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Health Insurance Programs, Extended Social History Taking, and Resources to Overcome Health Care Barriers: Introduction for Medical Students

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Abstract

Introduction: Recognizing social determinants of health and addressing barriers to health care are an essential part of medical practice for which students' formal training is inadequate. The majority of medical students feel a professional responsibility to understand health policy, but their knowledge of health care legislation and health insurance is lacking, and their primary information sources are outside the medical education setting. This resource provides an easily implemented tool kit to begin to fill these educational gaps. **Methods:** During their first inpatient medicine clerkship, fourth-year students in a 6-year BA/MD program participated in a classroom activity that included instruction on taking a comprehensive social history and a lecture regarding government insurance. Through an interactive case-based discussion, students developed a list of specific resources and then compiled information to share with their classmates. **Results:** Thirty-seven students participated in this learning activity during a brief pilot period. Comparison of preclass and postclass survey data showed that students increased their knowledge regarding insurance programs. Students also increased their self-perceived skills in identifying barriers and arranging resources for patients. The majority of students (94%) intended to apply these skills and knowledge during future clinical rotations. **Discussion:** This resource provides a tool for introductory, interactive learning about health insurance, social history taking, and addressing barriers to health care, and requires minimal resources. The amount of time devoted to the activity, references, and discussion topics can be customized to fit within a school's specific learning goals and overall curriculum on health disparities.

Keywords:
Social Determinants of Health, Health Disparities, Systems-Based Practice, Health Insurance, Social History, Health Policy, Population Health, Internal Medicine, Case-Based Learning

Educational Objectives

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

1. Increase self-assessed skill and confidence in extended social history taking by applying specific tools in the clinical setting.
2. Accurately define basic health insurance terminology on an end-of-clerkship written exam.
3. Identify characteristics of government insurance programs (Medicare and Medicaid), including their funding, qualifications, and covered services, on an end-of-clerkship written exam.
4. Distinguish the major implications and outcomes of the Affordable Care Act on an end-of-clerkship written exam.
5. Identify and educate classmates on a specific local resource to help patients overcome socioeconomic difficulties and barriers to health care.
6. Apply the knowledge, skills, and attitudes outlined above in the clinical clerkship setting to improve in the competency of systems-based practice.

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Introduction

Identifying patient needs and arranging resources are critical skills used to provide health care for patients affected by health disparities. Medical student education regarding social determinants of health and health disparities has expanded to all or nearly all medical schools, but concern about the quality and quantity of this instruction persists.[1] Despite a growing interest in these topics, there are no clearly defined teaching methods or programs that have been widely disseminated or had robust evaluation of their effectiveness.[2]

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Physicians also need to have a working knowledge about health insurance to effectively arrange care for their patients, but both medical students and residents report lacking understanding of insurance plans and how to help patients reduce their medication costs.[3] Since the passage of the Affordable Care Act, objective medical student knowledge regarding the implications of this legislation has increased significantly.[4] The majority (86%) of medical students report feeling that addressing health policy is a professional responsibility, yet only half think that medical schools spend enough time on health policy education, with personal and family experience and the media having a greater influence than their coursework on views of the Affordable Care Act.[4,5]

The Liaison Committee on Medical Education (LCME) has identified health disparities, cultural influences on health, and health care delivery for underserved populations as important topics in medical education.[6] Knowledge, skills, and attitudes related to health disparities center in the systems-based practice domain but also address physician competencies across the framework developed by Englander and colleagues for the AAMC, including Patient Care, Interpersonal and Communication Skills, Professionalism, and Interprofessional Collaboration.[7]

A review of our internal medicine curricula inventory at the University of Missouri-Kansas City School of Medicine found there was no formal instruction in the competency of systems-based practice that all students received as part of their first inpatient clinical rotation, yet the competency was assessed using both formative and summative methods. Feedback from students indicated that basic facts regarding the United States health care system, such as Medicare and Medicaid, were not covered elsewhere in the curricula prior to beginning clinical rotations. A search of *MedEdPORTAL* in 2017 seeking a resource to teach students about insurance programs found only a lecture that had been published a decade prior in 2007.[8]

The target audience for this educational activity is students beginning their first inpatient internal medicine rotation, who at our institution are students in the fourth year of a 6-year combined BA/MD program. This interactive small-group discussion activity was designed to address the specific gaps in our curricula as described above, introduce the important health disparities topics defined by the LCME, and incorporate identifying and sharing knowledge about local resources in our community.

