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Formal Relationships between Health Centers and Clinician Training Programs

Creating a Pipeline of Qualified Clinicians to Serve in Underserved Areas

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Contents

Introduction 2

Process of Literature Review 2

Delivering Primary Care to the Underserved 2

Physician Recruitment and Retention in Underserved Communities 3

Barriers to Developing Collaborations 5

Catalog of Training Relationships 6

1. Teaching Health Center Graduate Medical Education (THCGME) 6
2. Rural Collaborative Training Model 7
3. Community Based Medical Education 8
4. Integrating Community Health into Schooling 8
5. Nurse Practitioners and Physician Assistants as Primary Care Providers 9
6. Nursing Programs 9
7. Loan Repayment Incentives 10
8. Experiential Learning and Innovative Pilot Studies 11

Replication 11

Conclusion 13

Sources 14

Introduction

This review is one of the resources offered by the STAR^2 Center, a National Cooperative Agreement project of the Association of Clinicians for the Underserved (ACU). The STAR^2 Center provides training, technical assistance, and resources to assist Health Center Program grantees (health centers) in recruitment and retention efforts. The objective of this paper is to provide background information on formal relationships between health centers and community training opportunities, create a catalog of existing collaborations and their structures, and offer suggestions for how they could be replicated in other communities.

Process of Literature Review

This literature review began with a broad background search of residency training programs available for Physicians (MD's and DO's), Nurse Practitioners (NP's), Physicians Assistants (PA's) and Nurses. Following this review relevant phrases and terms such as, "Training Programs", "Teaching Health Centers", "Graduate Medical Education Training Relationships", "Teaching Community Health Center", and "Provider Pipeline to Underserved Areas" were searched across several databases including Google, Google Scholar, and PubMed databases. John Carper, the JSI Librarian, was contacted to search for and provide access to articles. Articles were selected for inclusion based on their relevance, depth and breadth on the topic.

Delivering Primary Care to the Underserved

The health center is a model designed to provide comprehensive healthcare to individuals living in underserved rural or urban areas. These health centers are an integral part of the health care safety net in the United States, providing high quality, cost-effective and comprehensive healthcare services to an estimated 22-million patients in underserved communities (5). There are over 1,300 health centers providing care at more than 9,500 sites throughout the country.

One of the most pressing obstacles to an efficient primary care infrastructure is the shortage of primary care physicians in the United States, particularly those willing to work in low income or rural communities. Contributing to this problem is that fact that residency programs are predominantly hospital-based, resulting in structural workforce deficiencies across the country. One approach is an interactive and creative model to bring young medical talent to underserved communities through the collaboration between academic medicine communities and health centers (9).

Projections indicate that the health workforce shortage of primary care physicians will increase significantly in the coming years, and will continue to affect access to care disproportionately in underserved areas (2). A 12,000-31,000 shortage of primary care physician supply in the next ten years is anticipated (28). An inadequate primary care workforce has implications for the quality and cost of health care, with evidence showing that health care systems with strong primary care bases are associated with better outcomes and lower costs. These findings suggest that strengthening the primary care workforce is crucial to establishing an accessible, high quality and efficient health care system (4).

Many health centers recognize the benefit of having students and residents serve patients and learn at their sites, and thus, consider themselves Teaching Health Centers (THCs). These THCs are community-based primary care programs that provide education and training to health professionals while also providing care in underserved communities. This partnership has the potential to not only better staff health centers to serve underserved communities, but to also create a pipeline of qualified clinicians to work in these health centers once their training is complete. These programs can be both privately and publicly funded. While a promising concept, many of these health centers do not receive additional funding for providing educational opportunities to students and residents. This lack of financial support presents a barrier for personnel and budgetary resources, limiting the health professionals they are able to accommodate at their facilities (30).

Formal relationships between health centers and training programs are an important source of effective clinician training and a pipeline for qualified clinicians to serve in underserved areas. Various models of these training programs exist. While some residents may spend only one or two days of their entire residency in a health center, others may spend all three years of their outpatient clinical training in health centers. In this literature review, ACU will present research on these relationships and create a catalog of these collaborations, their structures, and offer suggestions for how other communities can incorporate training into their community health centers.

