

# The Development and Evaluation of Community Health Competencies for Family Medicine

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## ABSTRACT

*Background:* There is an increasing emphasis on teaching community-responsive care and population health in medical education. This focus requires a multidimensional perspective on community health that examines the determinants, ranges, and variations of health status and disease in the community as a whole.

*Description:* The Department of Family and Community Medicine at the Medical College of Wisconsin sought to strengthen the community health curriculum in its residency programs by developing a core set of competencies in community health as well as a service-learning model to teach residents about community needs and strengths.

*Evaluation:* A common core curriculum was developed and evaluated based on these competencies.

*Conclusion:* Residents who have mastered these competencies will be capable of functioning more effectively as community-responsive physicians.

## INTRODUCTION

Leaders in medicine and medical education are increasingly calling for a greater focus on the health of the larger community and a stronger orientation toward population health and community-responsive care.<sup>1-3</sup> Nationally there has been a call for greater emphasis to be placed on community medicine. A family medicine leader has suggested that residency curricula “should include a required rotation that would focus on improving the health status, access to care, and quality of care

within populations and in community-based settings and organizations.”<sup>4</sup> Community advocacy has also been suggested as a key part of medical education.<sup>5</sup>

This call is partially driven by changes in health care financing and delivery that have increased competition among health care professionals and managed care organizations. The 1996 Institute of Medicine report stated that “for both individuals and populations, health depends not only on medical care but also on other factors including individual behavior and social and economic conditions for individuals and communities.”<sup>6</sup> In addition, the Pew Health Commission identified competencies that expand beyond the medical model of disease that providers should possess to respond to the evolving health care system.<sup>7</sup> These proposed competencies include health promotion/disease prevention, cultural competency, and community and environmental health. The Pew Health Commission also recommended curriculum reform that would focus on incorporating these competencies into current disease-oriented medical education. This multidimensional perspective reinforces a population-based approach to health issues. In order to assess health care needs, a population perspective is required that examines the determinants, ranges, and variations of health status and disease in the population as a whole. The Accreditation Council on Graduate Medical Education<sup>8</sup> requires that graduate medical residents demonstrate knowledge of the health promotion and socio-behavioral sciences, sensitivity to a diverse population, teamwork with patients, families, and other health professionals, and system-based practice that is responsive to the larger context and system of health care.

This article describes the development of a single core community health curriculum for 4 Family Medicine residency programs including: (1) the process used, (2) curricular design, (3) resident evaluation results, and (4) lessons learned about developing this type of curriculum. This curriculum development project leveraged a service-learning model to teach residents about

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community needs and strengths and encouraged them to problem-solve in partnership with other individuals and organizations.

## METHODS

### *Curriculum Development Process*

Initially we developed a project team comprised of 1 faculty representative from each of the 4 residency programs, 1 from the city's public health department, and 2 faculty from the Center for Healthy Communities.

### *Institutional Setting*

The curriculum initiative was supported by an institutional and departmental infrastructure. The Department of Family and Community Medicine at the Medical College of Wisconsin (DFCM) has 4 off-campus, community-based family medicine residency programs: Columbia St. Mary's, St. Joseph, Waukesha, and Racine. The residency programs are located in 4 different communities and each has a patient base and community that is racially, ethnically, socially, and economically diverse. The residencies all serve communities characterized by low income, low education, high unemployment, poverty, and many single-parent families, and several are located in federally designated medically underserved areas. Working with these diverse populations requires a broad range of skills and competencies in community-oriented primary care, interdisciplinary teamwork, cultural competence, and an enhanced understanding of the broader determinants of health and illness in their respective communities.

The City of Milwaukee Health Department (MHD), the largest local public health agency in the state, had a close connection with the DFCM. The former Health Commissioner had a faculty appointment in the DFCM and was on the advisory committee for this initiative. The MHD associate medical director also had a faculty appointment and was a project team member for the initiative. This collaborative relationship allowed us to reinforce the important connection between future community physicians and their local public health agency in the service of improving population health.

