



Allied Health Workforce Projections, 2016-2030: Optometrists and Opticians

This factsheet presents national-level supply and demand projections for optometrists and opticians from 2016 through 2030 using HRSA's Health Workforce Simulation Model (HWSM).¹

Optometrists perform eye exams and administer vision tests. In addition, optometrists diagnose and treat vision problems, eye diseases, and injuries.^{2,3} They can prescribe medications, perform certain surgical procedures, and provide vision therapy and low-vision rehabilitation. An optometrist typically completes four years of undergraduate studies, then receives a Doctor of Optometry (OD) degree after successfully completing a four-year accredited program. They may also complete an optional year of study in a specialty area (residency). All states require optometrists to pass clinical and written examinations to obtain a license.

Opticians design, measure, fit, and adapt eyeglasses, frames, and contact lenses for patients according to written prescriptions from ophthalmologists or optometrists.^{4,5} Opticians typically have a high school diploma or equivalent, and complete some form of on-the-job training. Some opticians enter the occupation with an associate's degree or a certificate in opticianry. Many states require examination and licensure or registration for opticians.

METHODS

While the nuances of modeling workforce supply and demand differ for individual health occupations, the basic HWSM framework remains the same across all occupations. For supply modeling, the HWSM's major components include common labor-market factors like unemployment and new entrants to the workforce (e.g., newly trained optometrists or opticians), demographic and geographic characteristics of the existing workforce, and workforce participation decisions (e.g., patterns in retirement and hours worked). The model assumes that current supply patterns for optometrists and opticians remain the same throughout the forecast period and projects forward in one-year increments. Each annual supply estimate becomes the starting point for the subsequent year, with the process repeated through 2030.

About the National Center for Health Workforce Analysis

The National Center for Health Workforce Analysis informs public and private sector decision-makers on health workforce issues by expanding and improving health workforce data, disseminating workforce data to the public, and improving and updating projections of the supply and demand for health workers. Visit the website: <https://bhw.hrsa.gov/national-center-health-workforce-analysis>

¹ This model uses a micro-simulation approach where supply is projected based on the simulation of career choices of individual health workers. Demand for health care services is simulated for a representative sample of the current and future U.S. population based on each person's demographic and socioeconomic characteristics, health behavior, and health risk factors that affect their health care utilization patterns. For more information on data and methods, please see: <https://bhw.hrsa.gov/sites/default/files/bhw/nchwa/projections/hwsm-technical-report-to-dea.pdf>

² Composite descriptions of health occupations examined in this report are sourced from: Bureau of Labor Statistics. Occupational Outlook Handbook, Optometrists [online]. 2018. Accessed at: <https://www.bls.gov/ooh/healthcare/optometrists.htm>.

³ ExploreHealthCareers.org. Explore Health Careers, Optometrist [online]. 2018. Accessed at: <https://explorehealthcareers.org/career/optometry/optometrist/>.

⁴ Bureau of Labor Statistics. Occupational Outlook Handbook, Opticians [online]. 2018. Accessed at: <https://www.bls.gov/ooh/healthcare/opticians-dispensing.htm>.

⁵ ExploreHealthCareers.org. Explore Health Careers, Optician (Dispensing) [online]. 2018. Accessed at: <https://explorehealthcareers.org/career/allied-health-professions/optician-dispensing/>.

For demand modeling, the HWSM assumes that demand equals supply in 2016,⁶ and applies health care utilization patterns across future population demographics. The model provides demand projections under two scenarios: a “status quo” scenario (Scenario One) and an “evolving care delivery” scenario (Scenario Two).

Under **Scenario One**, the model assumes that 2016 health care use and delivery patterns for vision services remain the same over the forecast period, and accounts for changes in population demographics and the commensurate shifts in optometrist and optician usage. This status quo scenario does not reflect potential changes in care utilization patterns in future years resulting from advancements in medicine and technology or shifts in health care delivery and payment models (e.g., team-based care, telemedicine).

Scenario Two builds upon Scenario One by incorporating the potential impacts of evolving health care system trends and goals on vision services. This includes assumptions related to improvement in population health (e.g. improved control of diabetes, modest reduction in excess body weight) and implementation of team-based care and continuum of care. Detailed information on the modeling of the evolving care delivery scenario can be found in an accompanying technical documentation report.⁷ Both supply and demand are reported as full-time equivalents (FTEs). FTE estimates may differ from actual counts of persons who are employed or providing care.

These estimates do not capture changes in health care delivery patterns or disparities between supply and demand at localized geographic levels. Quantifying changes to demand due to innovations in health care delivery models, payment reform, team-based care, health-seeking behaviors, and other health system-level factors presents many challenges. HRSA will continue incorporating such factors into its future workforce projections as the evidence-base evolves and reliable data sources become available.