Instructional methods were chosen in alignment with adult learning theory, resulting in an activity that was interactive, drew on past experiences, allowed learners to be resources to one another, and imparted practical knowledge and skills that would be immediately applicable. Consistent with most teaching about social determinants of health in undergraduate medical education, I included traditional didactic material as well as participatory classroom-based teaching through case-based discussion.[2]

Methods

I identified the instructional gap in systems-based practice through my institution's annual clerkship curricula review process, noting students' assessment in knowledge and skills they had not been formally taught. I developed this activity in the context of a master's of health professions education program, applying concepts from coursework regarding curriculum design, teaching techniques, and specific strategies for teaching about culture and health, and incorporating feedback from my instructors and mentors.

I implemented the learning activity in the fourth year inpatient internal medicine clerkship, which was the initial team-based inpatient experience for medical students in our 6-year combined BA/MD program. This 8-week clerkship was offered during six different blocks throughout the year, with approximately 20 students enrolled during each block. I used a classroom at the medical school with a computer, projector, and whiteboard, as well as tables and chairs that could be arranged in an optimal setup for an interactive learning session.

Students completed a brief preclass survey (Appendix A) regarding their knowledge, skills, and attitudes at clerkship orientation. I developed seven matching and multiple-choice questions related to objective knowledge regarding Medicare, Medicaid, and the Affordable Care Act. The second section on the survey included a 4-point Likert-scale (1 = *strongly disagree,* 4 = *strongly agree*) relating to students' attitudes and self-perceived skills at identifying barriers to health care and arranging resources to benefit patients; I created these items based on the learning objectives, using the Society of General Internal Medicine's health disparities education guide for examples of what attitudes to target in the survey.[9]

Students reviewed the optional learning materials listed in the facilitator guide (Appendix B) to prepare for the class discussion, which occurred within the first week of the clerkship. The initial classroom session followed the timing of activities as outlined in the detailed facilitator guide. The session began with a discussion of the material reviewed prior to class, using questions from the classroom presentation slides (Appendix C) to guide the conversation. I then presented the IHELP mnemonic[10] as a tool

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to take a detailed social history and identify barriers to health care. Next, I gave a brief lecture regarding Medicare, Medicaid, and the Affordable Care Act and its outcomes.

The next portion of the activity involved a fishbowl discussion,[11] where student teams were invited to briefly discuss a patient they were caring for who was experiencing barriers to health care. Next, the group as a whole brainstormed a list of potential resources to benefit that patient. One student was selected as scribe and began a list of resources on the whiteboard. If the students were not forthcoming with cases or if the discussion did not lead to a list of a comprehensive list of resources, the classroom presentation contained several additional patient cases and a resource list that could facilitate more conversation.

At the end of the activity, each student signed up to investigate and report back to the group on one of the resources listed on the whiteboard. Initially, I had intended to schedule a second classroom meeting for students to share the information they gathered and debrief, but due to faculty time limitations and the desire to avoid additional classroom activities detracting from clinical experience, this information sharing was done online instead, using a discussion board on the school's learning management system. The facilitator guide contains a suggested outline for how to hold a second session in person, if desired by future users.

Students completed a postclass survey (Appendix D) 1 month after the classroom activity in order to assess their retention and application of knowledge, as well as to determine whether there was any significant change in their (self-rated) skills and attitudes. In addition to the preclass survey questions, a final question appeared on only the postclass survey, using the same 4-point Likert scale, and asked students to indicate their level of agreement with the statement "I will use the knowledge and skills gained from this seminar on future clinical rotations." Correct answers to the knowledge questions appear in Appendix E.

Thrity-seven students experienced this learning activity during the pilot phase. I then added the activity as a regular part of the curriculum for the 2018-2019 academic year after getting approval from our institution's curriculum oversight council. Since that time, the knowledge questions from the surveys have appeared on the final clerkship summative written exam.

