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# Reorienting Orientation: Introducing the Social Determinants of Health to First-Year Medical Students

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## Abstract

**Introduction:** Medical students rarely learn about the intersection of socioeconomic and environmental effects on access to health care and maintenance of health. Case-based discussion can cohesively highlight the social determinants of health to complement preclinical education. Our modules can foster future interest in working with vulnerable populations, help students recognize barriers to care, and identify strategies to help these patients. **Methods:** The Social Determinants of Health Orientation Program (SDHOP) introduced students to the nonbiomedical factors that contribute to patients' health. Key topics were presented in small discussion groups led by faculty facilitators. The subjects addressed included access to care; immigration/language barriers; lesbian, gay, bisexual, and transgender health; human trafficking; race/ethnicity; and women's health. **Results:** The SDHOP initiative was integrated into the formal curriculum and successfully implemented in its first year at our institution. Pre- and postsurveys were administered to assess student satisfaction with the course, as well as changes in knowledge and attitude regarding the topics covered. Of the 186 SDHOP participants, 111 medical students responded to both surveys and reported improvements in both knowledge of and comfort level with these topics and specific related terms. Ninety-one percent rated the overall quality of SDHOP and its individual modules as good or excellent. **Discussion:** SDHOP contributes to medical education by providing an all-inclusive model for teaching students about the social determinants of health. Our results suggest that presenting these topics in a small-group discussion model improves medical student cultural competency and comfort level with patients of diverse backgrounds.

## Keywords

Social Determinants of Health, Cultural Competency, Communication Barriers, Women's Health, LGBT Health, Access to Care, Language Barriers, Human Trafficking, Race/Ethnicity, Food Insecurity, Food Supply, Social Disparities

## Educational Objectives

By the end of this activity, learners will be able to:

1. Define and discuss the social determinants of health, specifically, those that relate to access to care, immigration and language barriers, LGBT health, human trafficking, race and ethnicity, and women's health.
2. Identify social inequities and examine how they shape the health of the population and the delivery of health care.
3. Demonstrate an awareness of personal bias and of the social and institutional structures that lead to poor health outcomes among marginalized groups.
4. Apply knowledge of public health to communicate effectively and compassionately.

## Introduction

Students interface with the social determinants of health every day, but they receive minimal formal preclinical training in identifying the nonbiomedical factors that contribute to their patients' health. Evidence-based clinical decision-making includes these factors, or the social context of a patient's life.<sup>1</sup> The likelihood of contextual errors in patient care is exacerbated by the lack of training and attention to

## Appendices

- A. Access to Care Food Insecurity Environment Facilitator Guide.docx
- B. Access to Care Food Insecurity Environment Student Handout.docx
- C. Human Trafficking Facilitator Guide.docx
- D. Human Trafficking Student Handout.docx
- E. Immigrant Health and Language Barriers Facilitator Guide.docx
- F. Immigrant Health and Language Barriers Student Handout.docx
- G. Immigrant Health and Language Barriers Supplementary Information .docx
- H. LGBT Health Facilitator Guide.docx
- I. LGBT Health Student Handout.docx
- J. LGBT Health Intake Form .pdf
- K. LGBT Health Supplementary Information .docx
- L. Race Ethnicity Facilitator Guide.docx
- M. Race Ethnicity Student Handout.docx
- N. Women's Health Facilitator Guide.docx
- O. Women's Health Student Handout.docx

patients' individual background and environmental circumstances.<sup>2</sup> These contextual errors are one of many reasons that underserved patients receive poorer care and have poorer outcomes; such errors can be reduced by appropriate guidance on how to recognize the social determinants of health.<sup>3</sup> Furthermore, prior studies have shown that medical student attitude toward care for the underserved declines over time.<sup>4</sup> Other interventions have attempted to mitigate this effect later in medical school through optional opportunities for a self-selecting group of interested students.<sup>5,6</sup> We believe prioritizing and integrating education on the social determinants of health early in medical school as a required course can help prevent this attitude change and increase student investment in effective and compassionate communication to optimize patient care in the future. Here, we present a curriculum for teaching medical students about the social determinants of health. The cases presented here are interactive modules that emulate the patient population new medical students will serve in the future and can also be individually used as separate modules based on community need. The Social Determinants of Health Orientation Program (SDHOP) is uniquely suited to the knowledge level of these new medical students and is designed to be applicable to the wide range of contexts they will encounter in their training.

