

THE OPHTHALMOLOGY WORKFORCE THE UNITED STATES NEEDS



Two studies assessed critical concerns about eye care delivery, the current ophthalmology workforce, and interventions to decrease the number of missed clinic appointments.

BY O'RESE J. KNIGHT, MD, AND ANGELA R. ELAM, MD, MPH

OPHTHALMOLOGY WORKFORCE PROJECTIONS IN THE UNITED STATES, 2020 TO 2035

Berkowitz ST, Finn AP, Parikh R,
Kuriyan AE, Patel S¹

*Industry support for this study: Authors
disclosed relationships with industry*

ABSTRACT SUMMARY

This observational cohort study used data from the National Center for Health Workforce Analysis to assess the adequacy of the ophthalmology workforce from 2020 to 2035.

In 2020, the workforce comprised an estimated 21,250 full-time equivalent (FTE) ophthalmologists. The total ophthalmology supply is projected to decrease by 12% (2,650 FTE ophthalmologists) by 2035, and total demand is projected to increase by 24% (5,150 FTE ophthalmologists). Taken together, these estimates represent a projected workforce adequacy of 70%—the second-worst rate of 38 medical and surgical subspecialties studied. The level of projected adequacy varied noticeably based on geography.

DISCUSSION

The ophthalmology physician workforce cannot meet the current demand for services, and this inadequacy is predicted to increase

STUDY IN BRIEF

- An observational cohort study used data accessed from the Department of Health and Human Services, Health Resources and Services Administration website to analyze the ophthalmology workforce supply and demand projections from 2020 to 2035. By 2035, the total ophthalmology supply was expected to decrease by 12%, and a 24% increase in total demand was anticipated. Ophthalmology had the second-lowest rate of projected workforce adequacy of the medical and surgical subspecialties studied, with substantial geographic variation noted.

WHY IT MATTERS

The current workforce was found to be inadequate to meet the demand for eye care services, and the situation is expected to worsen in the next 10 years. Although the efficiencies gained from emerging technologies and AI could ameliorate some of the demand, the current model requires an additional 519 residency positions per year (a 100% expansion) to overcome attrition and meet additional demand. Further research is required to determine if allied health professionals could help individual physicians meet patient demand. The development of integrated eye care workforce modeling is needed to inform recruitment, medical education, and training policy and to create strategies to overcome the projected workforce inadequacy.

during the next 10 years. The increases in projected demand vary with geography (metro, nonmetro, and rural counties). Under the status quo, the projected demand was an additional 5,150 FTE ophthalmologists. The study also considered workforce demand when barriers to care in populations that have historically faced obstacles to accessing eye care services were reduced such that their eye utilization patterns began to

resemble those of populations with fewer barriers. Under this scenario, the projected demand was an additional 5,840 FTE ophthalmologists.

Lum and Goel raised credible concerns about the accuracy of the supply and demand assumptions of the model regarding the number of new ophthalmologists entering the workforce and the number of outpatient visits per ophthalmologist.² The supply side of the Health

Resources and Services Administration model accounts for new entrants and attrition and suggests that the latter will outstrip the former by approximately 176 ophthalmologists per year during the study period. In 2024, 518 new trainees began their ophthalmology residency.³ Neutralizing attrition would require an immediate 33% expansion in residency training positions. On the demand side, the model projects a need for approximately 343 additional ophthalmologists per

year. It should be noted that the same model projects potential workforce inadequacies for optometrists, opticians, and ophthalmic technicians.¹ Technological advances, AI, and the lean management of efficient eye care teams suggested by Lum and Goel could mitigate some of the projected workforce inadequacy but might not be sufficient without a substantial expansion of ophthalmology residency training positions.

