

Residency Education

The Central City Site: An Urban Underserved Family Medicine Training Track

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Background and Objectives: *We describe the development of an urban track in family medicine residency designed to recruit a high percentage of minority students and promote their future practice in urban, underserved areas of Milwaukee. We report here on the residents and their first practice location and compared this information to what occurred in our original “main” residency program.*

Methods: *Information about the program’s development was obtained through testimonials from faculty and residency graduates and review of the original accreditation application to the Residency Review Committee. Information about the residents and their practice locations was obtained from the National Resident Matching Program and graduate placement data.* **Results:** *The goal of training more minority doctors in Milwaukee was met, with eight of 16 (50%) residents at our urban-track site from minority groups. This compared to only 12% at our main program. Thirty-eight percent of graduates stayed to practice in an underserved area, compared to only 21% in our main program.*

Conclusions: *Development of an urban track for our family medicine residency increased the number of minority physicians trained and the number of physicians practicing in underserved areas after graduation.*

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Racial and ethnic disparities in health care and lack of qualified manpower create a need for family physicians in America’s urban areas.¹ Members of racial and ethnic minority groups, who make up the majority of inner-city residents, are less likely than others to receive needed services, including treatment for HIV infection, mental health problems, cardiovascular disease, and cancer.^{2,3} In 2006 there were 1,829 Health Professional Shortage Areas (HPSA) in metropolitan areas, representing 34% of all HPSA sites. More than 11,000 additional practitioners would be needed to provide adequate primary care to the populations of those HPSA sites.⁴

To address the lack of physicians in urban underserved areas, more family medicine training sites in those areas are needed,^{5,6} including programs in mid-sized urban areas. Rabinowitz et al defined underserved populations as (1) having a medical practice in a federally designated underserved area (HPSA or Medically Underserved Area) and (2) having a practice in which 40% or more of the patients are medically indigent

(receiving Medicaid or uninsured) or having a similar proportion of patients that is poor.¹ While rural training tracks have succeeded in providing well-trained practitioners in rural underserved areas,^{7,8} less information exists about training practitioners in urban underserved training sites.

A National Health Service Corps study revealed that a key factor in a physician’s desire to practice in an underserved area is the physician’s perception of being well prepared to practice in such a site.^{1,4} Other predictors of practicing underserved medicine include being a member of a minority ethnic group, a strong desire to work with underserved populations during medical school, and having an obligation to serve in the National Health Service Corps.^{5,9} Understanding the importance of fostering and supporting young physicians’ commitment to underserved communities, the American Academy of Family Physicians (AAFP) published guidelines on establishing urban, underserved residency programs.¹⁰

In 1995, the St. Luke’s Family Practice (SLFP) Residency, in conjunction with the University of Wisconsin and Aurora Sinai Medical Center, established a residency site in the inner city of Milwaukee. The new residency site, called the Central City Site (CCS),

was designed to educate family physicians to function effectively in urban underserved areas and to take the mission of family medicine to urban underserved populations. A secondary goal of the training program was to recruit minority physicians into the program. This paper describes the establishment of the CCS, development and implementation of its curriculum, and some of its outcomes and challenges.

Methods

Setting

According to the 2000 Census, the racial/ethnic makeup of Milwaukee's population is 46.7% Caucasian, 39.5% African American, and 13.3% Latinos, with a total population of nearly 600,000 in the city and another 200,000–300,000 people living in the greater metropolitan area.¹¹ Milwaukee has one of the nation's highest teen pregnancy rates—ranking sixth highest among the 50 largest American cities.¹² According to the US Census Bureau, the CCS zip code had a median income of \$13,140, with 47% of persons having incomes below the federally designated poverty level.¹³

The CCS clinic serves a primarily African American population (80%), and most (61%) of the patients are women (61%). It also serves, in collaboration with a community support program, a large population of community-dwelling mentally ill people. These mentally ill individuals are mostly men, many of whom have substance abuse problems. The most common means by which CCS patients pay for medical care is through enrollment in Medicaid (47%). Medicare accounts for 12.9% and commercial insurance for 21.3%.

Program Development

Information about program development was obtained through testimonials from current faculty members who were part of the inception of CCS and also from program graduates. Documents reviewed included the original proposal to the Residency Review Committee (RRC), National Resident Matching Program (NRMP) data, and graduate placement data stored in program files. Use of these data as part of this report was approved by the Aurora Health Care Institutional Review Board.