The Center for Healthy Communities was established in the DFCM in 1997. The mission of the Center is to build community-academic partnerships to improve health. One of the Center's goals is to strengthen the community health curriculum in the medical school and Family and Community Medicine residency programs.

Although elements of a Community Health curriculum were provided in various ways in the 4 programs,

no systematic, consistent, organized core curriculum in community health existed among these 4 geographically dispersed Family Medicine residency programs. Developing a core curriculum that would be provided across all programs was believed to be an efficient way to systematize the curriculum and maximize the faculty expertise and assets so all programs would benefit. We initiated this effort by developing a core set of competencies that could unify the community health education across remote programs. This was the first time that a core curriculum was developed and implemented in all 4 residency programs. The educational goals were to be accomplished, where possible, in the context of the community-identified needs.

Pre-project needs assessment research was conducted with departmental faculty to assess the need for strengthening the community health curriculum in the residency programs. Interviews with 15 residency program faculty in the DFCM at the Medical College of Wisconsin (MCW) demonstrated the need to strengthen and expand the community health component of the curriculum in its 4 affiliated residency programs. Results from this needs assessment are described in Table 1.

The Project team met twice a month for the first year, 1 in-person meeting and 1 conference call. We also established a listserv that included all team members, the residency program directors, the director of graduate medical education, and the department chair. The listserv was an extremely useful mechanism to communicate about issues related to the development of the curriculum. It served not only as a vehicle to disseminate information, but more importantly as a forum for substantive dialogue about community health issues. The team began by initially identifying the strengths and areas for improvement in the current community health curriculum at each of the 4 residencies. Each residency program presented its current community health curriculum identifying strengths, resources, and needs.

A number of strategies were employed to identify and develop the community health competencies. These strategies are described below. The project team reviewed the current competencies developed by the department's curriculum development committee and approved by the faculty in June 1998. These included 6 abilities adapted from the American Academy of Family Physicians and American Board of Family Practice guidelines: family and community-oriented care, comprehensive and continuing care, compassionate care, health-connected problem solving, effective communication as a professional, and professional and social responsibility. The team then reviewed the community

health literature in the following areas: (1) cultural competence, (2) community health curricular models, (3) population health, (4) service-learning, and (5) community-oriented primary care. Team members made oral presentations on the literature review as well as submitting a written review.

Team members thought it was critical to define the competencies that a community-responsive physician would possess. Therefore, the first step in the process was to identify a core set of competencies that would include basic community health concepts, community assessment methods, partnership building, community intervention strategies, continuous improvement, and sociocultural diversity and inclusiveness. We convened a series of brainstorming sessions using a modified Delphi method to generate a list of these community health competencies that we wanted our graduates to possess. This list was expanded, modified and revised over the first year of the project.

We also sought input from other sources for ideas about competencies. A community health liaison was hired at each residency program. Each community health liaison met with that program's current residents, community members, and the residency's patient advisory council to solicit their thoughts about community health competencies. In addition, the community health liaisons identified best practices in community health by reviewing models presented at national meetings and on community health Web sites. We also surveyed graduates of the programs from the last 5 years to assess their opinions about the community health skills they needed in their practices.

The list of competencies was then analyzed inductively to determine emerging themes and categories. The following 7 categories emerged from the analysis: (1) teamwork, (2) knowledge and use of community resources, (3) socio-cultural competency, (4) community education, (5) community partnership, (6) population health, and (7) research and evaluation.

Curricular modules based on each of the 7 competencies were subsequently developed by the faculty on the project team. Because service-learning represents an approach in which residents have a structured learning experience that combines community service with personal reflection, we wanted to use a service-learning model to develop and implement the curriculum. Since residents who participate in service learning activities not only provide direct community service, but also learn about the context in which the service is provided,<sup>6,9</sup> this model helps residents to understand there is a connection between a particular service activity and

**Table 1.** Faculty Interview Results: Most Commonly Mentioned Curricular Needs

- More resident exposure to projects supporting community health (as opposed to only providing clinical services in a community setting)
- Didactic material on community health
- Experiences linked to a variety of community agencies
- More cohesive approach to community medicine including a core set of competencies
- Services for special high-risk populations
- Increased outreach
- Chronic disease and substance abuse treatment
- Cancer prevention and screening
- Disability evaluations

the didactic portion of their community health curriculum course work.