Major governing bodies within medical education have recently heightened the emphasis on social factors in the Medical College Admission Test and Liaison Committee on Medical Education (LCME) and graduate medical education standards. LCME standards for medical schools mandate education in cultural competency and understanding underserved populations within the context of health care disparities in order to become a clinically proficient physician (Objective 7.6).<sup>7</sup> Many medical schools do not have a required curriculum on the social determinants of health, and finding an efficient and effective method to teach subjects such as cultural competency and health care disparities can be challenging. This curriculum provides a tool kit to introduce the fundamentals of social disparities and how they affect the way that patients interact with the health care system.

Under faculty supervision, a committee of medical students conducted literature searches and surveyed other appropriate patient educational materials. Topics were identified and selected from Centers for Disease Control and Prevention resources on health disparities. The committee consulted with faculty and community members to write case discussion materials teaching students about these issues. The cases provided a foundation for medical students in these key topics before encountering a diverse patient population in clinical training. Each case was designed for student participation in a small-group setting, to promote thoughtful discussion among students with different levels of exposure to these subjects. Some pedagogical methods utilized in the cases included asking students to access publicly available medical information in the same way that a patient might, asking students to fill out intake forms from the perspective of a patient, and asking students to work through challenges patients might face in following a physician's recommendations.

## Methods

We formed a committee of students and faculty from the Baylor College of Medicine Office of Student Affairs to organize and execute SDHOP. This group created a required program for first-year medical students during orientation. The discussion groups were 1-hour sessions led by faculty facilitators in which small groups of 10 students worked through interactive learning exercises about six core topics. These topics were selected as those most relevant and critical to early medical student training based on the Office of Disease Prevention and Health Promotion Healthy People 2020 topics and objectives: access to care and food insecurity; immigrant and refugee health; lesbian, gay, bisexual, and transgender (LGBT) health; human trafficking; race and ethnicity; and women's health.<sup>8</sup>

All first-year medical students were required to participate in SDHOP during the first week of orientation. The program was designed to be an introductory course on the social determinants of health and to encourage students to continue to explore these subjects in the future. Students were not required to have any prior knowledge. Participants were given pre- and postsurveys to assess their knowledge of and attitude toward each of the subjects highlighted in SDHOP.

P. Surveys.docx

*All appendices are peer reviewed as integral parts of the Original Publication.*

The resources required for SDHOP were minimal and inexpensive. They included the use of meeting rooms for the small-group sessions. We printed student handouts for the discussion sessions; however, hard copies are not required. Faculty facilitators were recruited from clinicians with expertise in each of the six topics covered in the discussion groups. They volunteered their time to support this initiative.

Below, we list a brief overview of the main topics addressed in each case, with references to the corresponding appendices included in this resource.

#### Case 1: Access to Care, Food Insecurity, Environment

Students stepped into the shoes of the Jones family as they navigated barriers to accessing care. They used online references to plan logistical aspects of transportation and clinic hours for physician appointments, to understand the challenges of food insecurity while preparing a grocery list, and to explore exercise options for the family. Topics addressed included access to health care, food insecurity, transportation, and the built environment. Materials included the case-specific facilitator guide (Appendix A) and student handout (Appendix B).

#### Case 2: Human Trafficking

Students walked through an encounter with a trafficked patient and her alleged boyfriend through a “choose your own adventure” style case. They selected the clinical course of the trafficked patient and saw how their actions helped or hindered her in her medical care. Topics addressed included human trafficking, translation services, domestic abuse, red flags, and screening tools. Materials included the case-specific facilitator guide (Appendix C) and student handout (Appendix D).

#### Case 3: Immigrant Health and Language Barriers

Students discussed the challenges that immigrants face while navigating the American health care system. They learned about what it means to be uninsured and how the Emergency Medical Treatment and Active Labor Act (EMTALA) affects care for this population. They followed the fictional case of Ms. Garcia, which was inspired by an actual patient whose citizenship status was revealed by health care providers to authorities outside of medical care. Students reflected on the legal and ethical aspects of this case and also discussed how language and cultural barriers impact patient care. Topics addressed included EMTALA, language barriers, and citizenship status. Materials included the case-specific facilitator guide (Appendix E), student handout (Appendix F), and supplementary information (Appendix G).

#### Case 4: LGBT Health

Students completed a new clinic intake form from the perspective of Shawn, a trans man, and Holly, a lesbian woman. They discussed how this initial form set the stage for patient interactions with the care team and ways for health care providers to be more sensitive to barriers to care that disproportionately affect LGBT patients. Topics addressed included LGBT terminology, sexual health, and health risks in LGBT populations. Materials included the case-specific facilitator guide (Appendix H), student handout (Appendix I), intake form (Appendix J), and supplementary information (Appendix K).

