

Medical Student Education

Student Attitudes: Potential Barriers to Implementing a Community Medicine Field Activity

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Objective: Clerkship-year medical students may have complex attitudes regarding communities in which they train. Our objective was to assess medical students' attitudes following implementation of a community medicine experience in their clerkship year. **Methods:** We analyzed transcripts of audiotaped medical student group discussions following a community field activity. A multidisciplinary team coded the transcripts using content analysis techniques to identify key features of student narratives regarding students' attitudes and attributions regarding their community medicine experiences. **Results:** Students expressed several important perceptions regarding the community in which they conducted their field experience. These included strong insider/outsider themes, resentment that historical legacies shape the doctor-patient relationship, and concerns over personal safety and educational relevance of the activity. Some students noted improvement in understanding of patients within their communities. **Conclusions:** Negative attitudes and attributions expressed by students can act as obstacles in the development of community medicine initiatives, hinder professional development if unaddressed, and have the potential to contribute to health disparities. Further work on how to incorporate community medicine training is needed.

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The Institute of Medicine (IOM) has defined primary care as “the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community.”¹ Family medicine as a discipline is ideally suited to teach primary care, with core values aligned with the IOM definition. For example, the Family Medicine Curricular Resource Project, which was funded by a Health Resources and Services Administration contract describes three clerkship themes or contexts in which family medicine delivers care: (1) prevention and wellness, (2) acute and chronic illness, and (3) community and population medicine.²

New approaches to enhancing the family medicine curriculum and improving students' knowledge, skills,

and attitudes in core-valued areas are needed. Many current curricular interventions designed to implement the new IOM and Family Medicine Curricular Resource Project guidelines are elective and so selectively include students already interested in community health, potentially exaggerating the measured benefits of these programs. To create change in the wider medical community, interventions must influence the development of all trainees: students choosing to pursue careers along the spectrum from primary care clinical medicine to subspecialty care, in addition to those destined for basic science and research-based careers. Training of students in isolation from the communities they serve also risks the development of “outsider” perspectives on health care and health care delivery that may not be successful in the real world.³

Strategies supporting the development of patients empowered to work in partnership with providers who are effective communicators, sensitive to the “insider” or patient perspective, are promising approaches in addressing health disparities and improving the efficacy of acute and chronic care of patients.⁴ Specifically, increased student exposure to an underserved, ethnic minority population may serve as a resource to help improve the health of marginalized communities while

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educating students in community medicine and public health.⁵

One approach to this process is to introduce curricula designed to enhance students' understanding and cultural competence regarding the communities they serve and the effect of community factors on health. Understanding student attitudes toward patient populations and orienting students toward a community perspective are critical components of medical education and professional development. When present, overt or subliminal negative or dysfunctional attitudes and attributions directed toward communities and their members have the potential to act as barriers to the doctor-patient relationship and may serve to perpetuate stereotypes and increase existing gaps in health disparities and social determinants of health.⁶ The specific aim of this study was to identify attitudinal and attributional responses to implementing a community medicine field activity among second-year, urban, academic medical students at a private university.

Methods

Sample and Overview

Students participating in the study were medical students who matriculated at an urban academic medical center assigned to a mandatory family medicine 4-week clerkship rotation in 2006. Informed consent was obtained from all participants, and the study was approved by the University of Pennsylvania Institutional Review Board.

Students at this institution enter their clinical clerkship rotations in their second year after 18 months of classroom-based didactics. As part of their family medicine clerkship, students were required to participate in a newly developed community medicine curriculum.

The curriculum was designed to review factors shaping the social determinants of health, expose students to the concepts of insider (patient) and outsider (health professional) perspectives, as well as providing students the opportunity to explore community settings and perspectives on health. Students (1) received a 1.5-hour didactic presentation on community medicine, (2) were asked to complete a worksheet with data (eg, available resources and public transportation routes, census data, mortality data, and other health statistics) about a neighborhood they picked using Internet-based resources, (3) completed a 4-hour community-based field activity, (4) participated in a 1-hour debriefing session intended to discuss community perspectives regarding health-related issues of their selected neighborhood, and (5) prepared a written report on a potentially influential health concern from a medical and community perspective.

The field activity required students to select a neighborhood within the community base of the university with the exception of neighborhoods immediately sur-

rounding the university known as West Philadelphia. It is a community of neighborhoods with wide variation in community histories and values as well as economic, physical, and social composition. Many neighborhoods in West Philadelphia are economically challenged, with large uninsured and underinsured populations. The neighborhoods are urban with well-defined public transportation routes.