The team members all used the same template to develop their assigned curricular module. This template included (1) statement of objectives, (2) description, (3) learning activities, (4) resources required, (5) evaluation methods, and (6) time commitment. The curriculum templates were presented to the project team and modified and revised based on feedback. The curriculum modules have been presented to the residents at different times throughout the 3 years of the residency training and use a variety of teaching methods, including seminars, case studies, mentoring, lectures, readings, service-learning activities, reflection, grand rounds, participation in community events, videotaping, and precepting.

As an example for the "Knowledge and Use of Community Resources" competency, the implementation of this component had the following objectives: (1) organize patient record to track progress toward health improvement, (2) use a community resource directory, (3) emphasize primary prevention, and (4) link patient with available community resources. The Learning Activities included (1) lectures and discussion, (2) staffing with faculty, (3) visits to community resource sites, (4) development of resource directory, (5) revision and improvement of patient education tools, (6) case studies, and (7) chart review. These curricular components were incorporated in: (1) Orientation, (2) Introduction to Primary Care clinic, (3) Family and Community Medicine rotation, (4) Behavioral Health rotation, and (5) longitudinal clinical staffing.

One goal of the project was to have each residency program focus comprehensively on 1 specific community health issue. Due to both community need and the existing expertise of several faculty members, the issue that was selected was Intimate Partner Violence (IPV).

Therefore IPV was the community health focus around which the larger and more generic community health curriculum was implemented. In other words, IPV represented the primary learning vehicle for implementation of the more generic community health competencies.

## RESULTS

Community health residency faculty evaluated the third year residents at the end of the 2002/2003 academic year, which was also the end of the implementation phase of the grant. Residents were evaluated on the demonstration of competency in each of the 7 community health competencies that were taught through the new curriculum. The survey tool was a Likert scale instrument that required the faculty to rate the residents' performance as "Excellent," "Good," "Fair," or "Poor" on the core competencies. The data were analyzed descriptively and the results of the evaluation are illustrated in Table 2.

Residents obtained the highest overall mean scores in the following competency categories: (1) knowledge and use of community resources (1.63), (2) research and evaluation (1.64), and (3) sociocultural competency (1.68). Residents obtained the lowest overall mean scores in the competency categories of community education (2.11) and community partnership (1.88).

However, within the broad competency categories, residents obtained the highest individual scores of Excellent (62%) on the following discrete items: "Engages patient, family members, and office staff to help patients achieve goals" (Teamwork), and "Comfortable with role of physician in the community including partnership roles and participation in non-medical areas" (Community Partnership). Residents obtained the lowest individual scores of Excellent on the following discrete items: "Understands the agent-host-environment paradigm" (14% - Population Health), and "Remains current in knowledge of community health status at local and national level" (10% - Population Health). Residents obtained the lowest combined scores of Excellent and Good in the following discrete items within the competencies: "Helps to develop coordinated community partnerships within the community by working with community representatives, as well as agencies and organizations to improve health" (53% - Community Partnership), "Understands the epidemiology of common medical conditions seen in local practice" (60% - Research and Evaluation), "Gives effective educational presentations in the community" (62% - Community Education), and "Educates the public about current and emerging health issues" (67% - Community Education).

## DISCUSSION

These evaluations provided the residency faculty with important information about the new curriculum and identified strengths and areas for improvement in the existing curriculum. The low scores in the categories of Community Education and Community Partnerships most likely reflect the inherent clinical focus of the majority of education and experiences in the residency programs. An alternative interpretation could be that the findings reflect the fact that at some of the residency programs, community medicine is offered in the context of a 1-month, non-longitudinal rotation experience, thus reducing the likelihood that residents will have a chance to interact with and form community partnerships and engage in community education projects. The high and low scores were consistent across programs.

