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Affiliations of community health centers with the accredited schools and colleges of optometry in the states and territories of the United States

American Optometric Association Community Health Center Committee*

KEYWORDS
Community health centers;
Academic affiliations;
Schools and colleges of optometry;
Access to health care

Abstract

BACKGROUND: In 2006, the American Optometric Association Community Health Center Committee surveyed schools/colleges of optometry in the United States and its territories to assess collaborations between community health centers and optometric institutions.

METHODS: The survey investigated the number and structure of affiliations that existed between Federally Qualified Health Centers and schools/colleges of optometry in the United States. The survey reached the schools through the American Optometric Association Faculty Relations Committee or personal contact (Inter-American University of Puerto Rico).

RESULTS: The survey showed wide variation in affiliations of community health centers with optometry programs. Six schools had no affiliations, whereas the remaining 11 ranged from 1 to 14. Information relating to 37 community health centers was reported. Results showed that schools utilized community health centers for fourth-year students in 5 schools, and both third- and fourth-year students in the remaining 6 schools. Schools vary regarding how precepting is managed with either full-time faculty (64.9%) or adjunct faculty. Business models also vary between schools.

CONCLUSION: Affiliations between school/colleges of optometry and community health centers differ considerably. Optometric affiliations with community health centers can result in increased access to eye care for underserved populations and increased clinical experience for optometry students and residents. Opportunities exist to establish additional affiliations. Educational benefits and costs associated with affiliations should be explored before entering into a collaborative model of eye care delivery.
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Community health centers (CHCs), sometimes referred to simply as "health centers," are public, nonprofit tax-exempt community-based primary care medical facilities. CHCs were first created in 1965 to provide primary medical services to the poor, uninsured, homeless, and other underserved populations across the country. In 1975, "neighborhood health centers" were designated by Congress as "community and migrant health centers," and in 1996 the Public Health Service Act combined a number of health care programs for the poor that met a particular definition.[1] These public and nonprofit programs are now collectively referred to as Federally Qualified Health Centers (FQHCs). Many FQHCs receive federal funding under Section 330 of the Public Health Service Act (Consolidated Health Center Program).[2] Other health centers meet a majority of definitional requirements of what constitutes a health center, but do not receive funding under Section 330 of the Public Health Service Act. These entities are designated Federally Qualified Health Center Look-Alikes (or Look-Alikes) by the Health Resources and Services Administration and the Centers for Medicare & Medicaid Services.[1]

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CHCs exist to identify and respond to health disparities in their communities by providing primary health care to needy and vulnerable populations, such as people with the greatest risk for disparities in access to primary medical services and those with the greatest risk factors for disparities in health outcomes.[3,4] In addition to primary medical care, preventive care, and enabling support and social services, health centers frequently offer dental care, pharmacy services, behavioral health care, and substance abuse services. Thus, health centers are viewed as part of the larger system of health care delivery in the United States, caring for nearly 17 million individuals in 2007.[5]

Health centers tend to operate as ambulatory health care facilities, similar to outpatient teaching hospitals.[6] It is common for a CHC to have academic affiliations with a hospital(s) and/or academic medical center(s) or other professional teaching programs.[6] The benefits of academic collaborations between a CHC and a professional health care training program are well documented. Of the many reasons cited, perhaps the most important is that the populations served by a health center directly benefit from access to additional on-site clinical services such as dental services, mental health, pharmacy services, and, in some cases, eye and vision care services.[7-9] As with other health care professions, the outcome of an academic collaboration should result in a mutually beneficial relationship for the community and for both organizations.

According to a 2005 survey of the National Association of Community Health Centers (NACHC), only 18.3% of FQHCs in the United States and its territories provide on-site optometric care to their patients.[6] These data suggest that there is a large gap of access to on-site optometric services at CHCs. Thus, opportunities do exist to add new or additional eye care services to CHCs.

Schools and colleges of optometry may be instrumental in assisting CHCs with adding an eye care service either to those CHCs without any service or by increasing the availability of current eye services. A collaboration between CHCs and a school/college of optometry may provide a platform to deliver eye care services to people in need and the opportunity to design and implement a clinically challenging, culturally diverse, and cost-effective educational program. An academic-health center partnership would enable optometry students, residents, and clinical faculty to care for patients in a patient-centered, team-oriented, multidisciplinary primary care setting with both simple and complex medical, ophthalmic, and social problems.

Purpose

To investigate the current status of affiliations between CHCs and the U.S.-based schools and colleges of optometry, in 2006, the American Optometric Association (AOA) Community Health Center Committee (CHCC) developed a survey instrument to determine the number, type, and nature of academic affiliations that currently existed between CHCs and the U.S.-based accredited schools and colleges of optometry. With these data in hand, the results could show whether an opportunity exists for optometric institutions to develop additional clinical locations by collaborating with CHCs to provide additional clinical experience for student clinicians, residents, and faculty.