#### Case 5: Race/Ethnicity

Students participated in a privilege walk, an activity adapted from Peggy McIntosh’s article “White Privilege: Unpacking the Invisible Knapsack.”<sup>9</sup> Each student was given a vignette describing patients from many different racial and socioeconomic backgrounds to embody while participating in the exercise. Topics addressed included implicit bias, privilege walk, diversity, and racial and ethnic health disparities. Materials included the case-specific facilitator guide (Appendix L) and student handout (Appendix M).

#### Case 6: Women’s Health

Students attended clinic visits as Mrs. Smith as she asked for help with pain management. They discussed providers’ unconscious biases about women’s symptoms and how such biases negatively influence the care provided. Students also observed the warning signs of intimate partner violence in a clinical setting,

as well as other topics disproportionately affecting women, such as maternal mortality, contraception, and reproductive health issues. Topics addressed included pain management, domestic abuse, parental leave, maternal mortality, contraception, reproductive coercion, and sterilization. Materials included the case-specific facilitator guide (Appendix N) and student handout (Appendix O).

## Results

Because the curriculum was required, all 186 students from the first-year medical student class participated in the 2017 SDHOP initiative. Survey responses were collected from all 186 participants on the pre-SDHOP survey and from 111 of the 186 participants on the post-SDHOP survey (Appendix P) using electronic questionnaires via Qualtrics. The surveys included both responses to questions on a 5-point Likert scale (1 = *not knowledgeable at all or not comfortable at all*, 5 = *extremely knowledgeable or extremely comfortable*) and open-ended responses.

### Changes in Knowledge and Comfort

Students were asked to rate their confidence level with knowledge of terms discussed in SDHOP before and after orientation. These terms included *access to care, food insecurity, gender identity, healthy diet, homelessness, human trafficking, intimate partner violence, mass incarceration, medical literacy, reproductive health, and sexual orientation*. All terms had a significant change in increased confidence level (Wilcoxon signed rank test performed in Prism 7,  $p < .0001$ )

Students were asked to rate their knowledge and comfort level in discussing the topics covered in SDHOP with patients before and after orientation. All topics covered in the curriculum displayed a significant change in increased knowledge and comfort level between time points (Wilcoxon signed rank test performed in Prism 7,  $p < .0001$ ).

### Student Participant Satisfaction

Ninety-one percent of students reported that the overall quality of SDHOP was good or excellent. Each individual small-group discussion topic covered was rated as good or excellent by 90%-96% of students (see the [Table](#) for details). Open-ended responses to each section of SDHOP indicated overall student satisfaction and highlighted specific strengths of the new curriculum.

**Table.** Student Satisfaction With Social Determinants of Health Orientation Program

| Component                                    | Percent |
|--|---------|
| Overall                                      | 91      |
| Access to Care, Food Insecurity, Environment | 96      |
| Immigration, Language Barriers               | 91      |
| LGBT Health                                  | 94      |
| Human Trafficking                            | 90      |
| Race/Ethnicity                               | 91      |
| Women's Health                               | 91      |

In general, many students spoke of how the sessions “opened my eyes to things I did not even consider” as an “introduction to the more human side of medicine.” Students reflected on how “it is crucial for us to be aware of certain social issues that as physicians we will inevitably encounter” and “frame our understanding of medicine in these social determinants.” They reported that “most of the topics we discussed were relatively foreign to me” and how, prior to SDHOP, “I definitely was not equipped to be able to talk about these determinants, much less talk to patients about their own social determinants of their health, but now I feel a lot more comfortable talking about these topics.”

Students enjoyed the group sessions because they “allowed us to grapple with tough, real-life scenarios as well as to recognize our own personal biases.” Many students liked having faculty facilitators with “actual day-to-day practice” experience leading the sessions because they felt “real-life examples” made the sessions more authentic, informative, and passionate. They also appreciated that some of the cases required exercises that were “very engaging and demonstrate[d] what a patient might have to do.”

Participants supported early introduction of these topics in the orientation curriculum and were inspired to “delve deeper into some of the issues discussed.” Some students stated that exposure to these topics made them realize they wanted to “seek out more learning opportunities before clinics so that [they would] feel comfortable discussing [these topics] with patients.” Others wanted to be “extra vigilant and aware” in the future and hoped for more focus on these topics in later curricula.

