



Doctors of Optometry Increase Primary Eye Care at Health Centers

Federally Qualified Health Centers (FQHCs) have seized an opportunity by expanding primary services to include on-site primary eye care, according to federal data analyzed by the American Optometric Association Health Policy Institute. The Health Resources and Services Administration (HRSA), among others, provided funding for centers interested in this expansion.

Each year, health centers report on their performance using the measures defined in the Uniform Data System (UDS). The UDS is a standardized reporting system that provides consistent information about health centers. This reporting action includes the capture and reporting of eye examination data, which is especially significant because high-risk populations served at health centers are most affected by uncorrected refractive error and untreated eye disease.^{i,ii} The Health Policy Institute (HPI) evaluated HRSA UDS data to describe trends (Table 1.0).

Table 1.0: National Totals

	2014	2015	2016	% Change (2014 – 2016)
Doctors of Optometry	185.41	229.89	282.84	+52.55
Ophthalmologists	39.34	46.66	39.55	+0.53
Other Vision Care Staff	201.90	251.29	339.43	+68.12
Number of Eye Care Patients	433,086	501,647	599,314	+38.38
Number of Eye Exams	389,506	462,256	563,652	+44.71

Data Source: 2014, 2015, 2016 Uniform Data System (<https://bphc.hrsa.gov/datareporting/reporting/index.html>). Personnel measured by full time equivalents (FTEs). Eye exams = Current Procedural Terminology eye examination codes: 92002, 92004, 92012, 92014.

There are more professionals providing eye and vision care services in health centers, including more than a 50 percent increase in doctors of optometry from 2014 to 2016. The number of patients provided vision care services in health centers increased by more than a third, or 166,000 people, during those years.

Overall, 47 states and the District and Columbia increased optometry full-time equivalents (FTEs) at health centers (Table 2.0). Unfortunately, these data also indicate a vast primary eye care service need remains to be filled. While onsite vision care is expanding at some health centers, many centers remain without any onsite primary eye care.

Table 2.0:
2013-2016 FTEs at Health Centers

State	2013 FTE	2016 FTE
Alabama ◊ ●	3.78	5.21
Alaska ◊	0.79	3.84
Arizona ●	0.00	0.52
Arkansas	0.00	0.48
California ◊ ●	38.49	76.91
Colorado ◊	0.00	1.34
Connecticut ◊	1.17	3.63
Delaware	0.00	0.07
Florida ◊ ●	3.07	11.18
Georgia ◊	0.93	2.81
Hawaii ◊	1.00	3.25
Idaho	0.00	0.73
Illinois ◊ ●	3.59	4.64
Indiana ◊ ●	0.00	2.55
Iowa	0.00	0.20
Kansas ◊	0.75	1.80
Kentucky ◊ ●	0.00	1.43
Louisiana	0.96	0.91
Maine	0.00	0.59
Maryland	0.00	0.09
Massachusetts ◊ ●	25.56	38.14
Michigan ●	5.20	2.37
Minnesota ◊	1.19	3.01
Mississippi ◊	0.00	2.12
Missouri ◊ ●	1.02	5.58
Montana	0.00	0.09

State	2013 FTE	2016 FTE
Nebraska	0.00	0.11
Nevada	0.00	0.00
New Hampshire	0.00	0.24
New Jersey ◊	1.23	2.59
New Mexico	0.00	0.48
New York ◊ ●	32.51	42.78
North Carolina	0.00	0.26
North Dakota	0.00	0.73
Ohio ◊ ●	2.76	8.83
Oklahoma ◊ ●	2.02	3.68
Oregon ◊ ●	0.00	0.09
Pennsylvania ●	0.00	0.98
Rhode Island ◊	0.00	1.87
South Carolina ◊	0.00	1.76
South Dakota	0.00	0.30
Tennessee ●	0.00	0.28
Texas ◊ ●	9.86	13.85
Utah ◊	0.00	1.11
Vermont ◊	0.00	2.35
Virginia	0.00	2.35
Washington ◊	2.37	6.25
West Virginia ◊	0.73	1.92
Wisconsin	2.46	2.91
Wyoming	0.00	0.03
Washington, DC ◊	1.08	2.33
Puerto Rico ●	N/A	0.18

◊ = State FQHC Increase of Optometry FTEs ≥ 1.00

● = State with ≥ 1 School or College of Optometry

These data show most of the gain was in California with a 100 percent gain in optometry FTEs at FQHCs. In fact, just three states -- California, New York and Massachusetts -- together account for 55.8 percent of all the optometry FTEs. Especially noteworthy is that these states all have an accredited school or college of optometry, supportive of delivering vision and eye health care to vulnerable health center populations. These data may be considered a call to action for those states/territories (i.e. Arizona, Tennessee, Pennsylvania, Oregon and Puerto Rico) with an accredited school or college of optometry, high rates of diabetes, and less than 1.0 optometry FTE serving patients at health centers in their respective state/territory.