The study by Berkowitz et al found that workforce adequacy varied

greatly by geography and there was a greater prevalence of eye disease in populations with limited access to eye care.¹ A prior study demonstrated the complex relationship between ophthalmologist supply and eye care utilization across geographic locations.⁴ Any strategy to expand the ophthalmology workforce should seek to recruit and train a diverse workforce as a key to enhancing access to and utilization of quality eye care as well as mitigate disparities in outcomes.⁵

NEIGHBORHOOD POVERTY AND CLINIC ATTENDANCE IN THE MICHIGAN SCREENING AND INTERVENTION FOR GLAUCOMA AND EYE HEALTH THROUGH TELEMEDICINE (MI-SIGHT) PROGRAM

Ramachandran R, Hicks PM, Lu MC, et al⁶
Industry support for this study: None

ABSTRACT SUMMARY

This prospective study investigated the association between neighborhood-level characteristics and attendance for a no-cost eye disease screening at a free clinic and federally qualified health center (FQHC) as part of the Michigan Screening and Intervention for Glaucoma and Eye Health Through Telemedicine (MI-SIGHT) program.

A total of 815 (57%) FQHC and 616 (43%) free clinic patients were referred by their primary care physician to the MI-SIGHT program and scheduled for a screening visit. Participants received reminder phone calls and text messages before their scheduled screening visit. Demographics, public transit availability, state and national Area Deprivation Index (ADI) scores, and household financial income were included in a model of the probability of clinic visit attendance.

Overall, 23.1% of participants missed their screening visits. Individual and

STUDY IN BRIEF

- A prospective study investigated the association between neighborhood-level characteristics and attendance at a free eye disease screening. Higher neighborhood-level poverty was associated with greater odds of missing the screening appointment.

WHY IT MATTERS

Missed clinic appointments create a major health burden on patients and an economic burden on the health care system. Strategies to extend eye care to communities with few health resources must address both individual and neighborhood-level factors for clinical absenteeism.

neighborhood-level characteristics associated with missed clinical visits were male sex, Black race, living closer to the clinic, lower median household income, worse ADI score, not owning a vehicle, and a higher percentage of income spent on energy costs. More appointments were missed at the FQHC than at the free clinic (29.4% vs 14.6%) where FQHC patients lived in neighborhoods with a higher state or national ADI score, lower income, lower vehicle ownership, and higher rent and household energy burden.

DISCUSSION

The MI-SIGHT program reported a glaucoma prevalence of 24%; the glaucoma prevalence in the New York City SIGHT and Alabama SIGHT studies was 10.45% and 33%,

respectively.^{7,8} The SIGHT studies represent various eye care delivery models in populations at high risk of vision impairment at FQHC and free clinics in urban, suburban, and rural settings. Ramachandran and colleagues examined the neighborhood-level factors related to missed appointments, which can have a negative impact on patients' vision and on the financial viability of community outpatient clinics. The study found that clinical absenteeism was affected by both broad factors such as the percentage of household members who did not own a vehicle and small area variations in ADI scores. Interactive phone and text reminders were found to be minimally effective at stemming absenteeism compared to double-booking virtual visits on the

same day as the clinical appointment and the employment of social workers to connect patients with transportation and childcare services.

Pushing beyond the workforce study by Berkowitz et al,¹ the MI-SIGHT study indicates that increasing the number of ophthalmologists alone cannot overcome the life factors vulnerable patients face, including lack of access to a vehicle and extreme poverty. The roles of community health and social workers in enhancing vision care utilization and thus outcomes should not be overlooked. This is of particular importance with glaucoma given the asymptomatic nature of early disease. ■

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JAMES C. TSAI, MD, MBA | SECTION EDITOR

■ President, New York Eye and Ear Infirmary of Mount Sinai, and Delafield-Rodgers Professor and System Chair, Department of Ophthalmology, Icahn School of Medicine at Mount Sinai, New York

■ Member, GT Editorial Advisory Board
■ jtsai@nyee.edu
■ Financial disclosure: Consultant/advisory board (AI Nexus Healthcare, Eyenovia, Smartlens)

ANGELA R. ELAM, MD, MPH

■ Assistant Professor, Department of Ophthalmology and Visual Sciences, University of Michigan School of Medicine, Ann Arbor, Michigan
■ Financial disclosure: National Institute on Minority Health and Health Disparities grant ID K23MD016430

O'RESE J. KNIGHT, MD

■ Associate Professor, Department of Ophthalmology, University of California, San Francisco
■ orese.knight@ucsf.edu
■ Financial disclosure: None