

Expanding Knowledge and Changing Attitudes About Poverty: An Interactive, Interprofessional Approach

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Abstract

Background: Poverty negatively affects the lives and health of the poor. However, health professionals often have limited personal experience and receive little formal education on surviving under conditions of poverty in the United States, which may contribute to suboptimal patient care and outcomes. **Purpose:** We conducted a 3-h, interactive, experiential poverty simulation workshop with an interprofessional group of pre-professional health students to increase their comprehension about the realities of poverty. **Method:** As part of the evaluation, participants completed a self-assessment of their attitudes and skills using a Likert scale and open-ended questions; a reflection prompt about how the workshop might affect their professional practice; and a pre- and post-assessment questionnaire. **Discussion:** Participants' attitudes about low-income patients became more favorable; they gained awareness and expressed empathy through the role-play experience. Our analysis revealed increased understanding of social determinants of health, of life challenges that patients face outside of healthcare, and that solutions must be collaborative as the challenges facing poor patients are multifactorial. **Conclusion:** The workshop allowed interprofessional students to learn from and with each other about the experiences of poor patients. Future sessions should emphasize interprofessional skill-building and action, potentially in virtual formats.

Keywords

health professions education, interprofessional education, interprofessional team collaboration, poverty, social determinants of health

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Introduction

Poverty as a Primary Driver of Poor Health

Poverty is likely the greatest predictor of poor health in the United States and is associated with food insecurity, homelessness, unemployment, and numerous other unmet social needs.¹ Among wealthy nations, the U.S. currently has among the highest rates of poverty, the most extreme wealth inequality, and ranks near the bottom in terms of economic mobility.² Furthermore, mounting evidence suggests that the far-reaching economic and population health consequences of the U.S. COVID-19 pandemic include increasing prevalence of unemployment, food insecurity, and housing instability.³ This reality lends particular urgency to efforts to improve health care professionals' role in screening for and addressing unmet social needs in the post COVID-19 era.

Academic health centers sit at a cross-section where they are responsible for providing care to a diverse array of

patients, including many who live in poverty, while teaching and training future health care professionals. However, health care professionals may be prone to misunderstandings and

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biases against their most economically destitute patients, resulting in inappropriate or suboptimal care for these patients. The social-economic distance between the provider and the patient is known to impact care and may contribute to disparities.⁴ Moreover, health professionals often have few formal opportunities to learn about the lived experience of poverty. The future of academic medicine and the allied health professions should include greater emphasis on the social determinants of health, including efforts to deepen physicians' understandings of the lives and constraints of patients who are economically disadvantaged.⁵

Poverty simulations are a strategy to meet this curricular need. These activities are designed to increase empathy and facilitate improved cultural responsiveness by engaging providers with the nuanced consequences of poverty on daily living and health. Efforts to put learners "in the shoes" of their most disadvantaged patients have been shown to increase knowledge of the specific needs of underserved patients and improve empathy among current and future healthcare providers.^{6,7}

Interprofessional Education About Poverty

Given their relevance for healthcare delivery and outcomes, several healthcare professional organizations have suggested, if not mandated, that curricula incorporate themes pertaining to the social determinants of health. Such organizations include the American Medical Association through its Health Systems Science learning series; the Pharmacy Quality Alliance (PQA), as addressed at its 2020 Annual Meeting; and the Accreditation Council for Graduate Medical Education (ACGME). The ACGME in its common program requirements specifically states that trainees, "must demonstrate an awareness of and responsiveness to the larger context and system of health care, including the social determinants of health."^{8,9}

The generally siloed nature of health professions education has functioned as a barrier to collaborative learning. We contend that having learners learn with and from each other on health equity topics such as poverty in an interprofessional context is an innovative strategy for developing health professionals' understanding of the multifaceted challenges that patients from low-income communities experience. In this educational case study, we describe our experience conducting an interprofessional, cross-sector poverty simulation to provide trainees a simulated exposure of the lived experience of persons living in poverty.