Physician Recruitment and Retention in Underserved Communities

For more than 25 years, residencies and other formal training programs have worked with health centers to train physicians. Studies have shown that such partnerships increase physician recruitment and retention in underserved areas while providing high quality training environments (2). Studies dating back to the 1990’s and 2000’s identify the benefits of using health centers in training programs, focusing on

the retention of graduates in health centers and other urban and rural sites of care for the underserved as well as the development of their skills in the care of culturally and socioeconomically diverse populations (1). When executed successfully, partnerships are shown to enhance the financial strength of both the health center and the training program, while also improving the quality of care delivered to patients (1, 2). The most successful collaborations start with developing a shared mission, one that supports program sustainability, financial stability, high quality and continuity of care, and continued learning for providers (1).

One 2012 national survey, surveying 354 Family Medicine residency program directors that trained 7,530 residents annually, found that training in health centers created satisfying experiences for residents, and resulted in subsequent recruitment to practice in underserved areas following graduation (2). In a separate study that compared health center and non health center trained physicians regarding practice location, job and training satisfaction, and recruitment and retention to underserved areas, results showed that health center trained physicians were almost twice as likely as their non health center trained counterparts to work in underserved settings (3). Other studies have indicated that exposure to rural settings or underserved areas while in medical school or residency contributes to the likelihood of choosing to practice in these settings following education (5). Studies also show that growing up in a rural area is a predictor of going on to practice rural primary care (14). Finally, a study by Schwartz (2008) found that increasing the number of physicians that are educated in-state could increase physician retention in rural health centers of these states, increasing care for underserved populations (10).

Retention of health center physicians has also been found to be dependent on workforce support. For example, access to wellness programs and practicing in non-rural locations were significant factors in primary care providers (PCPs) remaining in underserved locations, as well as pursuing quality improvement and research opportunities. In contrast, workplace stress, full time schedules and isolated geographic location of practice reduced the likelihood of practicing in these target communities (5). A 2013 survey of providers in Massachusetts health centers sought to understand the factors most likely to predict recruitment and retention (5). It was found that the need for a larger, skilled, diverse and compassionate health center primary care workforce is at a critical juncture. The feedback from primary care physicians currently working in health centers underscores the need for:

> *"Support for medical schools and CHCs to provide opportunities for medical students to learn in the community from PCPs that are passionate*

about their work and who model the CHC mission; reform of graduate medical education funding priorities and the continuation of training grants which favor curricular innovations aimed at preparation for careers caring for underserved populations; continual training for students, residents, and practitioners about the interprofessional team-based care; and creative recruitment and retention programs that financially recognize and reward a providers commitment to the CHC". (5, pg. 1029)

Strong physician leadership has also been shown as an important part of successful training programs, recruitment and retention. As it stands now, many active health center directors lack sufficient training in practice management and the specific skills that leadership and training requires. Through interviews and focus group data, one study identified the patterns and themes to determine leadership training needs in underserved settings. It was found that medical directors in charge of training programs are often unprepared and are easily frustrated by an inability to make system improvements. This lack of success by medical directors may contribute to the issue of retention and turnover in health centers. These directors may benefit from leadership skills trainings, including conferences, peer networking, mentorship and formal degree training (15).

Barriers to Developing Collaborations

Health centers in underserved areas have numerous barriers to connecting to training programs. These include, but are by no means limited to: a lack of information on potential training opportunities and knowledge on how to connect to them; limited access to universities or teaching hospitals in rural areas; low clinician initiative to explore training relationships, and; increased staff time, energy and resources to organize and supervise students/residents.

In one-survey of health centers, these specific barriers to potential teaching health center collaborations were cataloged. Among respondents who reported they do not collaborate with an academic institution, 28% indicated their organization lacked several pieces necessary to develop a collaboration, including: 1) knowledge on how to establish a collaboration with an academic institution; 2) teaching staff, and; 3) financial resources and physical space to accommodate students. In addition, 21% reported they lacked the time needed to take on this type of responsibility. Staff time and productivity were mentioned most often as challenges specific to educating students (30).

Respondents that were considered THCs also had barriers in their collaborations with academic institutions. One of the largest of those was the reduced volume of patients seen when students were on site, leading to a reduction in revenue for the health center. Other common barriers to having a successful collaboration with academic institutions included: space constraints; lack of computer resources, and; added administrative time and costs to the organization (31). In addition to these barriers, provider fatigue and communication between the health centers and the academic institutions were also emphasized (31). Despite this significant list of barriers to developing and maintaining training relationships, a number of successful models exist. The following section outlines eight broad models or training relationships that have proven successful in creating a pipeline of providers to serve in underserved areas.

