

# Health Disparity Curriculum at The Warren Alpert Medical School of Brown University

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## ABSTRACT

There is increasing recognition that, in addition to acquiring knowledge of basic sciences and clinical skills, medical students must also gain an understanding of health disparities, and develop a defined skill set to address these inequalities. There are few descriptions in the literature of a systematic, longitudinal curriculum in health disparities. Using Kern's six-step approach to curriculum development along with principles of experiential and active learning, student champions and the Office of Medical Education developed a multimodal health disparities curriculum. This curriculum includes required experiences for medical students in the 1st, 2nd and 3rd year, along with elective experiences throughout medical school. Students are examined on their knowledge, skills and attitudes towards health disparities prior to graduation. It is our hope this curriculum empowers students with the knowledge, skills and attitudes to care for patients while helping patients navigate the socioeconomic and cultural issues that may affect their health.

**KEYWORDS:** Education, medical, undergraduate; Students, medical; Curriculum; health disparities; social determinants of health

## INTRODUCTION

There is increasing recognition that, in addition to acquiring knowledge of basic sciences and clinical skills, medical students must also gain an understanding of health disparities, and develop a defined skill set to address these inequalities.<sup>1,2</sup> There are broad efforts nationally to incorporate curricular components that focus on health disparities, but, to our knowledge, the only longitudinal systematic health disparities curriculum in undergraduate medical education exists at the University of Michigan. During their four-year medical school experience, students at the University of Michigan visit community sites, are involved in longitudinal case discussions that incorporate social determinants of health, enroll in electives on the effect of poverty on health and work in a family-centered care program.<sup>3</sup> Additional curricular efforts at other institutions include integrating a public health curriculum (including health disparities) into clinical teaching<sup>4</sup>; teaching medical students how to use

interpreters<sup>5</sup>; and even development of a board game on the social determinants of health.<sup>6</sup>

At the Warren Alpert Medical School of Brown University (AMS), there is increasing momentum to introduce a cohesive, longitudinal curriculum around health disparities. Faculty, students and other key stakeholders at AMS have initiated and developed core elements of a health disparities curriculum in order to empower students with the knowledge and skills to practice effective clinical medicine. At the same time, it is envisioned that this curriculum will help patients navigate the health care delivery system and mitigate the socioeconomic and cultural issues affecting their health. In light of the growing national impetus to address health disparities, as evidenced by a recent publication ranking the social mission scores of undergraduate medical schools,<sup>7</sup> we describe the current health disparities curriculum at AMS.

## SHADES OF PROVIDENCE

Using Kern's six-step approach to curriculum development for medical education along with principles of experiential and active learning, student champions and the Office of Medical Education developed a multimodality health disparities curriculum.<sup>8</sup> AMS students in the MD Class of 2015 took the lead in developing the first curricular component, entitled "Shades of Providence", which was initiated in the fall of 2012 and was modified the following year based upon student feedback. All members of the MD Class of 2017 participated in the "Shades of Providence" experience during their first two weeks of medical school. This included an early introductory lecture on health disparities by the President of Brown University, a required reading assignment, a community experience, a brief assignment, and two small group sessions in which community experiences, readings and assignments were discussed.

The goals of the early "Shades of Providence" curriculum were as follows:

- To introduce students to the social and structural factors that shape and influence health outcomes using a didactic curriculum.
- To enhance medical students' knowledge of the demographics of the community in which they will live and work through direct exposure to Providence's diverse neighborhoods.

- To demonstrate community-based and collaborative approaches to addressing health inequities that can serve as opportunities and models for student engagement in the community.

Specific components of the curriculum included the following:

