Policy Briefing

Reducing Visual Health Disparities in At-Risk Community Health Center Populations

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Community health centers (CHCs) have an impressive record of addressing health disparities through consistently delivering high-quality and affordable care in a culturally competent manner, while also producing cost savings to the nation's healthcare system. Thus CHCs are optimally positioned to reduce visual health disparities and improve visual health outcomes by being included in the primary care services that they deliver. An estimated three million health center patients have risk factors for vision disorders and eye disease, yet a recent policy briefing survey conducted by The George Washington University reported that about 20 percent of centers provide on-site eye and vision care.

KEY WORDS: community health centers, eye and vision care, visual health disparities

Overview of Community Health Centers and Eye and Vision Care

The contemporary community health center (CHC) era began in 1965 as a policy action of the Federal Office of Economic Opportunity (OEO) referred to as "the War on Poverty." OEO Director Sargent Shriver approved a research and demonstration project proposal developed by physicians Jack Geiger and Count Gibson to establish a model at an urban housing development at Columbia Point in Boston, Massachusetts, and a second model at a rural township in Mound Bayou Mississippi. Their proposal was to create a new, broader vision of healthcare and a new institution to provide it as a way of addressing the devastating links between poverty, race, and ill health in the United States.[1]

Today's CHCs are nonprofit, tax-exempt, community-governed providers of primary health services to the nation's poor, uninsured, and other vulnerable underserved populations.[2] Community health centers also offer preventive services such as oral health, mental health, substance abuse counseling, pharmacy services, and enabling services. Community and the other types of health centers (rural, migrant, homeless, and public housing based) have proven to deliver high-quality care that exceeds the performance

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of more traditional providers and to deliver these services at a cost that is better than other modalities, such as in hospitals and emergency rooms.[3,4]

Access to comprehensive eye care and risk factors for visual health disorders are among the many health status issues affecting CHC populations. According to 2007 Centers for Disease Control and Prevention data, the prevalence of vision disorders among adults at <200 percent of the federal poverty level was 26 percent. In 2007, CHCs cared for 13.8 million individuals at <200 percent of the federal poverty level. This data translates into an estimated three million or more health center patients with potential risk factors for vision disorders and eye diseases. The 2007 Uniform Data System (UDS) data[5] from the Health Resources and Services Administration (HRSA) report that 36.5 percent of health center patients are 19 years or younger and 69 percent of health center users are of racial or ethnic minorities, including African Americans and those of Hispanic descent. Thus the potential number of health center patients who may need eye and vision care, eye disease prevention, and chronic eye disease management services for these conditions is in the millions.

Vision disorders and eye diseases remain prevalent throughout all life stages, from infants to elders. Refractive errors, strabismus, and amblyopia more commonly manifest in children and younger adults. Eye diseases such as glaucoma occur more frequently in mid-life or after a patient has had a systemic disease such as diabetes that can lead to the onset of diabetic retinopathy. Other sight-threatening conditions such as cataracts and macular degeneration are present in later life, threatening home safety, and contribute to depression.[6]

Table 1 summarizes important findings documented through literature review in a recently published article.[7] This information highlights the increased prevalence of eye and vision problems among the at-risk populations that CHCs serve. In addition, analysis recently revealed a significant underutilization of comprehensive eye services in select sociodemographic subgroups and the uninsured.[8]

Disparities in access to and utilization of eye and vision care services and disparities in visual health carry a two-pronged threat to the nation: (1) the serious public health threat caused by conditions resulting in vision loss and permanent vision impairment and (2) the resultant escalation of healthcare costs associated with the management of sight-threatening eye problems and associated healthcare services.[9,10] Poor access to eye and vision care for the uninsured and underserved represents another challenge with the potential to lead to poor visual health outcomes and additional cost burdens if left unaddressed. Failure to respond to disparities in eye and vision care will have a profound impact on health status, quality of life, and healthcare costs for the nation.