Catalog of Training Relationships

1. Teaching Health Center Graduate Medical Education (THCGME)

The patient Protection and Affordable Care Act of 2010 (ACA) created the Teaching Health Center Graduate Medical Education (THCGME) program as a method of providing graduate medical education (GME) funding directly to community health centers that expand existing or establish new primary care residency programs (4). The program was reauthorized in 2015 as part of the Medicare Access and CHIP Reauthorization Act (MACRA) (24). It began with nine programs and 63 residents in 2011 and has grown to include 37 THCGME programs in 2015 (21). Congress recently provided $60 million per year of continued support for THCs in FY 2016 and 2017 (22).

Early evidence suggests THCGME is effective in producing the outcomes it was designed to deliver, with over 90% of students graduating from these programs intending to work in primary care, and more than 75% in underserved communities. THCGME graduates are taking positions in rural settings at almost three times the rate of traditional graduates (25), (21% compared to 8%). Unfortunately, although there is a rapid increase in applicant interest, many potential THC programs have not applied for the grant because of concerns about how long the funding will continue. A recent survey of THC program leadership indicates most will not recruit this year without evidence of stable funding (23). For a case study of one health center seeking accreditation in order to be part of the THCGME program, follow this link: http://www.nhchc.org/wp-content/uploads/2011/09/NHCHC-Teaching-Health-Center-Case-Study-2013.pdf (30). An additional resource guide on THCGME can be found at:

http://www.nhchc.org/wp-content/uploads/2011/09/thc-resource-guide_2013.pdf (32).

If funding continues, pursuing health center accreditation to provide Graduate Medical Education (GME) is a possible solution for alleviating some of the financial burden of educating residents. Becoming an accredited THCGME program renders benefits not only to the health center but also to the health center staff, residents who participate in the program, and the community where the health center is located (30). For an issue brief of the 6 current THCGME programs located in California, click here:

http://www.chcf.org/~/media/MEDIA%20LIBRARY%20Files/PDF/PDF%20P/PDF%20PreparingTeachingHealthCenters.pdf (34).

In addition to sustaining the current THCGME program through Congressional renewal of funding, there is mention of expanding the THCGME program into established US residency programs. THCs could partner with Academic Medical Centers (AMCs) to create CHC/Academic Medicine partnerships (CHAMPs.) These partnerships could test new workforce training programs to prepare physicians to lead the transformed delivery systems of the future. In complementing the existing THCGME program, the CHAMP THC Model offers a number of innovative features (9).

2. Rural Collaborative Training Model

The John A. Burns School of Medicine and the Wahiawa General Hospital in Central Oahu, Hawaii have administered an accredited Family Medicine Residency Program for a number of years. This program, purposefully situated in a rural area to break away from the urban training pattern in Hawaii, trains the bulk of its residents at the primary sponsoring hospital, giving residents the experience and interest in working in rural settings. As a second initiative, and with the understanding that young physicians are likely to practice where they train, there have been numerous efforts to develop a satellite family medicine residency program in a workforce shortage area in Eastern Hawaii. In a first effort, faculty was recruited and residents were rotated to the area, however the program was closed due to financial restrictions after just a few months. A number of subsequent efforts have been launched, involving collaborations between hospitals, the community and the university, and using numerous private and public funding sources to lay the foundation for a rural collaborative training site. Although not immediately successful, this public-private partnership-funding model has resulted in concrete steps towards a viable model, and may be recognized as a method

to initiate new programs during a time of financial restraint (11). To view the specific ten-point strategy Hawaii has adopted to strengthen its rural primary care workforce, follow this link:

https://www.researchgate.net/publication/51443503_Developing_the_rural_primary_care_workforce_in_Hawaii--a_10-point_plan (11).

3. Community Based Medical Education

In the Community Based Medical Education (CBME) model, medical students are able to become a part of the social and medical communities where their clinical training occurs. They are often involved in activities that use the community extensively as a learning environment, where students, teachers and community members are engaged throughout the educational experience in providing medical education that is relevant to communities' needs. Students are exposed to primary care practices, the professional community, and local community. The physicians and community take on the role of training these students. Such programs typically include having students follow the patient from office setting into hospital care and back home to community based homecare (16). Not only does this model enhance the depth of learning for trainees, but it has also been shown to motivate students to practice community healthcare (29). Florida State University College of Medicine offers a community based training program that extends into rural training sites, providing residents with a comprehensive experience in rural care. You can find a description of the program here: http://med.fsu.edu/?page=home.communityBased.