- **Introduction to Health Disparities:** A lecture delivered by the President of Brown University, Christina Paxson, PhD, whose background is in the economics of public health. During her lecture, she discussed quantitative measures of health disparities in the United States.
- **Reading Assignment:** Students were asked to read an eight-page handout that was prepared by one of the authors (M.E.) and reviewed and edited by three faculty members (L.D., R.D., and P.G.), summarizing important findings from the literature in health disparities. It was designed to provide an introduction to the topic and a framework for group discussions. The reading provided basic definitions of terms such as health disparity, race and health literacy, and reviewed major categorical factors that drive health disparities such as race, housing and income. Survey data on Providence were incorporated to illustrate ways in which these issues manifest locally.
- **Community Exploration:** In order to contextualize the health disparities issues addressed in readings and in the introductory lecture, all 120 students in the MD 2017 class spent an afternoon at one of eight different community agencies in greater Providence during their first week of classes. The decision to position this community experience so early in the curriculum was deliberate. For many students, an early exposure to community agencies allows them to begin to understand the communities in which they will be engaged during their four years of medical school.  
The agencies represented a diversity of services, such as nonviolence outreach and refugee settlement, whose core missions address one or several social determinants of health. We intentionally chose organizations that were not directly involved in health care delivery. Instead, the goal was to find organizations that might provide students with a broader perspective on the factors that influence health and how health disparities are addressed, as well as orient students to the Providence community.
- **Mapping Exercise:** We divided students into groups of ten. Using a map of Providence neighborhoods and census data, each student in the small group had a different assignment related to a specific social determinant of health. Students were asked to highlight neighborhoods on the map that demonstrated extremes of the given social determinant. For example, one assignment entailed highlighting the neighborhoods with the highest and lowest family incomes. Each assignment was related to the specific community experience site.

- **Small Group Discussions:** The following week, students were divided into groups of ten with at least one student who had visited each of the different community sites. Second-year students, who were trained as facilitators and provided with a discussion guide, served as the small group leaders. During this time students debriefed the community exploration experiences and mapping exercises. Subsequently, students watched a video clip from the documentary “Unnatural Causes”<sup>9</sup> on the importance of physical environment in shaping health. The second-year facilitators then led a discussion that incorporated the documentary data, the assignments, and the community experience.
- **Examination Questions:** We added several questions to the first examination of the year for the first-year class in order to evaluate student knowledge and skills gained from completion of the health disparities sessions.
- **Survey Assessment:** Before the introduction of the curriculum, the students were given a survey to assess preexisting knowledge and attitudes with regards to health disparities. After the completion of the “Shades of Providence” community exploration and small-group sessions, the students repeated the survey to assess any changes. The survey results indicated that the curriculum was successful in teaching the students specific facts regarding health disparities and also gave students more confidence in their knowledge and skills. However, results did not demonstrate any significant changes in attitudes.

## HEALTH DISPARITIES SYMPOSIUM

The first annual Warren Alpert Medical School Symposium on Health Disparities held in January 2014 was designed to offer members of the Brown University and greater Rhode Island communities the opportunity to share research, curricular initiatives and grant information, and learn about community programs that address health disparities in Rhode Island. The list of nearly 100 attendees included physicians and other healthcare personnel, medical and graduate students, community organizers, and researchers. The event began with an introduction given by Elizabeth Tobin Tyler, JD, MA, director of Rhode Island Hospital’s Medical Legal Partnership. In breakout groups, participants were encouraged to identify and discuss current initiatives related to health disparities in Rhode Island, outline the gaps within these strategies, and explore opportunities for collaboration and partnership both within Brown and in collaboration with the greater Rhode Island community. The symposium culminated in a keynote address by Brown University’s President Christina Paxson, an expert in the economics of disparities in health, who outlined the ways in which Brown University plays a central role in providing sustainable programs and collaborations to address healthcare disparities in Rhode Island.

## INTER-PROFESSIONAL WORKSHOP

Each year, second- and third-year medical students participate in two inter-professional workshops. These workshops, which include nursing, pharmacy and physical therapy students from the University of Rhode Island, and social work and nursing students from Rhode Island College, focus on various issues pertaining to health disparities. In inter-professional health-care teams, students are asked to brainstorm methods for providing the best possible care to patients during particular clinical scenarios by overcoming socioeconomic factors that affect health. For example, students are introduced to a non-English speaking Cape Verdean patient with a terminal illness, who is the victim of elder abuse and cannot afford his medications. Students must devise a plan of care for this patient and then present it to their peers and faculty. Finally, students participate in an Objective Structured Clinical Examination (OSCE) in which they interview a standardized patient who presents with an illness, but also has family or social problems. The students formulate a diagnosis and a management plan that addresses both the illness and the social or economic factors affecting the patient. Through participation in these inter-professional workshops, students begin to develop team-building skills essential in holistically addressing health-care needs as well as learn about the roles of each prospective health care provider.

## FAMILY MEDICINE CLERKSHIP

During the Family Medicine clerkship, which is part of the required third-year clinical curriculum, students are exposed to health disparities at many clinical sites, and in addition have two structured exercises in health disparity education. During weekly small group sessions, students discuss clinical scenarios based upon a virtual, multi-generational, Cape Verdean family who lives in Pawtucket. In addition to the biomedical health issues faced by this family, the cases raise social issues such as teenage pregnancy, alcoholism, and poverty, and encourage the students to consider these factors when discussing their management and care of the family members.