Material and Methods

Poverty Simulation Workshop

This case study describes a 3-h interprofessional, interactive poverty simulation that we conducted in November 2019. The goal was to increase awareness among the learners and trainees, and promote change to better serve underserved

communities. The tool kit was purchased from the Community Action Poverty Simulation from the Missouri Community Action Network.¹⁰ The organization was founded in 1970 and this activity was originally called a welfare simulation to demonstrate the difficulty of living on public assistance. The organization purchased the copyright and modified the program in 2007.

During the simulation, participants roleplayed the lives of low-income families by using time-limited fictional case scenarios to allow participants to see the various sides of poverty in an experiential setting. We modified the tool kit by adding additional props such as toy guns for police officers, stuffed dolls to mimic babies and poster images of community locations like the courthouse. To be more inclusive, we modified families to represent those that were Mandarin speaking, of Muslim religious faith, and from the LGBTQ community.

Prior to the session, the lead facilitator, a law school professor, led a teaching session with the volunteers who served as "staffers" at the resource tables to outline the roles they would play and the expectations for interacting with participants at the session. The entire session required participation from faculty and staff from the law school, as well as health profession programs, and in total included over 60 persons.

In addition to faculty, the learner participants were students in pharmacy, medicine, physician's assistant programs, and psychology, as well as residents in pediatrics and internal medicine. Thirty-nine of the interprofessional learner participants completed program evaluations. Students were participants in a grant-funded interprofessional primary care training program that included team-based clinical care as well as educational training activities such as this simulation. Students received instructions at the start of the workshop to orient them to the physical setup and flow of the session. They were assigned to role-play members of "families" and provided with appropriate props. After the session there was a large, group debrief led by the lead facilitator.

The workshop was deemed exempt as an educational activity and did not qualify as human subjects research, by the Northwell IRB. However, participants were asked to sign a consent form to use their image for media purposes.

Workshop Evaluation

We used a 3-component mixed-methods analytic approach to evaluate this workshop. First, participants were asked to provide open-ended reflections on their experiences and attitudes to the course content. Second, we developed a 4-item questionnaire using an 10-point Likert Scale to obtain learners' views on the degree to which the workshop (a) provided "real-world" skills, (b) helped them become more comfortable with the topic; (c) prepared them for interprofessional practice; and (d) met their educational needs. Finally, participants electronically completed a pre- and post-assessment questionnaire (included with the