4. Integrating Community Health into Schooling

Developing a community health elective (CHE) curriculum is a training method to integrate community health into internal medicine residency training. In one pilot study, a two-week CHE curriculum was developed for internal medicine residents, featuring facilitated discussion sessions, clinical experience at health centers targeting underserved populations, and a culminating presentation. Evaluation showed that this model could be replicable for internal medicine residency programs that seek to provide community health training (27).

The Division of Medical Student Education in the Department of Family Medicine at Brown Medical School has also used a model that integrates community health into schooling; in 2010 the school secured federal funding from the Health Resources and

Services Administration (HRSA) to enhance its training of medical students in care of the underserved. The purpose of the project (2010-2015) was to train medical students to provide outstanding primary care for underserved populations, with grant money covering every medical student at Alpert Medical School (AMS) of Brown University. The program focused its funds towards professional development, curriculum development, and an evaluation of the effectiveness of the program (13).

5. Nurse Practitioners and Physician Assistants as Primary Care Providers *(Fellowship and Residency Programs)*

By recognizing and valuing the unique contributions of nurse practitioners serving as primary care providers, the Community Health Center, Inc. (CHCI), a multi-site FQHC in Connecticut, implemented a one-year residency program for new nurse practitioners in 2007. The program was designed for family nurse practitioners intending to practice as primary care providers in health centers located in designated high need communities (17). This active program serves as a national model for replication, as CHCI has consulted with many organizations that are now actively developing NP residency training programs of their own. They have also developed the Weitzman Institute, the first community-based research center established by a FQHC.

Fellowship Programs for PA's and NP's are also available, specifically designed for new graduates and newly licensed clinicians to work in primary care within the health center setting. One example of this model is the Shasta CHC NP/PA Post Graduate Fellowship Program (33), a 12-month paid fellowship program, introducing clinicians to the broad range of services and skills required to be part of a health center and in treating underserved populations. Another example is the Kraft Center for Community Health Leadership, which has developed and implemented two 2-year programs: a fellowship program for physicians and a practitioners program for early-career physicians and advanced practice nurses (18). Although postgraduate residency training is optional for Physician Assistants and Nurse Practitioners, these fellowships and residency opportunities are tremendous opportunities to create a pipeline of qualified primary care providers to underserved areas (8).

6. Nursing Programs

A number of associate and baccalaureate nursing programs partner with community health clinics, allowing nursing students to spend clinical days at clinics serving underserved and underinsured individuals (19). In these programs, nursing student's work with expert faculty members who are nurse practitioners and educators

at clinics serving underserved patients. The Harrisburg Area Community College (HACC) Nursing Care Center provides an example of a successful collaboration between a community college associate degree nursing program and an inner-city clinic (19). This particular partnership began when a college nursing program approached the executive director of South East Lancaster Health Services (SELHS), the health center, and an agreement was made to begin a mutually beneficial partnership (19). Another notable pipeline that exists to recruit and retain nursing staff in rural areas is the Bassett Medical Center in New York (20). This health network has established a number of programs involving academic entities in the region, offering clear benefits to both nursing students and faculty for participating in the program. Purdue University School of Nursing also has a residency program operating in a nurse-managed health center, a valuable clinical site for students and faculty, and also a model for similar clinics nationwide. For more information, follow this link:

https://www.purdue.edu/hhs/nur/centers-clinics/ncfh/index.html.

In addition to existing partnerships like these, the current lack of funding for teaching health centers provides an opportunity for schools of nursing to create innovative academic partnerships with organizations that provide care for underserved populations. Health centers provide a wealth of opportunity for both nursing education and health centers, making it essential that nursing faculty reach out to health centers within their communities to establish positive relationships (7).

7. Loan Repayment Incentives

The National Health Service Corps (NHSC) Students to Service Loan Repayment Program (S2S LRP), is a loan repayment incentive that provides up to $120,000 to medical (MD and DO) students in their final year of school in return for a commitment to provide primary healthcare full time for at least three years at an approved NHSC site in a Health Professional Shortage Area. While this is not a formal training program, it is a unique opportunity for both students and health centers to become part of a program that ensures physicians can work in underserved areas early in their careers. State and Federal grants also offer tax-free loan repayment assistance to medical professionals who choose to work in NHSC approved sites, creating a pipeline of qualified medical professionals to health centers that serve underserved populations. The general Loan Repayment program provides up to $50,000 for Primary care medical, dental and mental/behavioral health clinicians to repay their health profession student loans in exchange for a two-year commitment. There is also a NHSC Scholarship program that

offers scholarships to students in NHSC-eligible disciplines in return for a commitment to provide health care to communities in need, upon graduation and the completion of training. For more information of these programs, follow this link: https://nhsc.hrsa.gov (26).

