activities, school and community resources, and volunteer opportunities easily accessible to anyone with access.

6.2. Two software applications will assist in our plan's implementation. The first will be the aforementioned Positive Health Model Check-In App. This will be utilized for the Mental Health Check-in on Wellness Days and will allow for easily trackable data for research. The second will be Red e App, also described above and coordinated by the Student Marketing and Technology Intern. This will allow the school to be purposefully redundant in distributing wellness activities and events.

6.3. Student and faculty research will be used to monitor the success of the wellness initiative, and to restructure wellness activities to suit the needs of the medical school community. The Wellness Department's Research Director and the Student Research Assistants will oversee these research projects. All data will be de-identified for students as a measure to ensure student confidentiality; this is with the exception of students accessing their own Positive Health Model data to track personal progress.

6.4. School-wide research will be gathered from student and faculty evaluations, the information from the Positive Health Model App, and the longitudinal health data from students participating in the Wellness Certificate program. Metrics

collected from the Wellness Certificate students will include physical health data such as Blood Pressure, Heart Rate, BMI, data from stress and depression screenings, and data from questionnaires on substance use.

7. Implementation

7.1. While we have presented an idealized version of our wellness curricular model, adopting these innovations will depend on the medical school's available resources. We have structured our curricular model to be incrementally implementable depending on the amount of people, time, and money a school is willing or able to devote to such innovations. By strategically applying resources in select, critical areas, even medical schools without significant funding can derive benefit from this model. The phases below are organized by increasing resource investment.

7.2. In terms of affecting cultural change, the most critical area of focus will be the administration[40,9]. As the cultural leaders of an organization, the highest levels of the school administration must begin to adopt wellness into their own lives, and make their own self-care a priority. This can be accomplished by devoting time to exercise, taking a mindfulness class, or working to eat more healthily. By personally reaping the benefits of wellness and self-care, the administration leads by example and sets the stage for change throughout the organization.

7.3. The administration must then begin to foster this wellness culture within the organization. Creating a supportive, understanding environment within the school is essential to encourage positive cultural change. People are more likely to embrace cultural change when they see its benefits and feel that they are supported in their participation. People also tend to follow the path of least resistance, so the administration must take steps to make wellness and self-care easier for faculty and students to pursue. By making a visible investment in this cultural shift, be it in the form of sponsored group meditation workshops or discounted massages on Fridays, members of the school will see that the administration supports positive change.

7.4. The administration must select individuals who value communication, self-awareness, and empathy when they are considering whom to hire, promote, or matriculate. This will allow the administration to influence the cultural shift in an organic way. The administration must also foster open communication between administrators, faculty, and students. Each member of the organization must feel that his or her voice is heard. Along these lines, the administration must be transparent about organizational decisions.

7.5. In order to maintain the culture shift, a dedicated Dean of Wellness is necessary. This individual will have input on large-scale organizational decisions including funding, curricular design, and hiring. They will also be tasked with organizing wellness events and facilitating the culture of wellness within the school.

7.6. With a dedicated administrator in place and a culture of wellness being promoted, a school can begin to integrate more tangible aspects of our model into the curriculum. Each medical school has specific needs; the specific piece of the curriculum that is adopted, and when it is adopted, will depend upon what each school most needs to enhance the communication, empathy, and self-awareness of its students.

Conclusion

This wellness and self-care curricular model will support learners, teachers, and patients. In doing so, this model will empower future physicians to grow in the essential areas of communication, empathy, and self-awareness. This culture shift will help reduce burnout in students and practioners, and result in improved patient outcomes. As students versed in wellness and self-care graduate and move forward into practice, the culture will propogate and begin to realign the culture of medicine with its core values.

Figure 1

AAMC Competencies

1. **Interpersonal Competencies**
   a. Service Orientation
   b. Social Skills
   c. Cultural Competence
   d. Teamwork
   e. Oral Communication
2. **Intrapersonal Competencies**
   a. Ethical Responsibility to Self and Others
   b. Reliability and Dependability
   c. Resilience and Adaptability
   d. Capacity for Improvement
3. **Thinking and Reasoning Competencies**
   a. Critical Thinking
   b. Quantitative Reasoning
   c. Scientific Inquiry
   d. Written Communication
4. **Science Competencies**
   a. Living Systems
   b. Human Behavior

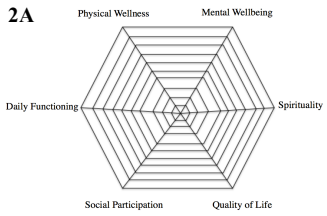
Competencies effected strongly by hidden curriculum

1. **Communication**
   a. Teamwork
   b. Oral Communication
   c. Written Communication
2. **Empathy**
   a. Service Orientation
   b. Social Skills
   c. Human Behavior
3. **Self-Awareness**
   a. Cultural Competence
   b. Ethical Responsibility to Self and Others
   c. Reliability and Dependability
   d. Resilience and Adaptability
   e. Capacity for Improvement

Figure 2

Students fill out the Positive Health Model *[Figure 2A]* by assigning a score to each of their six aspects (0 being at the center of the model and 10 being at the outer corners of the model, 10 lines away from center), then connecting the dots *[Figure 2B]* to visually interpret where they have room for growth.

2A



2B

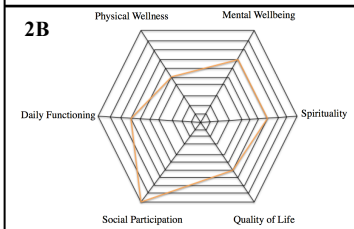


Figure 3

Wellness Group Divisions

1. **Body**
   a. Cooking Demonstrations
   b. Team Sports
   c. Exercise at the Medical School Gym
2. **Mind**
   a. Mindfulness Classes
   b. Lectures: Coping with Stress
   c. Puppy Therapy
   d. Student massages
3. **Social**
   a. Laugh Therapy
   b. Group Tailgating
   c. Trivia Nights
4. **Mentoring**
   a. 1st and 2nd Year Mentor Program
   b. Physician Mentors
5. **Community Outreach**
   a. Community Health Screenings
   b. Patient Interviews

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