Students were instructed to generate a health-related question of their choice based on their review of external sources of neighborhood data (ie, Web-based data used for their worksheets). Students typically selected topics related to cardiovascular health, nutrition, exercise, obesity, or diabetes. Students were to travel to a public, but non-medical setting (eg, grocery stores, hair salons, churches, etc) in their selected neighborhood, collect field observations, and assess the perspective of community members on their health-related issue. Students were encouraged to use public transportation to expose themselves to transportation routes available to people living in the communities. Students were asked to conduct their activities in non-medical settings with the intention of helping students see the community environment through the eyes of patients rather than from the biased setting of a medical office. Students were asked to engage with informally identified community members (ie, "people on the street") to avoid systematically exposing students to community members with agency-based agendas. Students could either find their own site to visit or choose from a list of community agencies developed by the faculty. Vetted sites were provided for students who felt uncomfortable with a less-structured activity. The safety of neighborhood sites was reviewed by the University Department of Public Safety.

Data Acquisition, Management, and Analysis

Data included transcripts of group debriefings conducted during the third week of five distinct, 4-week clerkship rotations. Group debriefings were conducted after the field activity and were mandatory for all students participating in the family medicine clerkship. Audiotapes were sent to a professional transcription service where all identifying information was eliminated during the transcription. De-identified transcripts were entered into a qualitative software package (QSR N6) for analysis.^{7,8} QSR N6 software facilitates thematic coding, inter-rater coding (and inter-rater reliability), and correlates themes with demographic variables.

Data were coded first using broad themes that reflected participants' responses to questions about their community medicine experiences.^{9,10} The constant comparative method was used to refine coding. The method involves ongoing revision of codes as new themes emerge during a close reading of the data.¹¹ Once themes were identified, they were compared

across groups to ensure that they were both representative and inclusive of all groups. A multidisciplinary team of investigators from primary care, education, and anthropology were involved in coding and analyzing the transcripts. Discrepancies in coding were discussed during weekly meetings and were resolved by consensus.

The unit of analysis for our study was the student body rotating through the family medicine clerkship. As such, we did not do additional focus groups based on purposeful sampling to be able to assess variations in themes based on student demographics.

Results

Sample Description

All 76 students rotating in the family medicine clerkship during the study period participated in the group debriefings. Group debriefings varied in size but were usually comprised of 13 to 14 students. Table 1 describes the characteristics of participants.

Summary of Major Themes

The primary domain examined was medical students' personal and emotional responses to the field activity and the community in which they conducted their field work. Themes within the domain of students' personal and emotional responses included prior expectations,

guilt by association, safety, the need to go to community settings, service versus learning, and feelings of helplessness. Table 2 provides quotes supporting the identified themes.

Prior Expectations. The debriefings revealed that students began the activity with pre-determined ideas about the residents of West Philadelphia. Some felt that they had little new to learn because they believed they were already familiar with the area—a statement commonly made by students living within the neighborhoods surrounding the university. Others expressed feelings of fear and discomfort about interactions with residents of the West Philadelphia area and with time spent walking around in the area. Several students, however, were pleasantly surprised that residents were more accessible than they had assumed them to be, conceding that their communication with community members was affected by snap judgments regarding educational levels and socioeconomic status.

Guilt by Association. Respondents identified several existing barriers to interaction and connection with community members through the activity. Students believed that their affiliation with the university was a barrier to open dialogue with community members, but there was some difference in opinion over the extent of its impact. Most concerns were based in the perceived historical legacy of the university's interactions with the surrounding community characterized by social and economic displacement of community members and a sense that university providers "experiment" on community members.

Safety. Some students voiced direct concerns about the personal safety risk they perceived in doing the activity. Specific concerns involved the safety risk of commuting (ie, use of public transportation), approaching community members, and being perceived as targets while in community settings. Fears were associated with the perceived potential for danger in approaching community members to ask them about health-related issues. Several students expressed doubt that the benefits of the field activity outweighed the perceived safety risks. Two respondents noted that they were "lucky to get out alive." Others stressed the importance of being aware and savvy in community settings. Some expressed no discomfort at all.

The Need for First-hand Observations. Students were critical of the requirement to personally engage with community members in a community setting for a variety of reasons. Many students were reluctant to approach community members in a community setting. Additionally, some students considered the assignment as unnecessary, viewing the process of speaking to

Table 1

Demographics of Participants (n=76)

Mean Age: Years (SD)	24.7 (1.9)
	n (%)
Gender	
Female	37 (49)
Race/ethnicity	
Black (non-Hispanic)	8 (11)
White (non-Hispanic)	48 (63)
Latino/Hispanic	5 (7)
Other	15 (20)
Anticipated practice type	
Subspecialty	61 (84)
Primary care	12 (16)
No response	5 (7)
Anticipated practice size	
Small (solo—four providers)	19 (28)
Large (>four providers)	37 (54)
Academic center	12 (18)
No response	8 (11)