This study was designed to ascertain if, and to what extent, optometry schools and colleges were collaborating with CHCs to provide eye care services. The survey, in addition to gathering information about clinical care, investigated the structure of affiliation agreements that existed between FQHCs and FQHC Look-Alikes and the schools and colleges of optometry in the United States and its territories. If affiliations were present, the questions requested information on the scope of the services available to patients as well as the numbers of students assigned to the CHC, faculty status, and details about the business relationship.

Methods

The survey was distributed to the schools and colleges through their individual representatives to the AOA's Faculty Relations Committee (FRC). All schools except the Inter-American University of Puerto Rico are represented on this committee. (The Inter-American University of Puerto Rico School of Optometry was contacted directly by the CHCC.) FRC members took the survey back to their respective institutions to complete or requested that it be completed by the appropriate administrator. All of the surveys were returned to the AOA CHCC and reviewed. The initial response rate was 100%; however, a review of the survey results suggested confusion about what qualified a program as a FQHC or Look-Alike CHC. Each school was subsequently recontacted by one of the authors to verify the accuracy of the results. The results were then modified and updated, if needed, to accurately reflect the intent of the survey.

The survey instrument was divided into 2 sections. The first section identified the school or college of optometry, the person who completed the survey, and whether an affiliation(s) existed between the school and a CHC(s). The second section was completed only by programs that reported affiliations with a CHC and asked detailed questions about the relationship, specifically information regarding students' and residents' clinical assignments, professional staff, hours of operation, types of ophthalmic services offered, description of support personnel, optical service availability/scope, and issues relating to the business operations of the eye service.

Results

All of the programs within the United States responded to the questionnaire. Six of the schools reported that they did not have affiliations at the time of the survey with either an FQHC or Look-Alike. The remainder of the results

Table 1 U.S.-based schools/colleges of optometry and number of CHC affiliations

School or college of optometry	# of CHC affiliations
Illinois College of Optometry	1
Inter-American University of Puerto Rico	2
The New England College of Optometry	14
The Ohio State University, College of Optometry	1
Michigan College of Optometry at Ferris State University	1
Indiana University, School of Optometry	4
University of Missouri-St. Louis, School of Optometry	3
University of California at Berkeley, School of Optometry	3
University of Houston, College of Optometry	3
University of Alabama at Birmingham, School of Optometry	3
Pacific University, College of Optometry	2
Total	37

represented the information provided by the 11 schools that did report an existing relationship with a CHC.

Of the 11 schools, the number of affiliations between the school and local CHC ranged from 1 to 14. Table 1 reflects the specific numbers by institution.

Student/resident involvement in community health centers

The programs varied as to how students and residents are assigned and rotated through the CHC affiliates. Schools with affiliations ranged from assigning 4 students per year to 310 students per year. Five schools send only fourth-year students to CHCs for clinical experience, whereas the remaining schools send both third- and fourth-year students. Only 3 schools integrate residents into CHC programs (The New England College of Optometry, University of Houston, and Inter-American University of Puerto Rico School of Optometry). Figure 1 shows the distribution by school.

Access to optometric service

The surveys showed that professional staff numbers varied from 1 to 5 optometrists at individual CHCs, with optometry providing all eye care in 22 sites. A total of 50 optometrists were reported.

The optometrists that staffed the eye services varied as to their appointments. The survey asked the respondents to indicate whether they had a staff appointment or faculty appointment. If they were a faculty member, they further recorded whether the faculty members were full-time or part-time educators and if they were tenure track, adjunct, or other. The results of that question are shown in Table 2. (Note that an individual may have a staff appointment and also be an adjunct faculty member; thus, the frequency of the responses may reflect the higher than actual number of optometrists that can be found at CHCs.)