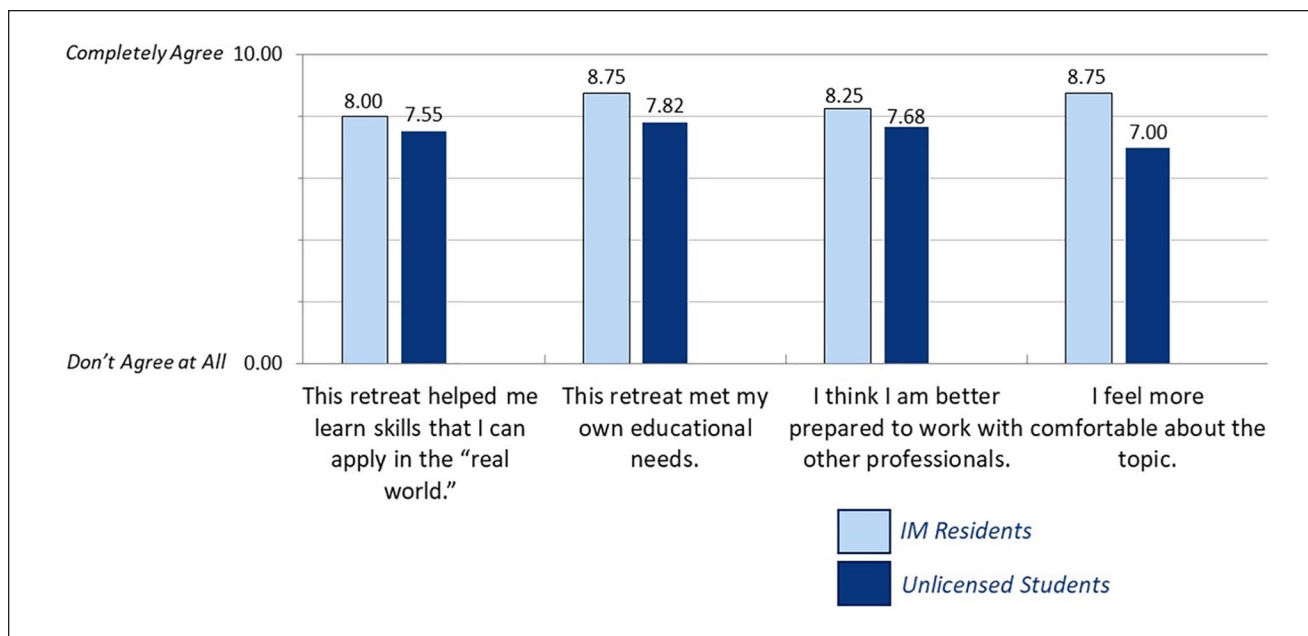


Figure 1. Mean learner ratings among IM residents ($n=4$) and non-licensed learners (Medical students, pharmacy, PA, psychology students ($n=31$; all comparisons NS)).

toolkit) on the same day; and a written reflection prompt asking how this activity will affect their behaviors in the future when working in their professional roles.

Data Analysis

We deployed non-parametric analyses comparing distributions of responses (ie, Mann-Whitney U tests) to examine differences among the learners for Likert Scale responses. These analyses were completed using SPSS (v. 22). Next, we used descriptive statistics to summarize the pre- versus post-questionnaire results. Last, we completed a qualitative analysis of the reflection prompts using an inductive approach. Two authors (LM, CC) manually reviewed transcripts separately and developed a code book of major and minor themes. Then, a third author (LB) reviewed the transcripts to identify new themes as well as those in the code book. The coders met to discuss and agree on final results.

Results

Four of the medical residents and 31 of the unlicensed learners responded to the anonymous evaluation. Mean scores on the Likert Scale items suggested overall high levels of satisfaction with the workshop (mean item ranges between 7.27/10 and 7.96/10). While residents endorsed slightly higher mean ratings than the other learner groups, these differences failed to reach statistical significance ($P > .05$ for all comparisons; see Figure 1).

The pre-post assessment showed that the learners shifted from showing less favorable to more favorable attitudes to

those living in poverty (Figure 2). We interpreted a greater proportion of participants in the post-test saying "I don't know" as a positive movement along the continuum. The largest pre-post changes we saw were in 2 survey questions: (1) "The social service system has a positive impact," where attitudes changed from 33% agreement in the pretest to 10% agreement in the posttest, and (2) "Poor people spend too much money on junk food/fast food," where again, attitudes changed from 43% agreement in the pretest to 20% agreement in the posttest (data not shown).

Four themes emerged from analysis of the reflection prompt. First, a majority of participants expressed an increase in empathy and understanding toward patients living in poverty, either by recognizing that every individual has unique circumstances and stories, or by identifying the need to individualize treatment based on social determinants of health. Secondly, participants gained a new appreciation of the challenges faced by people living in poverty, which negatively impact their healthcare access. Barriers mentioned included time, language, and childcare. Medical students seemed most sensitive to the time crunch felt throughout the simulation, empathizing with barriers to achieving medical outcomes when so much of a patient's time involves meeting family needs, ensuring childcare, maintaining employment, or paying bills (Table 1).