⁶ The assumption that supply equals demand at baseline is a standard approach in workforce projection modelling. Please refer to: Ono T, Lafortune G, Schoenstein M. “**Health workforce planning in OECD countries: a review of 26 projection models from 18 countries.**” *OECD Health Working Papers, No. 62*. France: OECD Publishing; 2013: 8-11.

⁷ U.S. Department of Health and Human Services, Health Resources and Services Administration, National Center for Health Workforce Analysis. Technical Documentation for HRSA’s Health Workforce Simulation Model. Rockville, MD: U.S. Department of Health and Human Services, 2018. Available from: <https://bhw.hrsa.gov/sites/default/files/bhw/nchwa/projections/hwsm-technical-report-to-dea.pdf>.

FINDINGS: OPTOMETRISTS

Nationally, approximately 42,680 optometrists were active in the U.S. workforce in 2016. In 2030, the supply of optometrists is expected to increase approximately 19 percent to 50,870 (*Exhibit 1*).

Under **Scenario One**, the demand for optometrists is expected to increase 9 percent to 46,730 FTEs in 2030. Under **Scenario Two**, demand is projected to grow 18 percent to 50,310 FTEs in 2030. These estimates suggest the U.S. will have a sufficient supply of optometrists to meet projected growth in demand for services in 2030 under both the status quo and the evolving care delivery scenarios.

Exhibit 1. Projected Supply and Demand for Optometrists in the United States, 2016-2030

	Optometrists	
	Scenario One (Status quo)	Scenario Two (Evolving care delivery)
Supply		
Estimated supply, 2016	42,680	42,680
Projected supply, 2030	50,870	50,870
<i>New entrants, 2016-2030</i>	23,130	23,130
<i>Attrition^a, 2016-2030</i>	-14,940	-14,940
Total growth (%), 2016-2030	8,190 (19%)	8,190 (19%)
Demand		
Estimated demand, 2016	42,680	42,680
Projected demand ^b , 2030	46,730	50,310
Changing demographics, 2016-2030	4,050	4,050
Achieving population health goals	NA	2,540
Increased managed care ^c	NA	1,140
Avoidable hospitalization and ED use	NA	-100
Total growth (%), 2016-2030	4,050 (9%)	7,630 (18%)
Projected Supply (minus) Demand, 2030	4,140	560

Notes: All numbers reflect full time equivalents (FTEs). Numbers may not sum to totals due to rounding. NA denotes “not applicable”. ED denotes “emergency department”.

^a Includes retirement and mortality.

^b Demand growth for status quo scenario reflects changing demographics only.

^c Patients in managed care plans tend to use more services from optometrists.

FINDINGS: OPTICIANS

Nationally, approximately 61,640 opticians were active in the U.S. workforce in 2016. In 2030, the supply of opticians is expected to increase approximately 12 percent to 68,860 FTEs (*Exhibit 2*).

Under **Scenario One**, demand for opticians is expected to increase to 67,290 FTEs by 2030, representing a 9 percent increase. These estimates suggest that the 2030 supply of opticians will be adequate under the status quo scenario. Under **Scenario Two**, demand for opticians is projected to grow by 18 percent to 72,710 FTEs in 2030, resulting in an estimated shortfall of 3,850 FTEs under the evolving care delivery scenario.

Exhibit 2. Projected Supply and Demand for Opticians in the United States, 2016-2030

	Opticians	
	Scenario One (Status quo)	Scenario Two (Evolving care delivery)
Supply		
Estimated supply, 2016	61,640	61,640
Projected supply, 2030	68,860	68,860
<i>New entrants, 2016-2030</i>	32,280	32,280
<i>Attrition^a, 2016-2030</i>	-25,060	-25,060
Total growth (%), 2016-2030	7,220 (12%)	7,220 (12%)
Demand		
Estimated demand, 2016	61,640	61,640
Projected demand ^b , 2030	67,290	72,710
Changing demographics, 2016-2030	5,640	5,640
Achieving population health goals	NA	3,620
Increased managed care ^c	NA	1,810
Avoidable hospitalization and ED use	NA	0
Total growth (%), 2016-2030	5,650 (9%)	11,070 (18%)
Projected Supply (minus) Demand, 2030	1,570	-3,850

Notes: All numbers reflect full time equivalents (FTEs). Numbers may not sum to totals due to rounding. NA denotes "not applicable". ED denotes "emergency department".

^a Includes retirement and mortality.

^b Demand growth for status quo scenario reflects changing demographics only.

^c Patients in managed care plans tend to use more services from opticians.