Additionally, each student is assigned a Social and Community Context of Care (SACC) project that accounts for 15% of the clerkship grade. The project is paired with a half-day session early in the rotation during which students explore one of two communities in Rhode Island and learn about agencies that address the social influences on the health of that community. For their projects, students perform a similar exploration of the community surrounding their preceptor site, speak with key informants regarding a health issue that they have identified as affecting the population served, investigate the existing community resources that have an impact on this health issue, and propose a community-level intervention that is relevant to the needs and resources of their preceptor site community.<sup>10</sup> (See "Building

a workforce of physicians to care for underserved patients" in this issue for further details).

## FOURTH-YEAR OBJECTIVE STRUCTURED CLINICAL EXAMINATION

To ensure students are graduating with the knowledge, skills and attitudes necessary to practice effective clinical medicine while at the same time addressing health disparities, students must successfully navigate cases addressing health disparities in their fourth-year Objective Structured Clinical Examination (OSCE). For example, in one of the OSCE cases, students must counsel a non-English speaking patient, who has inadequate resources, about leaving the hospital against medical advice during an exacerbation of congestive heart failure. In another case, students must counsel a non-English speaking patient on resources to obtain medications not covered by her insurance.

## ELECTIVES

In addition to the required curriculum that has been developed as a part of the mission to provide AMS students with a comprehensive health disparities education, there are a number of electives offered to students that allow them to further explore these interests. For example, the "*Healthcare for the Underserved*" elective aims to provide students with the knowledge, skills and support to care for underserved populations. Over the course of the semester, each of the evening class sessions deals with a topic on health and healthcare challenges that face underserved populations. Additional preclinical electives include "*Race, Health Disparities and Biomedical Interpretations*," "*Poverty, Health and Law*," "*Science and Power*," "*Gender and Sexuality in Healthcare*," "*Refugee Health and Advocacy*," and "*Healthcare for the Underserved*." Each of these electives is a cooperative effort of faculty and student leaders and has significant participation among the AMS student body. In addition, AMS offers scholarly concentrations, or elective opportunities, for students to gain formal curricular exposure to topics related to medicine but not usually included in the curriculum. These include areas such as Caring for the Underserved, Global Health and Advocacy and Activism – all with significant curriculum on health disparities.

## CONCLUSION

To our knowledge, this initiative to longitudinally introduce health disparities education at AMS is unique among medical schools. The effort to grow and develop a Health Disparities medical school curriculum is not without limitations or challenges. Although members of the student body provided a great deal of the motivation behind the curricular changes at AMS, not all students share the same fundamental knowledge or concern about these issues or have an interest

in participating in these initiatives. While all students entering medical school are expected to have a baseline level of knowledge in biological and physical sciences from their pre-medical studies, there is no such universal curriculum requirement for topics that inform health disparities. The attempt to design a curriculum that effectively and adequately addresses the complexities of health disparities while accommodating the wide range of student familiarity with these topics resulted in some disparate feedback; some students described the curriculum as oversimplified, and others suggested that it was too broad and ambitious.

This challenge is exacerbated by curricular time and resource constraints. By necessity, medical school curricula place high demands on students as well as faculty, who must dedicate tremendous resources to preparing students for the United States Medical Licensing Exam and residency in four years of undergraduate medical education. Although many argue that a rigorous understanding of health disparities is critical to quality patient care, medical education has historically focused on the more traditional biomedical approaches to patient care. With finite time and resources, education pertaining to health disparities and social determinants of health is all too often given much lower priority within the realm of medical education.

The challenge moving forward is to strike the appropriate balance between providing students with a strong biomedical fund of knowledge and gaining a deep understanding of the social influences that often drive health outcomes. Equipping students to address these determinants in their communities and in their future practices is one of the goals of a robust health disparities medical curriculum. At AMS, student leaders, faculty and community members are working together to ensure that these efforts continue through the implementation of our evolving student-initiated health disparities curriculum, the development of a new Primary Care-Population Medicine Program and the introduction of a full semester, first-year course on health disparities for all medical students (see Rappaport et al in this issue for further details). It is our hope this curriculum empowers students with the knowledge, skills and attitudes to enable them to care for patients and allows them to help navigate patients through the disparities that may affect their health.

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## Disclosures

None

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