Third, participants recognized that poverty is a systemic issue, leading to challenges to achieving positive health outcomes. Lastly, participants identified that collaborative solutions are necessary to meet patients' needs. Solutions identified by participants included resource navigation, treating the individual needs of a patient, communication

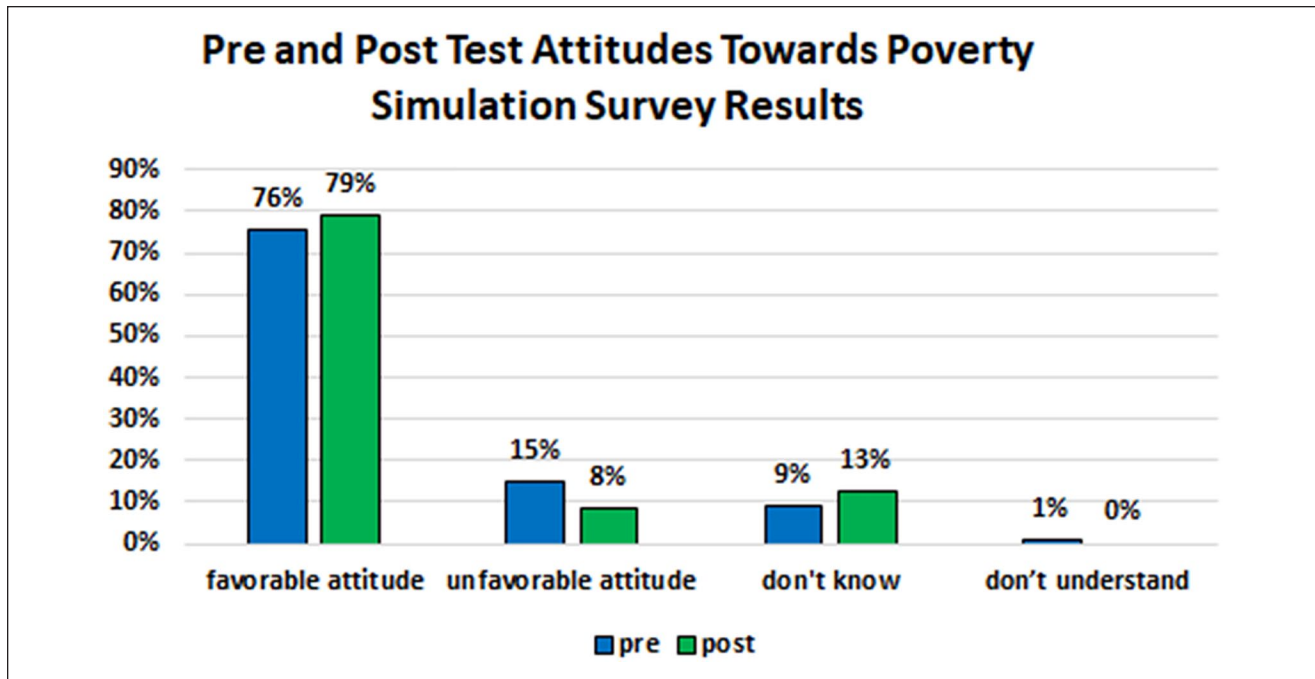


Figure 2. Change in participants’ attitudes toward poor people as a result of the Poverty Simulation.

Table 1. Themes in Participant Responses to Open-Ended Questions About the Poverty Simulation.

