Understanding the Goals of Service Learning and Community-Based Medical Education: A Systematic Review

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Abstract

Purpose
To understand the educational goals of projects described as “service learning” or “community-based medical education” and to learn how relationships between medical schools and community members are discussed in these projects.

Method
In 2008, the authors performed a systematic qualitative content analysis of 57 articles, published since 1990, that addressed community placements for U.S. medical students. After the initial analysis, the academic-based authors conveyed their findings to their community partner and coauthor, received input on relevance and priority of themes, and then refined their analysis accordingly.

Results
The authors identified five main findings: (1) Considerable heterogeneity existed across projects, (2) although medical schools aimed to improve the health of the community, they did not routinely involve community members in the identification of local health priorities, (3) educators were enthusiastic about community-based education as a method for teaching complicated ideas such as social determinants of health, (4) many authors emphasized community placements as being equivalent to traditional curricula, and (5) the articles did not emphasize the concept of reciprocal knowledge transfer.

Conclusions
The authors found little emphasis on the reciprocal nature of partnerships between communities and medical schools. They propose that the principle of community partnership within medical education could train a cohort of medical students prepared to practice in the rapidly changing health care environment—one that now includes an important new agenda of community accountability.

As the health care system evolves, reorienting medical education toward community health is one strategy for aligning the priorities of academic medical centers with those of the general population.1–3 Yet, despite considerable public funding and the educational autonomy granted them by society, academic medical centers have been slow to fulfill their “social contract” to engage with and serve the greater community.4,5 Organizations such as Community–Campus Partnerships for Health also promote the development of reciprocal knowledge transfer.

Health encourages partnerships between academic leaders and community members to address local health concerns.6 The National Institutes of Health also promotes the development of community partnerships through the Roadmap for Medical Research7 and through the Clinical and Translational Science Awards, which evaluate proposals on, among other things, the extent to which applicants are engaged in the community.8 In keeping with this national agenda, the Liaison Committee on Medical Education (LCME) endorses an educational approach called service learning.9 Service learning, rooted in the pedagogical theories of John Dewey and Paulo Freire, emphasizes a combination of active community participation and ongoing reflection,10 sending learners out to serve in the community and then bringing them back to the classroom to reflect on their experiences and consolidate new insights. Ideally, service learning helps medical students rediscover their initial, altruistic reasons for studying medicine. One of its important tenets is that service activities must address needs identified by the community.11

The main components of service learning overlap with the principles of community-based participatory research,12 another strategy that academic medical centers use to increase community engagement. Similar to service learning, community-based participatory research programs, developed and run in partnership with local communities, emphasize collaboration and shared knowledge.12 Because of the overlapping goals of service learning and community-based participatory research, it is not surprising that service learning projects are often described as “community-based education” or “community-based medical participatory learning.”

Inconsistent vocabulary and conceptual convergence can make the discussion of these approaches confusing.

Method
Objective
We sought to better understand this complicated and heterogeneous web of community-based educational activities by systematically analyzing the literature (1) to identify specific educational goals of projects described as “service learning” or “community-based medical

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education,” (2) to learn how relationships between academic medical centers and their surrounding communities are discussed, and (3) to find evidence of reciprocal knowledge transfer between the two.

Data sources
Using PubMed, ERIC, and Web of Science, we searched for articles published since 1990 that contained the following key terms: medical students, undergraduate medical education, medical school curriculum, medical education, service learning, community-based medical education, community-oriented medical education, and community-based education.

Study selection
Having retrieved 189 articles, we excluded 120 articles that had an international focus (outside the LCME territory of the United States and Canada). We excluded a further 12 articles that focused on health professionals other than medical students, winding up with a total of 57 peer-reviewed articles that focused on service learning or community-based education in U.S. medical schools (Figure 1). Interestingly, our specific search criteria and key terms retrieved no articles on Canadian programs.

Data extraction
We (Hunt and Bonham) then conducted a systematic qualitative content analysis.13,14 We used the data analysis software, NVivo 8,15 to organize and index the journal articles and to identify categories and themes.16 Coding proceeded iteratively; we developed a descriptive coding scheme with a tree structure based on our initial research questions and on the community-based participatory research principles of partnership.12 We then used this scheme to code all articles, and we created detailed memos linking codes to emerging themes. We met regularly to identify and resolve any discrepancies in coding and analysis through a process of consensus.