Planning

Sponsored by Aurora Health Care and affiliated with the University of Wisconsin School of Medicine and Public Health, the SLFP Residency began in 1974. In the early 1990s, a group of physicians, including several practicing in the central city, began discussing the idea of an underserved family medicine residency site. When considering a location for the CCS, the downtown satellite known as the Family Care Center seemed ideal. It was already established as a primary care clinic in a neighborhood with a considerably different population

than the main SLFP clinic. Moreover, the educational experience at Family Care Center was rated favorably by medical students who did rotations there. The Center thus became the outpatient clinic site for the new CCS. Inpatient rotations were shared with those of the already established SLFP program.

A proposal was sent to the RRC in February of 1995 and approved in October of that year. The first “full” class of two residents per year was recruited into the CCS in 1996. Initially the transition to a residency training site was difficult for some faculty physicians at the site, since they were accustomed to a private practice model with medical students rotating through the clinic occasionally. The first few years were thus full of changes in staff and policies to accommodate resident learning. Monthly meetings with faculty, residents, and administrators were used to assess progress.

Recruitment

The CCS has a separate NRMP number from SLFP. Even so, CCS advertises in conjunction with SLFP at residency fairs, national conferences, and in student publications of the National Medical Association to reach potential minority applicants. Originally, all applicants to SLFP were offered an interview at CCS. In 2005, the faculty began screening applicants based on the electronic residency application service (ERAS) application, inviting only those expressing an interest in underserved populations. This reduced the number of interviews at CCS but did not change the number of residents matched to the site. A comparison of the number of candidates ranked at SLFP versus CCS is shown in Table 1. The “scramble” was used to place residents in vacant positions (Table 1).

Curriculum

After establishing the mission and goals of CCS (Table 2), faculty and residents began work on a formal curriculum. The curriculum provided focused learning on urban underserved medicine in addition to the standard family medicine curriculum. In its current form, each faculty and resident at CCS is responsible for teaching to specific annual objectives within broad curricular areas. The teaching occurs through a lecture series given by CCS faculty, residents, and guest speakers on topics relevant to urban medicine and community outreach. Examples of topics include hypertension in African American populations, breast cancer screening in the inner city, political advocacy and activism for equality in health care, and physician burnout. Lectures are arranged monthly and are shared by videoconference with the main SLFP residency site.

Faculty members have organized community outreach programs that include partnerships with local, primarily minority, high schools to provide workshops on health careers and education on specific health top-

Table 1

Number of Applicants That Were Ranked and Matched at the St. Luke's Family Practice Main Residency Site Compared to Number of Applicants Ranked at the Central City Site (CCS)

| Year | Main Site Applicants That Were Ranked | Main Site Positions Filled | | CCS Applicants That Were Ranked | CCS Positions Filled | |
|------|---------------------------------------|----------------------------|----------|---------------------------------|----------------------|----------|
| | | Match | Scramble | | Match | Scramble |
| 1995 | 52 | 8 | 0 | 0* | 0 | 1 |
| 1996 | 56 | 6 | 1 | 12 | 2 | 0 |
| 1997 | 61 | 8 | 0 | 37 | 0 | 2 |
| 1998 | 53 | 7 | 0 | 22 | 2 | 0 |
| 1999 | 46 | 8 | 0 | 15 | 2 | 0 |
| 2000 | 40 | 8 | 0 | 16 | 2 | 0 |
| 2001 | 38 | 7 | 1 | 13 | 2 | 0 |
| 2002 | 30 | 7 | 1 | 16 | 0 | 2 |
| 2003 | 44 | 6 | 2 | 24 | 2 | 0 |
| 2004 | 38 | 7 | 1 | 22 | 0 | 2 |
| 2005 | 32 | 6 | 2 | 0** | 2 | 0 |
| 2006 | 22 | 3 | 5 | 13 | 0 | 2 |

* Program was not approved in time for 1995 Match.

** In 2005 the program filled prior to the National Resident Matching Program with applicants from osteopathic medical schools.

Table 2

Mission and Goals of the Central City Site (CCS) Residency

Mission

The mission of the CCS is to provide quality, comprehensive health care in a respectful environment by providing excellent customer service to the diverse population of Milwaukee, including its underserved population. The clinic strives to be the first choice for residents seeking training in urban medicine while creating a supportive environment where people want to work.