TABLE 1 ● Important epidemiologic data on eye and vision disorders

Leading causes of vision impairment/blindness in the United States
Age-related macular degeneration
Glaucoma
Cataract
Diabetic retinopathy
Statistics regarding vision impairment/blindness
Vision impairment is the number 1 disability in children (less than 15% of preschool children receive an eye examination; less than 22% receive any type of vision screening)
Of the 14 million people older than 12 years in the United States with visual impairment, 11 million could have visual acuity corrected to a level of 20/40 or better with proper refractive correction
More than 3.4 million Americans older than 40 years are blind or visually impaired
Visual health disparities
African Americans, Hispanics, and populations with low socioeconomic status are at an increased risk of being visually impaired
Patients of Hispanic descent were found to have a 7.3% prevalence of vision impairment caused by diabetic retinopathy compared with Whites at 4.7%
Blindness affects African-Americans and Hispanics at least two times more often than Whites of the same age, primarily because of glaucoma and diabetic retinopathy
African-Americans have an over three times greater prevalence rate for visual impairment caused by glaucoma than Whites

Because the vast majority of eye problems are asymptomatic, they are "silent" to patients, the public at large, leaders in public health, and healthcare planners and reformers. As policy makers foster expansion of CHCs through state and federal healthcare reform and stimulus funding, understanding the silent nature of eye problems and having complete information about comprehensive eye services are essential for supporting the inclusion of vision health and eye care services at CHCs.

In this briefing, we seek to inform policy makers about a number of issues pertaining to eye and vision health and the role that CHCs could play in addressing disparities in access to vision services and visual health outcomes for a significant majority of the nation's underserved. We comment on primary care issues that link vision and health, draw inferences on cost impact of undiagnosed eye and vision problems within CHC populations, conjecture on cost savings associated with on-site eye and vision services at CHCs, and finally

inform policy makers about key challenges and issues to achieve in order to improve visual health for CHC patients.

Assessing Need for On-Site Eye Care Services at Community Health Centers

The George Washington University (GWU) School of Public Health and Health Services Department of Health Policy conducted a survey in 2008, assessing the need for on-site eye services at CHCs. In this policy briefing report, the GWU reported that only 20 percent of CHCs provide on-site eye and vision care services by an employed optometrist or ophthalmologist.[11]

The survey was administered electronically to a random sample of 300 federally qualified health centers during a six-week period between November and December 2008. The profile of the selected health centers reflected the general patient and urban/rural location of all 1 040 federally funded health centers, excluding 27 from US territories. The respondent health centers were slightly more urban than rural, but this was not statistically significant. Reminders were sent to help maximize response rate with ultimately 100 of 300 centers responding, that is, a 33 percent response rate; therefore, the findings should be interpreted with some caution because of this smaller sample size. The results of the survey were weighted by health center size and geographic region to reflect the national sample of health centers in the 2007 UDS.

Pertaining to on-site eye and vision care, the results indicated that the vast majority of US federally funded CHCs do not have an on-site employed optometrist or ophthalmologist. Although a significant percentage of respondents (48%) reported that their patients could access eye care through informal and verbal agreements with local optometrists and ophthalmologists. (However, the authors of this report are unaware of any data regarding follow-up by CHCs to ensure that referred patients actually receive care.) The survey went on to report that only about six percent reported having a formal legal and contractual agreement for referral services. Alarmingly, nearly 23 percent of CHCs reported that they did not use any arrangement largely because of perceived lack of need or lack of an available eye care professional in the geographic area. As only 20 percent of CHCs reported on-site eye care billable services, this result mirrors the 2007 UDS data of 18 percent of federal grantees providing optometry services.

The primary barrier stated by most health centers (via the GWU survey) without on-site eye care was a perceived inability to afford the necessary space/equipment. The majority responded that while vision care is recognized as important, other services such as medical and dental screening were considered priorities. The Public Health Service Act not only requires health centers to provide screening services including pediatric eye, ear, and dental to determine the need for vision and hearing correction and dental care but also specifically requires health centers to provide preventive dental services.