Diabetes complications include, among others, both vision and oral complications, and annual dental and eye examinations are a recommended clinical preventive strategy.^{iii iv v} Medicare, Medicaid, and most commercial health plans cover eye exams for patients with diabetes, sometimes without any patient cost sharing. In addition to annual dilated retinal evaluations, comprehensive eye exams can help about 65 percent of adults with diabetes and poor vision, through appropriate eyeglasses.^{vi}

For contrast, these 2016 UDS data additionally describe 4,474.48 FTE dentists at health centers nationwide, fifteen times the number of FTE doctors of optometry nationwide. Primary eye care services accounted for only 0.77 percent of total clinic visits to health centers in 2016, compared to dental services accounting for 13.85 percent of total clinic visits. This incongruity in health care professionals and utilization of services signals a substantial under-investment in resources for patients in need of vision care, particularly those 2 million with diabetes.

Increasing on-site primary eye care speaks directly to the primary care mission and demographics of health centers by serving as a catalyst for improving health outcomes for millions of Americans of all ages, receiving care at health centers. People of Hispanic (35.42 percent health center population) and Black/African descent (19.47 percent health center population) are more than twice as likely as Caucasians to go blind from diabetic retinopathy and glaucoma.^{vii viii} Children of racial/ethnic minorities have increased rates of refractive error^{ix} and low-income children are more likely to go without eyeglasses, due to cost barriers and poor access to care.

A recent National Academies of Science, Engineering and Medicine (NASEM) report highlights this as a serious and costly national problem. The report distinguishes that avoidable vision impairment “occurs because of outdated assumptions, missed opportunities and shortfalls in public health policy and health care delivery in the U.S.” NASEM also determined that “promoting optimal conditions for vision and health can positively influence many social ills, including poverty.”^x Fortunately, nearly all children served by health centers have coverage for eye exams and necessary treatments through Medicaid, Children’s Health Insurance Program (CHIP) or another health plan. Providing ready access for comprehensive eye exam services, on-site at health centers, is most important for children’s learning, social development, and high school matriculation.^{xi xii}

These UDS data provide evidence of growth of optometry services in FQHCs as well as the need for continued efforts to expand eye health and vision care for health centers, to allow equitable access to comprehensive eye exams for all populations.

References:

-
- ⁱ Muñoz B, West SK, Rubin GS, et al. Causes of Blindness and Visual Impairment in a Population of Older Americans: The Salisbury Eye Evaluation Study. *Arch Ophthalmol*. 2000;118(6):819-825.
- ⁱⁱ Vitale S, Cotch M, Sperduto RD. Prevalence of Visual Impairment in the United States. *JAMA*. 2006; 295(18):2158-2163.
- ⁱⁱⁱ Ana Neumann, DDS, MPH, PhD; Evaluating quality of dental care among patients with diabetes Adaptation and testing of a dental quality measure in electronic health records, *JADA*, September 2017 Volume 148, Issue 9, Pages 634–643
- ^{iv} David M. Mosen, PhD, MPH; Assessing the association between receipt of dental care, diabetes control measures and health care utilization, *JADA*, January 2012, Volume 143, Issue 1, Pages 20–30
- ^v <https://www.cdc.gov/diabetes/ndep/toolkits/ppod.html>
- ^{vi} Centers for Disease Control and Prevention. National diabetes fact sheet: national estimates and general information on diabetes and prediabetes in the United States, 2011. Atlanta, GA: U.S. Department of Health and Human Services.
- ^{vii} Varma, R., Torres, M., Peña, F., Klein, R., Azen, S. P., Los Angeles Latino Eye Study Group. (2004). The prevalence of diabetic retinopathy in adult Latinos. *The Los Angeles Latino Eye Study*. *Ophthalmology*, 111(7), 1298–1306.
- ^{viii} Varma, R., Ying-Lai, M., Francis, B. A., Nguyen, B. B., Deneen, J., Wilson, R. et al. (2004). Prevalence of open-angle glaucoma and ocular hypertension in Latinos. *The Los Angeles Latino Eye Study*. *Ophthalmology*, 111(8), 1439–1448.
- ^{ix} Kleinstein, RN et al. Refractive error and ethnicity in children. *Arch Ophthalmol* 2003; 121:1141- 1147
- ^x <http://www.nationalacademies.org/hmd/Reports/2016/making-eye-health-a-population-health-imperative-vision-for-tomorrow.aspx>
- ^{xi} Yue Ma, PhD, Effect of a Local Vision Care Center on Eyeglasses Use and School Performance in Rural China, A Cluster Randomized Clinical Trial, *JAMA Ophthalmol*. Published online May 10, 2018.
- ^{xii} http://www.visionandhealth.org/documents/Child_Vision_Report.pdf