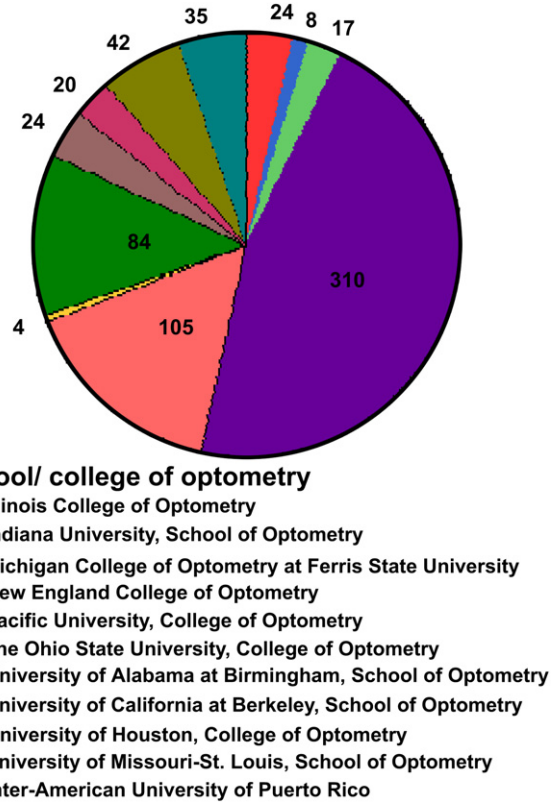


Figure 1 Total number of students assigned to CHC clinical rotations annually.

In the section of the survey in which the financial structures were evaluated, the survey queried who was responsible for the salaries of optometrists. Of the 37 responses, the schools and colleges covered the optometrists salaries alone in 51.2% or 22 sites; the salaries were covered by the CHCs alone in 5 centers; and the salary expense was shared by both in 23.3% or 10 sites.

Eye care is provided by optometry alone in 59.5% (22) of the affiliated CHCs, whereas 40.5% (15) have ophthalmology service available in addition to optometric care.

Access to ophthalmology service

The survey inquired as to the amount of time that ophthalmology was available at these 15 sites. Hours of

Table 2 Optometric staffing at CHCs

Type of appointment	Frequency
Staff appointment at CHC	15
Staff appointment to another medical facility affiliated with CHC	5
Full-time faculty	24
Part-time faculty	7
Adjunct faculty	20

Table 3 Ophthalmology services on site

Doctor's time commitment	Frequency
≤1/2 day per month	2
3-8 hours per month	9
3 hours per week	2
Unknown	1
1 day per week	1
Total	15

ophthalmology service varied widely from 4 hours per month to 32 hours per week. Table 3 presents the total hours that were reported. In addition, the survey requested information on who is covering the salary for the ophthalmologists. Nine surveys reported that the CHC covers the ophthalmologist's salary, 2 of the sites are dependent on volunteer service, 1 ophthalmologist bills directly for services, and the remainder did not know or did not have any ophthalmologic services on site. A question was posed asking if a patient was referred out for ophthalmologic care that was not available within the center, did the community health center refer the patient to outside facilities that offered ophthalmologic care? Only one response indicated that they did refer to clinics offering eye care at no cost to the patient. No other information was provided.

Administrative staff support

Three CHCs reported no administrative staff available to support the eye clinic. (One survey did not include a response in this area of inquiry.) The number of administrative/clerical staff dedicated to the eye service on the remaining surveys ranged from half-time to 5 full-time staff members, with a median of 1.25 staff members (*see* Table 4).

Design of eye service, days of operation, and scope of eye services provided

The survey asked the respondent to describe the design of the eye service, such as days of operation and rooms devoted to the service, and also to list the types of eye and vision care services provided. The days of operation ranged from 1 day to 6 days per week, with a mean of 3.96 days (±1.87). Eye examination rooms available for patient care varied from 1 to 7, with the mean being 3.03 rooms (±1.49). The choices for location included complete eye center, examination room only, mobile unit, or shared examination room. Twenty-three of the CHCs indicated they were a complete eye care center, defined as an examination room(s), office, optical/dispensing area, and a room for special testing. Twenty-three reported "exam room only" in their response. Nine respondents marked both "complete eye care center" and "exam room only," suggesting inflated numbers for the "exam room only" option. Three of the programs had mobile eye services.

Table 4 Number of administrative support staff for eye service

Number of staff	Frequency	Percent
.0	3	8.1
.5	1	2.7
1.0	14	37.8
1.5	1	2.7
2.0	12	32.4
2.5	1	2.7
3.0	3	8.1
5.0	1	2.7
Total	36	97.3
Missing	1	2.7
Total	37	100.0

The next question on the survey asked the specific types of services available within the eye service. Services varied, including comprehensive eye examinations, optical sales and services, contact lenses, low vision services, and pediatric care. Table 5 is a summary of the responses.

Optical services were found in 33 of the 37 eye services. "Complete optical services" were available at 15 or 40.5% of the CHCs, whereas the same number offered "dispensing only." Three eye services offered no dispensing on site. The remainder reported optical services were available, but did not elaborate.

Business relationship and scope of responsibility for operational issues

Regarding ophthalmic equipment, survey results reported that CHCs were responsible for maintaining equipment in 20 locations, the schools/colleges were responsible in 13, and there was joint responsibility in 2.