SD—standard deviation

Table 2
Primary Themes

Themes	Quotes
Prior expectations	"It's almost like I didn't learn anything about that by going out here and seeing it because first of all, we all live within like two miles of school so we see this community everyday."
	"I generally assume that they are going to be unhappy or sad in some way, but that is usually not the case, like hating their lives or wishing that they were had ... but it doesn't seem to be the case at all."
Guilt by association	"If you say 'I'm a student from Penn,' some people might feel like that might be a barrier."
	"...I think we play it up in this setting and I think that people in the community don't really think about it at all unless we randomly come up to them and tell them we're from Penn, then we know whatever feeling may be evoked but I don't really think on a day to day basis they think about it or consider the university...."
Safety	"I'd just like to say that the probability that something will happen to you kind of depends on your ability to blend in and how you interact in that community."
	"We picked this class just because the public transportation went right there. And with neither of us knowing the community we figured we'd rather go somewhere that at least was easy to get to and back from, rather than being somewhere where we would have to walk around..."
	"I guess what confused me is that like we get all these mixed messages like the family medicine doctors are like 'It's not dangerous' and then the administration is like 'It's dangerous, don't go there.' I think as young people new to Philadelphia, like we kind of rely on the school to give us a reasonable picture of like what's safe and what's not and I don't think it's clear."
The need for first-hand observations	"Can you teach this stuff? Like there are some people who are just completely inept at this stuff and they just are always kind of going to be that way."
	"I felt that the office would have been a more appropriate setting for addressing sort of personal issues with health."
	"...working [at a community health site], like talking to these people in the community and working with them and handing out their vitamins on a weekly basis and giving them vaccinations, you get an idea of what people are thinking, and are quite frank with you, even in that setting, even if you are a medical student."
Service versus learning	"And this is just another insult along those lines of insults, which I felt that really has no place, unless we are going to actually provide something for them, instead of just taking from them, which seems to be what we are doing."
	"I felt weird saying that we were doing a project, because we're like doing a project on you like you're some freak and we're studying you and I felt weird saying that."
Feelings of helplessness	"We saw a number of closed, large grocery stores, so it's important for us to know about, but there's really nothing we can do about it."
	"And so it's kind of like 'Alright, I'm going to turn in this paper. It's not going to make any change or be towards any change really because we don't necessarily have the resources to go about making that change. So I don't see it being brought to a higher level."
Positive responses	"I didn't feel frustrated and part of it might be because...the people we met were very proactive about their community—volunteered to drive kids to after-school programs, talking about summer programs for the kids and one lady outside the community center... we ran into more enthusiasm than we did cynicism or distress about their neighborhoods."
	"I think we were a little surprised at like how comfortable it was, like I think we expected to kind of—for it to be a little bit more outside of our normal, every day kind of comfort zone or whatever."
	"... when you have a patient and you're wondering why they're not compliant with your therapies, maybe if you had some exposure in the areas that they've been, you can understand that...they don't have access to a local drug store where they can get their meds... and there are other issues which are impacting their ability to take their meds."

patients/community members in a clinical setting as equally beneficial. Students reported a greater sense of comfort talking to community members in office settings or settings with more supports/structure such as at the offices of community-based organizations using a pre-designated questionnaire format or meeting. Some students questioned whether the tenets of community medicine could be taught at all.

Service Versus Learning. Students voiced concerns over the nature of the interaction with community members characterized by the community activity. Students cited the feeling that asking for community

perspectives outside of the context of a community service program was potentially exploitative.

Feelings of Helplessness. Students described a sense of hopelessness and guilt when confronting macro-social issues such as poverty, race, and class.

Positive Reactions. By contrast, some students described their experiences with West Philadelphia communities as valuable, enlightening, and comfortable. Several respondents identified community resources and proactive attitudes that changed their view of the neighborhoods they visited.

Discussion

The qualitative assessment of students' attitudes regarding a field-based community medicine curriculum exposed significant attitudinal barriers to the realization of national curricular goals and objectives. This study demonstrated that second-year medical students can have strong attitudes regarding notions of community and community engagement that powerfully shape interactions with community members in community settings. Students struggled with the realities of community engagement and the macro-social challenges facing community health. It is important to note that when the field activity assignment was introduced to the participating students, many were reluctant to participate and voiced concerns over personal safety and discomfort approaching community members in community settings, and, perhaps more importantly, outside of the more familiar clinical setting. This level of concern was surprising to us and suggested that for these students the clinical setting provided a protective comfort zone from which many students are reluctant to emerge.