After our initial analysis, we conveyed our findings to our primary community partner at Healthy African American Families in Los Angeles, California, and asked the director (Jones) for input on questions and topics that she considered important in medical education. She drew on her previous experience as a community mentor to medical students and other health professional trainees. We then refined our analysis based on topics she prioritized.17 The University of Arkansas for Medical Sciences institutional review board determined that this study was not human subjects research.

Results
Considerable heterogeneity existed amongst the articles. They used multiple terms: 38 articles referred to “service learning,” 31 articles described “learning” or “medical education” curricula that were “community based” or “community oriented,” and, finally, three articles discussed similar concepts but used other names entirely, such as “rural clinical preceptorship,” “transdisciplinary health profession education,” and “community capacity and interdisciplinary training.” Several articles used more than one term throughout.

Although we found discussions of community-based education and service learning in commentaries, editorials, conceptual pieces, national surveys, and self-reflection essays by medical students, the majority of articles were program descriptions, which ranged from accounts of curricular innovations to extensive evaluations of long-standing programs with multiple, longitudinal
interventions. They discussed a number of outcomes. Outcomes from the medical school perspective included class rank, test scores, qualitative or quantitative ratings of satisfaction, attitudes, skills or knowledge, career intentions, and residency choice. Fewer articles included outcomes from the community perspective, but some did track outcomes such as patient satisfaction, the provision of medical services to the community, agency staff satisfaction, community knowledge, and qualitative measures of project impact.

The majority of the articles affirmed the important role that medical schools have in improving the health of the greater community, citing specific medical school mission statements or broader institutional policies as drivers behind community-based education.

As Quinn et al note, community-based medical education programs should consciously ensure that they benefit not only students but the community as well. These programs, many in medically underserved communities, include ongoing clinics, health education campaigns, and annual health fairs and can be a vehicle for extending health care services. In most programs, students were involved in both direct clinical care and health education. A few emphasized only direct clinical care, and programs involving junior medical students tended to focus on health promotion projects. Finally, a few articles described students’ participation in nonmedical activities such as volunteering in a hospice, providing language translation, or rebuilding homes, walking dogs, and sorting donations after a natural disaster.

Service learning, as Seifer suggests, should respond to “community-identified concerns.” Most of the articles, however, had little discussion as to how these community needs were identified. In some projects, students participated in a formal needs assessment in the community before embarking on a project; however, the extent of community involvement in the design and implementation of these studies was not clear. Of the 57 articles, only 10 stated that community members were part of the process of choosing a health need. Five articles provided examples of community involvement in the design of an educational program. Another five indicated that community members were involved in designing and implementing the program, but did not specify their contributions. Finally, faculty from the University of Minnesota acknowledged that, when they planned a service learning intervention to address teenage pregnancy, they did not involve community input. Later, when the community disputed the need of the intervention, the project was abandoned. Although the project was never completed, perhaps the students learned a valuable lesson—both from the community’s leadership and from the integrity of the faculty who published this humbling experience.

The articles evidenced educators’ enthusiasm for community learning as a way to teach complicated or abstract ideas. Complex topics such as professionalism, social determinants of health, cultural competence, and systems-based practice are difficult to teach through traditional didactic methods. Articles that were authored by students or that included comments from students suggested that medical students develop new insights and a greater understanding about many of these ideas through community-based experiences. In keeping with the pedagogy of service learning, many authors described or advocated formal reflection exercises for students to contemplate and integrate the lessons they learned from their community experiences.

As for learning the principles of public health, many authors indicated that community settings teach students about health disparities, barriers to health care, and the social determinants of health. Most often, articles emphasized that using clinical scenarios in community settings allowed students to understand the sociocultural influences on both individual and population health. It was not clear, however, how these complex ideas were being taught to students. As Mennin asked last decade, does simply placing a student at a community site for a limited period ensure that he or she learn about these complicated interactions?

Several articles argued that shifting educational experiences to community settings was an inevitable response to changes in the overarching health care system. These larger changes in the health system make it important for students to understand organizations and health care delivery. Some articles described their attempts to use community settings to teach students about systems-based practice. For example, Horak suggested that medical educators take advantage of new community settings to involve students in quality improvement initiatives. And Glasser described a community-based medical education program that provided opportunities for students to learn about economic factors such as health care costs and insurance reimbursement. Another important trend was the use of community settings to encourage medical students to work alongside other health professionals in order to prepare them for future work on interdisciplinary teams.