Schools/colleges provided professional staff, students, and/or equipment in 73% of the CHCs and support salary of faculty in 22 of 37 programs.

The final section of the survey requested information relating to the business aspect of the eye service including, but not limited to, financial responsibility and billing for services. Billing for services was the responsibility of the

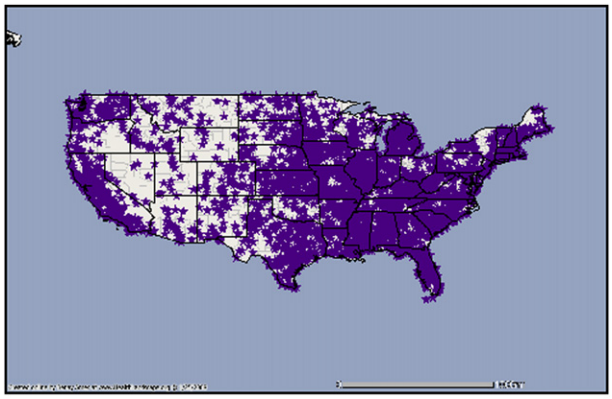
Table 5 Clinical services provided within each CHC eye service

Type of service	Number of CHCs offering each service
Comprehensive eye examinations	37
Contact lenses	19
Optical services	33
Visual field testing	29
Fundus photography	18
Low vision services	10
Binocular vision/vision therapy	13

Table 6 Summary of survey data outlining responsibility for certain aspects of the business relationship

Who is responsible for the following?	CHC	School/ college of optometry	Both	Other
Maintenance of equipment	20	13	2	2
Build out/equipment purchase	16	17	1	3
In-house optical overhead	15	9		1
Billing for eye services	24	12		0

CHC in 24 of 37 programs. Table 6 summarizes who is responsible for the primary infrastructure and billing of services.



Health Centers refer to all the diverse public and non-profit organizations and programs that receive federal funding under section 330 of the Public Health Service (PHS) Act, as amended by the Health Centers Consolidated Act of 1996 (P.L. 104-299) and the Safety Net Amendments of 2002. They include Community Health Centers, Migrant Health Centers, Health Care for the Homeless Health Centers, and Primary Care Public Housing Health Centers.

Figure 2 Map of health centers in the continental United States that receive Section 330 funding.

Discussion

In 2006, a majority of the schools and colleges of optometry in the United States were affiliated with at least one CHC. However, the survey results also show a wide variation in the number of affiliations between CHCs and the schools and colleges of optometry. These results suggest that an opportunity exists to establish additional affiliations between schools and colleges of optometry and CHCs to the mutual benefit of each organization.

CHCs are located in every state and territory of the United States. There are more than 1,000 FQHCs throughout the country. Many CHCs have multiple service locations. There are more than 5,500 CHC locations delivering services throughout the United States and its territories. As noted, in 2005 only 18.3% of FQHCs offered on-site eye care services. These 2 sets of data infer that opportunity exists for the schools and colleges of optometry that have an interest in increasing the numbers and diversity of patients in their clinical systems. This opportunity can be potentially realized by developing collaborative eye care programs in conjunction with CHCs that have communities in need of eye care services.

To further illustrate the proximal opportunity to collaborate with the schools and colleges of optometry, Figure 2 represents a map of the continental states with CHC locations identified by a "star." Each star represents a potential opportunity to address an unmet need in eye care services. A detailed listing of CHCs in all U.S. states and territories can be found at National Association of Community Health Center's affiliate Web page: *http://www.nachc.com/primcare/srpcalist.asp*.

Affiliations with CHCs enable optometry schools and colleges to expand their community service mission by contributing to the visual health of populations who experience disparities in access to eye care and disparities in visual health outcomes. Rotations through health centers provide diversification in clinical care with an opportunity to place students in unique teaching and learning environments that demonstrate frontline public health principles including disease prevention, population health, and cultural competency.[10] Health centers are also appealing sites for postgraduate optometric residents, particularly those interested in community health optometry.

Community health center practice allows faculty to develop strong clinical care and teaching skills, advance career interests in public health, care for underserved populations, and work in multidisciplinary settings side by side with other health care providers. Health centers offer professional opportunities for clinical faculty who have a strong interest in public health and community-based scholarship such as health services research, community-based participatory research, interdisciplinary education, and unusual/complex case reports.

Finally, increasing optometric affiliations with CHCs may contribute to an increase in demand for practicing optometrists. As CHCs add eye care to their array of clinical services delivered, there will be an increasing need for clinicians in these settings. Thus, new and/or additional academic partnerships between CHCs and the schools and colleges of optometry will help to prepare the next generation of optometrists who are interested in pursuing careers at CHCs. This outcome is already documented in medical education.[11]

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