At this point, as the author and clerkship director, I have facilitated all sessions of this activity. However, with a review of the facilitator guide and basic knowledge regarding government insurance programs, any faculty member could act as facilitator. Other members of the interdisciplinary medical team, such as a resident or inpatient social worker, may also have the knowledge and skills required to be an effective facilitator for this activity. The topics have sparked a lot of curiosity and questions from students, so it is important that any facilitator have clinical experience caring for and arranging resources for an underserved population.

Results

I analyzed preclass and postclass survey data from the 37 students who participated in this activity during the pilot phase. Five students' data were incomplete, as they returned only the preclass or the postclass survey form or else did not complete the form in its entirety. Those students' data were excluded from the paired *t*-test analyses.

Pretest scores ($M = 1.97$, $SD = 0.845$) rating students' knowledge regarding Medicare, Medicaid, and the Affordable Care Act were compared to posttest scores ($M = 2.48$, $SD = 1.034$) using a two-tailed paired *t* test; the difference was statistically significant, with $t_{31} = 2.523$ ($p = .017$). The effect size was moderate, with Cohen's $d = 0.57$.

In the year following the pilot phase, the knowledge questions from the preclass and postclass surveys were repurposed for use on the students' summative multiple-choice clerkship exam. The percentage of the class ($n = 105$) answering each of these four test questions correctly ranged from 62% to 75%, compared to an overall mean score on the exam of 70%.

Results of the *t* test for the individual Likert-scale items relating to students' attitudes and self-perceived skills at identifying barriers to health care and arranging resources to benefit patients are presented in the Table. To avoid family-wise error, a summed scale was created to analyze the data from these four survey items; a two-tailed paired *t* test comparing preclass to postclass survey data showed a statistically significant increase (0.8, $SD = 1.27$) in desirable attitudes, with $t_{29} = 3.449$ ($p = .002$).

Ninety-four percent of the 33 students indicated they agreed or strongly agreed with the statement "I will use the knowledge and skills gained from this seminar on future clinical rotations." In the first full academic year after implementation of this activity, students' ratings of their own improvement in the competency of systems-based practice during the clerkship increased to a mean of 4.76 (on a 5-point Likert scale), compared to 4.59 the prior academic year on an anonymous aggregate clerkship evaluation.

Discussion

This resource provides a tool for interactive learning about health disparities and the competency of systems-based practice and

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Table. Results of *t* Test Comparing Presurvey and Postsurvey Skills and Attitudes Items ($N = 32$)

Survey Item	Preclass *M*[a]	Postclass *M*[a]	*M* Difference (*SD*)	*t*	*p*
The health care system treats people unfairly due to their race or socioeconomic status.	2.7	2.6	−0.1 (0.6)	−0.902	.374
I am skilled at identifying barriers to health care by taking a patient's social history.	2.8	3.0	0.2 (0.5)	3.483	.002
I feel comfortable identifying and arranging resources that would be beneficial to my patients.	2.4	2.7	0.3 (0.7)	2.609	.014
Patients are in control of most factors that affect their health.	2.3	2.1	−0.2 (0.5)	−2.262	.031

[a]Rated on a 4-point Likert scale (1 = *strongly disagree*, 4 = *strongly agree*).

requires minimal resources beyond faculty time and a typical classroom setup. In the course of facilitating this activity, I found that students did not understand basic insurance terms such as *premium* or *deductible,* so I adjusted the content of the lecture to fit with my students' baseline knowledge and prior experience.

Results of preclass and posttest surveys, as well as clerkship evaluations, show that students increased their knowledge and perceived skills related to identifying and addressing barriers to health care. Performance on multiple-choice exam items related to this knowledge was comparable to performance on the written exam as a whole. One of two broader attitudinal questions did not show a statistically significant change when analyzed individually, likely reflecting that these attitudes were more ingrained and less susceptible to change after a brief learning activity. More evaluation is necessary to determine whether gains in knowledge were sustained long-term.

One of the benefits of this activity is the collaborative creation of a catalog of specific resources for patients. The format of this information sharing is flexible and can be done through a second in-person meeting or online, depending on faculty availability and scheduling preferences. The majority of students indicated their intent to use this knowledge on future clinical rotations. Again, more longitudinal follow-up is needed to determine whether students actually applied what they learned in social history taking, identification of patient barriers, and arrangement of resources for their patients, as they indicated they anticipated doing. This could be determined by analysis of performance on future clinical clerkships and clinically based exams.