Goals

The goal of the CCS program is to train family physicians to be skilled in urban family medicine, with an emphasis on:

- Community outreach, activism, and advocacy
- Patient-focused care and quality clinical services
- Patient and community education
- Understanding health care disparities and cross-cultural medicine
- Learning health care policies, administration, and politics
- Continuity and maintenance of physical and emotional wellness

ics. Residents are also encouraged to find their own ways to reach out to the local community through activities such as health fairs at community centers or churches, medically relevant presentations to community groups, performing Head Start physicals, and health screenings at a teen runaway shelter. Additionally, prenatal education classes taught by residents or residents working with medical students have been offered throughout much of the last 6 years as a response to the community's high teen pregnancy rates.

Residents may elect to complete a 4-week rotation in two local community health centers (CHCs). This rotation includes readings about CHCs' organizational structures and working with family physicians at two local CHCs.

Program Evaluation

Program evaluation at this point has included a tabulation of the number and percentage of residents enrolling in the CCS program who were from minority groups and the number and percentage of graduates whose first job after residency was an inner-city position. We compared these data to similar data for the main SLFP program. We also

reviewed residency records and interviewed faculty to identify challenges for the program and potential solutions.

Results

Graduate and Practice Sites

There were 16 graduates from CCS between 1998 and 2007. Of those, three took faculty positions (two at CCS), three entered fellowships (two sports medicine, one palliative care), five took jobs in private non-underserved practices, one became a hospitalist, and four began practicing in underserved populations or at CHCs.

Using the SLFP main residency site for comparison, there have been significantly more minority-group physicians enrolling in and graduating from CCS than at the main SLFP site (50% versus 12%). The eight minority graduates from CCS were all African American, while less than half of graduates of SLFP were African American, Hispanic, or Asian. Further, the proportion (38%) of residents from CCS who entered practice in an underserved area as their first job after residency was higher than at the SLFP program (21%) (Table 3). The closest data available to compare graduates of

CCS to other area programs are statewide statistics that show that the average percentage of family medicine graduates in Wisconsin practicing in HPSA sites is only 11%–13%.¹⁴

Challenges

Based on interviews with faculty, recruitment challenges seemed comparable to those at the main site, having more to do with the proportion of medical school graduates going into family medicine in any given year, rather than any factors inherent to the program itself. Faculty noted that the number of graduating US medical students going into family medicine has declined from 9.3% in 2003 to 8.4% in 2005,¹⁵ leading to the need to “scramble” to fill positions after the Match. Out of the six residents obtained through the scramble in the last 6 years, only one graduated the program.

Another challenge for CCS involved the advantages and disadvantages of its affiliations. Being affiliated with the larger SLFP allowed access to additional faculty, specialists, and patients, as well as an improved resident call schedule. It is difficult, however, to maintain a unique identity and focus within that larger group.

The operations of the CCS clinic are also a challenge. The CCS is a small clinic that can be a drain on resources—especially in relation to scheduling of faculty in resident clinics. Faculty from the main site are asked to help the two full-time and one part-time CCS faculty with resident supervision, which provides a greater variety of staffers for the residents but draws faculty away from other obligations.

The clinic is also limited by low reimbursement from federal and state insurance plans. Indeed, often there is a conflict between the clinic’s mission and the financial goals of a private health care system. A current example of this dichotomy is moving the faculty to a partial production-based model, which provides a disincentive for faculty to see indigent patients or teach, to a model that rewards increased productivity by seeing patients insured by commercial payers. On the other hand, faculty members report that this conflict is useful for teaching residents the realities of private practice in family medicine.

An additional difficulty encountered in an inner-city clinic is a high no-show rate (30%), which influences both the clinic’s financial stability and the number of patients available for residents to see. We met this challenge by instituting an aggressive no-show policy that results in discharging patients with continued missed visits and an innovative technique coined “the virtual physician schedule” whereby patients needing care on a same-day, urgent basis are put into a “virtual” schedule to be seen as soon as there is a cancellation or break in a provider’s normal schedule.¹⁶ This system has reduced the overall no-show rate to less than 20%, increased third-year resident volumes by 34%, and created more accessibility for patients to urgent care.