Although 19 articles mentioned cultural competence as an educational goal, few explained how this concept was taught and none discussed how it might be measured. Some suggestions for teaching cultural competence included providing information about local history and health beliefs, arranging seminars devoted to the topic of culture, assigning readings about culture, using reflection exercises, and participating in clinical activities in unfamiliar cultural settings.

Interestingly, notably few articles emphasized collaboration or teamwork as important skills that should be taught to medical students. Those that did were more likely to do so in the context of interdisciplinary education, and they focused on physicians’ working with other health care providers, not with community members. When addressing educational goals within the context of community outreach and engagement, the articles emphasized professional responsibility, commitment, and working with underserved populations; not one used the word “partnership.” In sum,
Community engagement was frequently conceptualized as service or outreach, but never as a collaborative partnership with the community.

It’s no surprise, then, that the concept of reciprocal knowledge transfer received little attention. Although a few editorials and conceptual pieces suggested that both communities and medical schools could benefit through the sharing of knowledge, few program descriptions described specific examples of knowledge sharing. Only six articles mentioned community members having specified roles as teachers or preceptors to medical students.

Although not addressed by one of our original research questions, the equivalence of community placements and traditional curricula emerged as a common topic during the coding process. Since Flexner’s original report on medical education, accountability and standardized testing have been important considerations for medical schools. Some articles discussed concerns about how to ensure quality in medical education overall and particularly in community-based medical education. Others discussed the dilemmas of how to maintain consistent teaching across different community settings. Students expressed concerns that grades received in community-based experiences might not be standardized. Two articles discussed the importance of documenting outcomes in community-based medical education to assure the LCME that the educational experience was equivalent to the traditional curricula. Criteria for LCME accreditation also specifically mention ensuring that the experience is “solid and creditable” through improved faculty development. In response to these specific criteria, seven articles focused on community-based medical education overall and particularly in medical schools. Few program descriptions described specific examples of knowledge sharing. Only six articles mentioned community members having specified roles as teachers or preceptors to medical students.

We were surprised to find minimal overlap between these educational initiatives and ongoing community-based participatory research collaborations. There are potential benefits in collaboration among communities, educators, and researchers who all devote time to developing campus and community partnerships. One of the commonly cited challenges in community-based participatory research is the struggle to maintain relationships between academic centers and communities in the time between projects and grants. Perhaps collaborations with stable, ongoing medical education initiatives could sustain and solidify these research relationships. Similarly, medical students can learn valuable research skills and the concept of partnership through exposure to ongoing community-based participatory research initiatives while they complete required community-based clinical rotations.

The growing enthusiasm about community-based medical education and service learning suggests that educators value this approach, but identifying meaningful outcomes to compare and track these innovative programs remains difficult. As Shipengrover suggests, single education outcomes may not capture the nuances involved in teaching and learning about complex medical systems and public health. Extensive, mixed-method evaluations are likely the best way to assess educational curricula developed in response to priorities identified by community members and medical schools. Unfortunately, comprehensive, nuanced evaluations do not lend themselves to reproducibility or direct comparisons between diverse programs. Our qualitative content analysis offers a rigorous method for systematically comparing articles with different emphases, outcomes, and study designs.

We are aware that, despite our efforts to conduct an exhaustive literature search, we did not identify all articles that focus on community-based medical education or service learning. For example, our search failed to retrieve several innovative programs in Canada. The difficulties in systematically searching the literature largely stem from the multiplicity of terms used and the lack of consistent MeSH headings within PubMed to describe community-based medical education. We also acknowledge that our analysis, though systematic and rigorous in its qualitative methods, is, by its very nature, interpretive.

Conclusion

Despite broad interest in orienting medical school curricula to better meet the needs of underserved communities, there remains much room to more fully develop mutual partnerships between academic faculty and community members. One avenue for integrating community members into academic medicine is to give them formal roles as mentors and teachers. Just as patients can provide invaluable insights to doctors in training, community mentors can give feedback to students regarding communication skills, partnership building, and cultural sensitivity. Community mentors can also share their knowledge about local resources and history and their expertise in areas such as neighborhood organizing, program development, or faith-based approaches to healing. As partnerships between medical schools and communities mature, both parties can benefit immensely through reciprocal knowledge transfer. Ideally, as academic faculty and medical students bring technical and
scientific expertise to the community, they gain in return even more knowledge from community members on culture, public health priorities, and the influence of social determinants on health. Increased community engagement and reciprocal knowledge transfer could prepare medical students to practice in the rapidly changing health care environment—one that now includes an important new agenda of community accountability.27

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