Themes	Illustrative quotes
1. Increased empathy toward patients living in poverty.	<ul style="list-style-type: none"> • “Gives me more empathy for challenges my patients face especially with time management and transportation.”—<i>IM Resident</i>
2. People living in poverty face challenges beyond healthcare access.	<ul style="list-style-type: none"> • “I saw how. . .healthcare fell to the bottom of the list. . . Sometimes people are forced to make decisions . . . to put other problems ahead of their health.”—<i>Pharmacy student</i>
Challenge: Time	<ul style="list-style-type: none"> • “. . .it’s not possible for parents to hustle work, bills, children, errands, “bad news”, and still have time for doctor’s visits.”—<i>Faculty</i>
Challenge: Language support	<ul style="list-style-type: none"> • “Important to have translation services and interpreters readily available in healthcare settings.”—<i>Pharmacy student.</i>
Challenge: Childcare	<ul style="list-style-type: none"> • “. . .kids get left alone, [and] schools unequipped to deal with everything.”—<i>Medical student</i>
3. Social determinants of health play a role in the cycle of poverty	<ul style="list-style-type: none"> • “Poverty cannot be blamed on the patient; rather, it’s a systemic issue and a public health crisis.”—<i>Medical student</i> • “Medical issues are barriers to patients accessing resources to meet their social needs. These patients have many challenges and their health may just be one of them.”—<i>Faculty</i>
4. Collaborative solutions to meet patients’ needs	<ul style="list-style-type: none"> • “This simulation really taught me to meet the challenges my patients face.”—<i>Faculty</i>
Solution: Resource navigation	<ul style="list-style-type: none"> • “Knowledge of resources for patients in poverty is KEY in assessing how a patient will be able to incorporate medical care into their everyday lives.”—<i>Medical student</i> • “excellent patient care means helping our patients navigate the healthcare system.”—<i>Pharmacy student</i>
Solution: Individuation	<ul style="list-style-type: none"> • “Look at the person in front of you as an individual with individual needs.”—<i>Other/unlisted</i> • “It’s all about getting to know my patients as individuals.”—<i>Medical student</i>
Solution: Communication skills	<ul style="list-style-type: none"> • “Important that. . .patients convey their feelings and thoughts to the provider (and vice versa).”—<i>Pharmacy student</i> • “Aspects of social history that we do not ask about routinely as primary care people. . .”—<i>Medical student</i>
Solution: Resiliency	<ul style="list-style-type: none"> • “To build emotional. . .support for our patients to help them. . . stay strong in their current lives.”—<i>Pharmacy student</i>

skills, and resiliency. Pharmacy students were most likely to address the importance of resource navigation regarding medication access in their reflections.

Discussion and Conclusion

Most classroom-based activities in medical and interprofessional education aim to increase learners' knowledge on a given subject. Results from our workshop indicate that we had noticeable success building learners' awareness of the motivations, time constraints, competing priorities (eg, employment, childcare, transportation) and financial pressures (eg, health care and prescription drug costs) that constitute in part the lived experience of poverty. With greater linkage to resources and effective communication, healthcare providers in any setting or from any profession, are in prime positions to partner with patients to improve not only their physical health, but their social, mental, and emotional well-being.

The interprofessional workshop was well-received by participants, their knowledge about living in poverty increased, and their attitudes toward the poor became more favorable. However, because the workshop was conducted and evaluated in a single day, we do not know what its longer-term impacts might be on the participants. Nor did we attempt to assess whether the experience will have discernible effects on their professional interactions with disadvantaged patients in the future. Additionally, because we closely followed the established Poverty Simulation workshop guide, we did not specifically query the learners about their perspectives on the interprofessional format of the workshop or their prior experiences or knowledge about the topic. We believe the resident trainees would have had the greatest familiarity given they deliver direct care. Future work would assess when learners would have had exposure to the topic to better determine their status prior to participating. Finally, our relatively small sample size limited our ability to accurately measure the significance of the observed effects of workshop participation.

As a next step, interactive poverty simulation workshops should move from a narrow focus on knowledge transfer to emphasize skill-building and action to address the deleterious effects of living in poverty. Moreover, future interprofessional poverty simulation workshops might encourage participants to develop interprofessional solutions to address the needs of disadvantaged and underserved patients. Last, in light of the public health crisis, educators must consider novel virtual educational strategies to deploy that can have a similar impact as the in-person poverty simulation.

Authors' Note

The contents are those of the authors and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS, or the U.S. Government.

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