Community-based curricula and training have focused on increasing the delivery of culturally effective medical care.¹²⁻¹⁴ For example, curricular evaluations reveal that medical graduates' practices improve as a result of exposure to patients of diverse backgrounds.¹² Our participants reported enhanced communication skills and interest in community service.

Tamblyn et al found that young doctors who graduated from one medical school with community-oriented, problem-based learning performed better than graduates of traditional medical schools.¹³ Tamblyn demonstrated that after transition to a community-oriented, problem-based learning curriculum, graduates showed improvement in mammography screening rates (55 more women screened per 1,000, 95% confidence interval 10.6 to 99.3) and continuity of care (3.3% more visits coordinated by the doctor, 0.9% to 5.8%) compared with graduates of a traditional medical curriculum.¹³ In related studies, researchers have also found that community-based curricula increased medical students' communication skills and professionalism, and students report increases in their ability to identify clinically relevant culture-related issues that may impact the patient's view of illness.¹⁴ Participants revealed a strong sense of service to humanity and pride in making a difference. There is also evidence that community members living in areas of deprivation reacted positively to involvement in medical education.¹⁵ Related literature does not, however, detail the challenges of curricular implementation. Our study begins to address this issue through its focus on a community-based activity and assessing the reactions of the medical students involved. The results can potentially benefit other medical schools that may add a similar assignment to their curricula.

A variety of community-based educational experiences have been described in the literature. Other efforts have focused on exposure of students to community-based medical providers, home visiting programs, or structured curricula through departments of or programs in public health.^{13,16-19} Previously described curricula often involved a selection process through which students electively participate in community-based activities. The design of our curriculum was quite different. Our curriculum was designed to require all learners to be exposed to community members and perspectives in non-medical settings. We intentionally avoided having students interact only with community leaders or agency representatives of community-based organizations to avoid the potential for bias in students' exposures to community perspectives. It is possible that our format contributed to negative responses students had to the curriculum, with students often preferring highly structured learning environments.

The attitudes we were able to elicit as barriers to implementing a successful community medicine field activity could be summarized as students' lack of comfort in underserved community environments. Student discomfort appeared to generate expression of concerns for personal safety among students, with many students resistant to entering communities and approaching community members with the intent of exploring community perspectives on health. Some students framed talking with community members as intrusive and exploitative. Several students felt that, despite the short time spent on this curriculum (approximately 4 hours), the curricular content was misplaced and should have been included elsewhere in their education, not during their clinical clerkships when they are focused on time spent in clinical settings.

Limitations

There are several limitations that should be considered when interpreting our results. First, any mention of associations should not be considered causal in nature since this was a qualitative study in which findings were intended for exploration of explanatory factors and development of hypotheses. Second, the generalizability of our results is limited since our sample consisted only of students matriculated into an urban, academic medical center for training. Although potentially not generalizable to non-urban, non-academic settings, we believe these data are valuable given that many medical schools are located in similar urban settings.

Third, informational bias, such as social desirability bias, could have biased students' responses but most likely toward positive notions about community members and community settings. As such, our findings may be conservative estimates of the discomfort students feel when asked to enter community settings in unstructured formats. Finally, the voice of socially

dominant students may not be representative of the less-vocal students, potentially skewing findings.

Conclusions

Medical students in their clinical rotations in an urban, academic setting had complex attitudes and feelings regarding the communities they serve. Largely negative attributions regarding the manifestations of poverty and safety in public transportation and public spaces were noted as significant challenges in implementing activities conducted in community settings. Negative attitudes and attributions are likely to hinder professional development and cultural competence, which has the potential to contribute to disparities in health care delivery. As a result of this assessment, we are developing new methods to overcome perceived threats to students' personal safety and to provide more options for students to address the variation in prior experiences and expectations.

It is also critical to recognize the barriers produced and institutionalized during the acculturation process of medical training. Medical education curricula that promote physician-oriented power structures by limiting the exposure of students to interactions with community members solely within the relative safety and security of the environment of the medical office or hospital room are at risk for training providers who are uncomfortable in community settings and systematically insensitive to the needs of their communities. However, introducing curricula that challenge student comfort and assumptions creates a complex set of responses that include strong negative feelings. A greater amount of curricular time may need to be spent integrating community perspectives into the clinical clerkship training of providers in family medicine and other specialties than we were able to provide. An institutional acceptance of the value of community perspectives is also necessary and must be promoted to create a culture of learning that is sensitive to community needs.

It is important to identify new ways to bring to the fore deep-seated attitudes and stereotypes that inhibit active student understanding and engagement with people outside of the clinical setting. Students acknowledged the importance of providing compassionate care to underserved people but were largely unable to recognize that their assumptions about poverty and difference shaped their perceptions of the determinants of community health. As educators, we need to seek more powerful tools to effect this change.

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