Discussion

According to AAFP guidelines, our CCS site meets the criteria for an urban underserved training program in that it exists in a city with a population of more than 500,000, and more than 80% of trainees’ clinical time

Table 3

Practice Sites of Graduates of the Central City Site (CCS) and St Luke’s Family Practice (SLFP) Residency Main Site Over the Past 9 Years

| Year | Graduates | | | | Current Practice Sites | | | | | |
|---------|---------------------|------|--|------|--------------------------------|------|------------|------|-------------------|------|
| | Number of Graduates | | Number of Graduates From Minority Groups | | Medically Underserved Practice | | Fellowship | | Academic Practice | |
| | CCS | SLFP | CCS | SLFP | CCS | SLFP | CCS | SLFP | CCS | SLFP |
| 1998 | 1 | 8 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 |
| 1999 | 1 | 7 | 1 | 1 | 1 | 2 | 0 | 0 | 1 | 0 |
| 2000 | 2 | 7 | 1 | 1 | 0 | 3 | 0 | 0 | 0 | 1 |
| 2001 | 2 | 7 | 2 | 1 | 1 | 2 | 1 | 0 | 0 | 1 |
| 2002 | 2 | 8 | 1 | 0 | 0 | 2 | 1 | 0 | 1 | 3 |
| 2003 | 2 | 8 | 1 | 2 | 0 | 1 | 2 | 1 | 0 | 1 |
| 2004 | 2 | 7 | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 0 |
| 2005 | 1 | 8 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 2 |
| 2006 | 2 | 8 | 1 | 0 | 1 | 0 | 0 | 4 | 1 | 1 |
| 2007 | 1 | 8 | 1 | 3 | 1 | 3 | 0 | 2 | 0 | 2 |
| TOTAL | 16 | 76 | 8 | 9 | 6 | 16 | 4 | 10 | 4 | 12 |
| TOTAL % | | | 50 | 12 | 38 | 21 | 25 | 13 | 25 | 16 |

is spent at an inner-city site. CCS is approaching the 50% rate for graduates entering practice in underserved locations, such as at federally qualified health centers and CHCs. Our CCS site has thus succeeded in increasing the number of minority graduates of our program who practice in underserved settings.^{5,9}

Our experience with recruitment and residents validates information already published about the likelihood that graduates practice in underserved areas. Specifically, residents who joined the program through the scramble were not as likely to graduate nor stay and practice in underserved areas. In the future, it would be beneficial to survey graduates regarding what kept them working in underserved areas or caused them to practice elsewhere. It may also be useful to ask graduates about whether they felt our curriculum prepared them for practice in underserved locations and what should be added or deleted from that curriculum.

Limitations

Several limitations should be considered when interpreting our experience. Although we have a large percentage of graduates entering urban underserved practices, we cannot be certain that this high percentage is directly due to our curriculum. Rather, it is possible that our program's advertised emphasis on urban medicine has attracted residency applicants with an interest in urban medicine, and these individuals are inherently more likely to practice in urban settings. Similarly, we have not conducted a formal evaluation of our curriculum to determine if our residents are acquiring knowledge and behaviors needed for successful urban practice or whether our curriculum is more successful in doing this than standard residency curricula.

Finally, much of the information about the history and development of our urban residency was obtained from interviews with faculty. It is possible that recollections of these faculty members were inaccurate or biased in ways that might portray a more favorable image of the program than is warranted. Use of documents as an additional source of information diminishes the likelihood that biased information is presented, but we nonetheless cannot exclude the possibility that faculty reports were inaccurate.

Conclusions

Developing an urban underserved training track, like any other specialty track, requires commitment and constant self-assessment. In building and maintaining the CCS residency, we learned many lessons. First is the importance of advertising and recruiting of the target audience. It is not enough to find students who want to be family physicians; they have to want to work

in an urban underserved environment. Locating and recruiting the students who will thrive in this training environment requires additional work before residency training even begins.

Second, a mission statement alone is not enough. Having a curriculum, even a dynamic one, helps to focus and improve the quality of the education provided.

Finally, constantly assessing and striving to provide not only an excellent education to residents but the best care for this population is essential. Although creating and maintaining an urban, underserved training track can be difficult, the need is both immediate and immense. As pioneers of this type of program, we hope that our experiences will encourage and inspire others to use, and possibly improve, our model.

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