8. Experiential Learning and Innovative Pilot Studies

In addition to the formal partnerships already mentioned, a number of pilot programs have been developed to address the primary care shortage by means of training opportunities using experiential learning and innovation. For example, in 2013, the Center for Primary Care at Harvard Medical School received a philanthropic grant to design and implement the Abundance Agents of Change (AoC) program, setting out to promote interprofessional learning, leadership and teamwork; foster innovative approaches to serving Boston's underserved communities; and increase medical student interest in primary care careers. This innovative program is a potential model for training medical student innovators and collaborating to strengthen student interest in serving in underserved communities (12). This is just one of many innovative programs in graduate medical education that are taking place around the country. Stay up to date and take a look at a report titled: Innovations in Graduate Medical Education: Aligning Residency Training with Changing Societal Needs (http://macyfoundation.org/docs/macy_pubs/JMF_2016_Monograph_web.pdf). (35).

Replication

This section provides a series of recommendations for health centers to consider when thinking about incorporating training opportunities into their program. For more information on the training relationships of interest refer to the sources cited at the end of this paper.

1) Research if there are organizations near your health center that connect clinicians with health centers in underserved communities. For example, the Tennessee Primary Care Association provides training and technical assistance in workforce development for health centers in Tennessee, linking them to resources that will assist them in recruiting, developing and retaining a primary care workforce. Find more information here: http://www.tnpca.org/workforce. Many other state and regional Primary Care Associations also have similar

programs. If an organization like this exists near you, call to see what resources are available for your health center.

2) Connect with local hospitals, nursing or physician assistant schools to see what training programs are already being offered, and how you can integrate your health center or offer to partner with a school for a new program. While doing this, ensure that there is a high level of trust between you and your collaborating organizations. Developing a trusting relationship between your health center and local hospitals and/or academic institutions is very important. If trust is lacking between the entities, there will be difficulty moving any ideas forward.

3) Once you have an idea for a training program, ensure that the health center has a site director who is both motivated and qualified to act on both sides of the partnership. This will help in successfully executing the training program and managing the health center. Having an individual that understands and is aware of the culture and requirements at both the health center and the academic institution is vital. A "champion" for the program is essential for success.

4) In order to maintain a healthy training environment that will motivate students to stay, build a culture of teaching within the organization. Make sure staff are highly committed to teaching and participating actively in the education of residents, as well as providing care to patients, pursuing research interests, and pursuing their own career goals. The teaching health center model is most successful when everyone's personal goals are included in the mission of the organization.

5) Remain up-to-date on the Affordable Care Act implementation and other federal initiatives as they relate to Teaching Health Centers. As current funding for the THC initiative has already been fully expended, funds are currently not available to develop or start new THCs. It is essential for organizations to be aware of funding opportunities, and begin taking the steps to plan and move forward if they believe that accreditation would be beneficial, particularly with the changing political landscape. It is important that organizations are positioned to take advantage of this opportunity if funding becomes available.

6) Seek research collaborations. Health centers should seek out academic and research institutions and develop relationships with research faculty who are interested in conducting research in the area of improving the health of people

living in underserved areas. This is a way to initiate the relationship and start the conversation about possible collaborative teaching opportunities.

7) Stay up to date on innovations in the graduate medical education field. To get started, take a look at this report titled, “Innovations in Graduate Medical Education: Aligning Residency Training with Changing Societal Needs” (http://macyfoundation.org/docs/macy_pubs/JMF_2016_Monograph_web.pdf). (35).

Conclusion

Training primary care physicians and other providers in underserved community-based settings is essential to address the current and future health workforce shortage in underserved areas in the United States. In this paper we have created a catalog of successful collaborations and their structures, and offered suggestions for how they could be replicated in other communities. The most successful relationships, illustrated above, are built upon a shared mission that supports innovative thinking, program sustainability, financial stability, high quality and continuity of care, and continued learning for all. Although barriers exist, these training partnerships show great promise, enhancing the education and diversity of experience for students, teachers, and community members.

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