The GWU study also identified a perceived lack of reimbursement (or perceived lack of adequate reimbursement) for eye services as a concern for health centers. However, leading practices data from Massachusetts demonstrate that reimbursement for eye and vision care services and materials are more than adequate to ensure sustainability of eye care as a sound business model for health centers.[12–14]

Findings of the GWU survey indicate that most health centers recognize the need to provide and improve access to eye and vision care; however, results from the needs assessment survey show several factors that significantly affect their ability to staff eye care professionals. These factors include perceived lack of policy and financial support for the development of on-site eye care, lack of perceived need for on-site care, and lack of infrastructural support and technical assistance needed to accurately assess and determine the community need for eye and vision care.

The GWU survey aside, another aspect of needs assessment with eye services is the costs associated with undiagnosed eye and vision problems. Impact on the nation's economy can be illustrated through a discussion of the most common disabling condition in children, namely vision disorders including uncorrected refractive error, strabismus, amblyopia (lazy eye), and accommodative/binocular dysfunction.[9] Since the visual system is used for 80 percent of learning, when undiagnosed vision disorders present in children, school performance and social difficulties manifest, which may result in unnecessary costs for special education. In a review of healthcare costs and the economic impact of visual impairment and blindness in the United States, the financial burden is estimated at $51 billion.[15] Frick et al[16] found that among adults older than 40 years who have visual disorders, visual impairment, and blindness, healthcare costs have been estimated at a total of $35.4 billion, which includes $16.2 billion in direct medical costs and $11.1 billion in other costs. Rein et al[10] found that patients 65 years and older account for the biggest share in the population with cataracts. The largest share of direct medical costs for patients between the ages of 40–64 years was due to refractive error. These estimates translate to $8 billion in lost productivity. Finally, by the year 2030, the number of

TABLE 2 Challenges and opportunities for eye services development at CHCs

Issues and challenges	Approaches and solutions
Policy and administrative issues	**Approaches and considerations**
A policy within HRSA Bureau of Primary Health Care defines eye and vision care services within the Health Center Program as a "specialty service." This policy requires health centers to apply for a change of scope to add eye care. Administrative challenges exist to obtain funding for health centers.	Encourage HRSA to review policy, practices, and initiatives that apply to optometric services at CHCs.
HRSA-defined services provided at health centers do not currently include optometry as part of the primary care list of disciplines.	Embracing primary eye care services and primary eye clinicians within the HRSA definition of primary care.
Workforce development challenges	**Building eye care workforce solutions**
Workforce challenges remain for the nation's health centers, including the development of community-based clinical education programs to create awareness among optometry students and graduates about health centers as a venue for practice.	Furthering collaborations between health centers and schools of optometry to create new clinical training programs in optometry, postgraduate residency programs in Community Health Optometry, the development of community service values, and contributions to workforce development.
National Health Service Corps eligibility does not presently include optometry.	Inclusion of optometry in the National Health Service Corps for recruitment and retention of optometrists to work at health centers would create an incentive for health center–based employment.
Recruitment of students and graduates with cultural competence and language skills.	Professional institutions could prioritize students from underserved populations in their recruitment strategies.
Funding and operational challenges	**Technical support solutions**
Funding challenges exist for health centers that would like an eye care service, including space needs, capital equipment for the delivery of comprehensive services, and an on-site optical to meet patients' eyeglass needs.	Encourage congressional support for CHC eye care services expansion. (Federal funding could be specifically targeted to assist health centers interested in adding eye care services, including the capital investment to support the service.)
Misconceptions by health center governing boards and management about adequate coverage and reimbursement for eye and vision care services and procedures.	Encourage CHCs to consider eye health services as part of the Federal capital stimulus initiatives.
	The formal development of capital, business plan analysis, and technical assistance mechanisms could encourage prioritization of busy CHCs in establishing enhanced and more comprehensive eye health services. (The AOA Community Health Center Committee has developed interactive financial modeling and other tools to help CHCs plan eye care services available at: http://www.aoa.org/x6493.xml.)
Knowledge base	**Training and development approaches**
Lack of culturally competent eye and vision health education for health center leaders and users about the range of asymptomatic eye problems in all age groups that impact learning, visual health, safety at home, and overall health status.	Formulation of alliances between national and state association leaders could also help maximize services expansion through outreach and educational programs to improve the public's awareness about eye and vision problems and the need for better access to these services.