The consistency across the residency programs regarding the competency evaluations suggests that the competencies that receive higher ratings may be easier to teach within the context of a residency educational program ie, some of the competencies that we developed are conceptually more difficult to teach and are a particular challenge for the residents to apply during the day-to-day activities of the clinic. Other explanations could include a common culture and history stemming from a common link to 1 medical school and 1 Family Medicine department. It appears we are doing well teaching residents to use community resources in their care of patients and providing culturally competent care, but we are struggling more with training residents to participate in community partnerships. This may partially result from a lack of opportunities in the residency programs to participate in community academic partnerships. Since the community health experiences of residents had not been systematically organized or evaluated prior to the implementation of the curriculum, we do not have baseline measures to use in comparison. The curriculum will be reviewed and revised in the competency areas where residents did not perform as well as expected.

The ACGME and others have called for graduate medical education that is responsive to the larger context in which patients live and that supports overall health outcomes in communities, not just for individual patients. In this initiative, we demonstrated that a common core curriculum in community health can be developed for programs at disparate sites, and that it can be based upon an underlying set of community and population health competencies.

In our experience, several issues emerged as we developed and implemented the community health curriculum. By integrating service-learning opportunities

**Table 2.** Resident Evaluation on Community Health Competencies for All Programs

|                                                   | Excellent | Good | Fair | Poor | Unknown | Mean (Excludes Unknown) |
|---------------------------------------------------|-----------|------|------|------|---------|-------------------------|
| Knowledge and Use of Community Resources: Average | 49%       | 35%  | 13%  | 0%   | 3%      | 1.63                    |
| Research and Evaluation: Average                  | 27%       | 29%  | 5%   | 0%   | 39%     | 1.64                    |
| Sociocultural Competency: Average                 | 52%       | 33%  | 9%   | 6%   | 0%      | 1.68                    |
| Population Health: Average                        | 37%       | 47%  | 7%   | 2%   | 7%      | 1.70                    |
| Teamwork: Average                                 | 52%       | 30%  | 10%  | 8%   | 0%      | 1.73                    |
| Community Partnership: Average                    | 40%       | 37%  | 5%   | 11%  | 7%      | 1.88                    |
| Community Education: Average                      | 31%       | 31%  | 7%   | 19%  | 12%     | 2.11                    |

Competencies: Percent of residents rated Excellent=1 (exceeds expectations), Good=2 (meets expectations), Fair=3, and Poor=4 (fails to meet expectations). N=21.

into the resident educational experiences, the residents experienced new ways to learn about community needs and strengths, and began to work in partnership to solve community-identified problems. The 4 residency programs are located in different communities so it was important to develop a common core curriculum that could be adapted and modified at each residency program to fit the unique local circumstances. Since the needs and assets of the communities and residency programs differ, the common concepts of the community health curriculum can be taught in a variety of community contexts at the different programs.

Each residency program hired a half-time community health liaison. The community health liaison position was a vital link to the community and provided critical information about community needs, assets, and input concerning the residency's community health curricular needs and service learning opportunities. The roles and responsibilities of this position could alternatively be fulfilled by a program staff person with dedicated time to focus on community health.

It was also extremely important to have the support of departmental and residency program leadership in curriculum development activities. Implementing curricular change is time consuming and challenging and strong institutional support facilitated this process. The full support of the Department Chair in this effort was essential. The presence of a community health champion in the person of the faculty project director at each residency program was crucial to the accomplishment of our objectives. These champions served as opinion leaders and provided support and endorsement of the new curricular innovation ensuring that the curriculum would be accepted and implemented by other faculty and staff. The close connection between the MHD and the DFCM was also a positive factor.

Increased focus on community health competencies in residency training is being recommended by many.

The community health curriculum developed from this process was effective in providing a stronger and more unified emphasis on community health at 4 separate residency sites. The core competency list developed during this process may be useful for other programs embarking on a similar curricular change.

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