Another benefit of this resource is generalizability across different settings, levels of learners, and even professions. The information provided in the classroom presentation regarding insurance programs is not specific to particular states or localities; it is a general overview that does not require particular prerequisite knowledge for the learners. This offers the potential to use the resource in the preclinical curriculum, in different medical specialty clerkships, and in the education of other health professionals (e.g., nursing or physician assistant students).

This activity could act as a starting point for discussion of health disparities in preclinical or early clinical students, but the complex and important topic of addressing health disparities cannot be covered in a brief classroom exercise. The optimal use for this resource would be to facilitate a more focused session regarding social history taking, specific local resources for patients, and health insurance programs in the context of an institution's broader curriculum related to health disparities and social determinants of health.

Analysis of outcomes showed that implementing this brief classroom activity effectively increased medical students' knowledge regarding health insurance programs, as well as their self-perceived skills in identifying barriers to health care and resources for patients. This activity did not change deep-seated attitudes regarding health disparities and should not be implemented with that goal in mind, unless as part of a more comprehensive curriculum. Future iterations of this work could include more longitudinal follow-up regarding knowledge, skills, and attitudes, including assessment of how these skills are applied in the clinical setting. It will also be important to reevaluate and update the presentation content in light of the evolving political climate surrounding health care reform.

Appendices

A. Preclass Survey.docx

B. Facilitator Guide.docx

C. Classroom Presentation.pptx

D. Postclass Survey.docx

E. Survey Answer Key.docx

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

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References

1. Chen FM, Overstreet F, Cole AM, Kost A, Brown Speights JS. Racial and ethnic health disparities curricula in US medical schools: a CERA study. *PRiMER*. 2017;1:6. https://doi.org/10.22454/PRiMER.2017.1.6
2. Doobay-Persaud A, Adler MD, Bartell TR, et al. Teaching the social determinants of health in undergraduate medical education: a scoping review. *J Gen Intern Med*. 2019;34(5): 720-730. https://doi.org/10.1007/s11606-019-04876-0
3. Lai CJ, Smith AR, Stebbins MR, Cutler TW, Lipton HL. Promoting interprofessional collaboration: pharmacy students teaching current and future prescribers about Medicare Part D. *J Manag Care Pharm*. 2011;17(6):439-448. https://doi.org/10.18553/jmcp.2011.17.6.439
4. Rook JM, Winkelman TNA, Fox JA, et al. Looking to the future: medical students' views on health care reform and professional responsibility. *Acad Med*. 2019;94(9):1361-1368. https://doi.org/10.1097/ACM.0000000000002621
5. Meurer JR, Ferda NM, Chelius T, et al. Medical student views of the Affordable Care Act. *WMJ*. 2015;114(6):247-252.
6. Liaison Committee on Medical Education. *Functions and Structure of a Medical School: Standards for Accreditation of Medical Education Programs Leading to the MD Degree*. Association of American Medical Colleges and American Medical Association; 2018.
7. Englander R, Cameron T, Ballard AJ, Dodge J, Bull J, Aschenbrener CA. Toward a common taxonomy of competency domains for the health professions and competencies for physicians. *Acad Med*. 2013;88(8):1088-1094. https://doi.org/10.1097/ACM.0b013e31829a3b2b
8. Dressler R. The structure and funding of the U.S. *healthcare system. MedEdPORTAL*. 2007;3:442. https://doi.org/10.15766/mep_2374-8265.442
9. SGIM Disparities Task Force. *A Train the Trainer Guide: Health Disparities Education*. Society of General Internal Medicine; 2008. https://www.sgim.org/File%20Library/SGIM/Communities/Education/Resources/SGIM-DTFES-Health-Disparities-Training-Guide.pdf
10. Colvin JD, Bettenhausen JL, Anderson-Carpenter KD, et al. Multiple behavior change intervention to improve detection of unmet social needs and resulting resource referrals. *Acad Pediatr*. 2016;16(2):168-174. https://doi.org/10.1016/j.acap.2015.06.001
11. Jaques D. Teaching small groups. *BMJ*. 2003;326(7387): 492-494. https://doi.org/10.1136/bmj.326.7387.492

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