Abbreviation: CHC, community health center; HRSA, Health Resources and Services Administration.

visually impaired and legally blind is expected to double and with the doubling will come healthcare costs to care for and manage these individuals and their total healthcare needs.

These alarming data and facts linking eye and vision problems to healthcare and other societal costs should be viewed as having a significant, costly, and lasting impact on the US economy unless measures are taken to address disparities in access and outcomes for vision and eye problems in underserved populations.

Next Steps for the Inclusion of Eye Care Services at Community Health Centers: Multidimensional Policy Considerations and Approaches

The evidence is clear that eye care and visual health are an essential part of the comprehensive health equation. In this era of healthcare reform, the disparities identified and addressed by Geiger in 1965 ring true today.[1]

Issues impacting access to eye and vision care delivered in a culturally competent manner can be effectively addressed through a multidimensional approach. While there are many issues and challenges, there are viable solutions to providing on-site eye and vision care services to the nation's CHCs.

The results of the GWU's School of Public Health's 2008 survey of CHCs reveal issues and challenges that have created barriers for the growth of on-site eye and vision care services at the nation's health centers. The authors have outlined the basis for the need to expand eye and vision care access for health center patients and have identified the known challenges that have created barriers for health centers to add these services.

While the need for financial support for start-up costs is very real, creative alternatives such as applying for local, state, and federal grants, securing low cost loans, accessing Environmental Protection Agency Brownfields funding, and partnering with optometry schools and/or academic programs can be found. Recent Obama administration stimulus funds may provide additional capital opportunities on a one-time basis.

The Public Health Service Act provides federal funding, administered by the HRSA, for CHCs and the National Health Service Corps (NHSC). Unfortunately, HRSA and the Act do not recognize optometry services (beyond vision screening for children), as a required primary service at CHCs that is eligible for Section 330 funding. As a result, a health center must apply for a change in the scope of practice and seek formal agency approval to add comprehensive eye and vision services. Because of a narrow definition of primary care, optometrists are currently not eligible for the NHSC scholarship and loan repayment programs, which help address workforce needs in underserved areas and incentivize certain providers to work at CHCs.

Both optometrists and ophthalmologists, within their scope of practice, provide quality eye and vision care; however, optometrists may be uniquely suited to provide primary eye and vision care services at health centers. Optometry was named in an Institutes of Medicine (IOM) report in 1996 as one of several professions that is able to deliver important primary care health services. In this report, it was noted that optometry plays a primary care role in providing basic health services that are desperately needed. The report continually stresses the important contributions of "first-contact" healthcare professionals, specifically referring to dentists, optometrists, and pharmacists to the provider team that cares for patients. The IOM further named CHCs where interactions between disciplines should be both encouraged and facilitated.[17]

As the positive dialogue among CHCs, optometry, and the federal government continues, specific action steps should be taken now to stimulate service expansion. These action steps span policy and regulatory matters, governance and management challenges, and health center leaders'/users' knowledge base about eye and vision problems. These issues and action steps are summarized in Table 2.

The addition of affordable comprehensive eye and vision care services at health centers will improve quality of life for millions of CHCs patients. In conjunction with the high quality of care and cost-effectiveness of other health services delivered by health centers, health status improvements and associated cost savings are expected for on-site eye and vision services, as demonstrated in Massachusetts.[12]

Finally, because of the silent nature of eye and vision problems, there is a need for culturally competent education programs for health center leaders and patients. When communities are informed about health disparities and are engaged in addressing health needs, overall health status is improved. The authors urge lawmakers, regulators, and other health policy makers at the national and local levels to address the issues raised in this commentary so that much-improved access to comprehensive eye and vision care becomes a reality for the millions of deserving patients who seek services at CHCs across the country.

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