We also prioritized creating a safe learning space for new students, and students commented that the “small-group sessions fostered an open environment of learning without judgement.” Students “didn’t feel uncomfortable asking questions that [they] might not usually be able to ask” and “liked hearing the different points of view and feeling challenged to consider [their] own beliefs” when “people in [their] group really disagreed.”

The faculty facilitators spoke of being “enlightened and encouraged by the hearty discussion and engagement of participants” and feeling “fortunate enough to provide a safe space for the discussion.” The combination of using fictional vignettes and real-life patients from media stories “seemed to bring home to [students] that they will be dealing not just with biology or cases, but with real people.”

### Discussion

SDHOP was successfully implemented in its first year at Baylor College of Medicine as part of the required first-year medical student curriculum. Overall, student feedback was positive, with many participants expressing a desire to continue learning about these subjects through community outreach opportunities, student and physician organizations, and elective courses offered by our institution. In the data collected from the surveys, we saw a distinct improvement in the three primary domains measured—student comfort level with discussing these topics, student knowledge of these topics, and student familiarity with particular terminology associated with the social determinants of health.

This resource is designed to be adapted by other institutions interested in initiating a program on the social determinants of health. Although this curriculum was planned for first-year medical students, the content is appropriate for health professional students of all levels. While the majority of the content presented in the cases is applicable to patient circumstances nationwide, some of the information is specific to the city of Houston, Texas. These statistics are presented as evidence of the challenges that many metropolitan areas face nationwide and reflect the generalizability of the fundamental themes addressed in this tool kit.

To adapt the cases to other cities, we recommend the following suggestions. Case A (Access to Care, Food Insecurity, Environment) uses Google Maps to find local community clinics in the Houston area and compare transportation options and clinic hours. More information on food deserts across the United States can be found in the United States Department of Agriculture’s interactive Food Access Research Atlas.<sup>10</sup> Statistics for urban pollution in major cities of the United States can be found in the United States Department of Transportation’s Air Quality Index.<sup>11</sup> Case E (Immigrant and Refugee Health) references the number of uninsured individuals in Texas and should be amended with regionally specific data. More information for other locations is located in the United States Census Bureau’s report on health insurance coverage.<sup>12,13</sup>

Institutions can be reluctant to make space for education on the social determinants of health, especially given the difficulty of securing mandatory curricular time. However, approaching this challenge with a preformed curriculum with specific time stamps and a logistical outline helps to demonstrate the feasibility of the new programming. At our institution, we were able to allocate time from orientation activities for the small discussion groups; however, since each case stands alone, they can also be spread out as six individual hour-long sessions throughout a school year. Another challenge is recruiting faculty facilitators. We recommend reaching out at least 3 months in advance to optimize scheduling. Faculty facilitators

should expect to spend at least 2-3 hours preparing for the small discussion groups using the included facilitator guides.

SDHOP presents an opportunity for community engagement that should be approached cooperatively as a way for students to learn from their communities and give back to them in the future. At our institution, students also participated in a site visit program that exposed them to many local nonprofits and presented opportunities to volunteer at those locations in the future. We recommend implementing a similar program to foster longitudinal student interest in their communities and social disparities.

After some minor adjustments to the small-group discussion cases based on student and facilitator feedback, we have included the most recent versions. The cases have also been modified to remove content geographically specific to the Houston area. Several additional improvements will be implemented at our institution in subsequent years and are suggested. We recommend that the subjects covered in this program be revisited several times in other mandatory courses and learning activities throughout medical school. This repetition will emphasize these topics to students and allow them to reflect on their experiences throughout different stages of their training, from limited patient exposure in the preclinical curriculum to extensive patient interaction in the clinical years. At our institution, connecting SDHOP longitudinally to other required curricular activities is the next step.

This study is limited in that we have a data set from only 1 year of our pilot program. The data are also restricted by assessing only self-reported student knowledge and comfort level on the topics covered in the modules. We are unable track any longitudinal changes to these metrics or predict whether there will be a significant effect on student behavior in a clinical setting in the future.

We are continuing to assess student and facilitator satisfaction with SDHOP and the program's success in improving knowledge of and attitude to the social determinants of health. While the formal pre- and postsurvey assessments were used initially, we are also incorporating more formal methods of evaluation, with a 55-word short reflection assignment.

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All identifiable persons in this resource have granted their permission.

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**Ethical Approval**

Reported as not applicable.

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