

Addressing the Nation's Primary Care Shortage: Advanced Practice Clinicians and Innovative Care Delivery Models

Citations

- ¹ UnitedHealth Group, "Advancing Primary Care Delivery: Practical, Proven, and Scalable Approaches," September 2014. <http://www.unitedhealthgroup.com/~media/UHG/PDF/2014/UNH-Primary-Care-Report-Advancing-Primary-Care-Delivery.ashx?la=en>
- ² UnitedHealth Group analysis of Area Health Resource File (AHRF) 2016-2017 Release, U.S. Department of Health and Human Services (HHS) Health Resources and Services Administration (HRSA) Bureau of Health Workforce – National Center for Health Workforce Analysis, 2018.
Note: Primary care physicians include those who provide direct patient care and who practice principally in general or family practice, general internal medicine, pediatrics, and obstetrics and gynecology. This analysis defines a primary care shortage area as a county with less than one primary care physician per 2,000 residents as a representative threshold for the number of patients a primary care physician can accommodate effectively in a relatively large patient panel. Different thresholds for primary care shortages will yield different results.
- ³ UHG analysis, 2018.
Note: Urban and rural populations are identified according to the most recent U.S. Census Bureau Urban/Rural Update included in the AHRF (2010). Urban includes all territory, population, and housing units located within urbanized areas and urban clusters. An urbanized area consists of densely developed territory that contains 50,000 or more people. An urban cluster consists of densely settled territory that has at least 2,500 people but fewer than 50,000 people. Suburban areas are generally categorized as urban areas due to their population density. Rural areas consist of all territory, population, and housing units outside of urban areas and urban clusters.
- ⁴ UHG analysis, 2018.
- ⁵ U.S. Census Bureau, "Table 3: Projected 5-Year Age Groups and Sex Composition of the Population," March 2018. <https://www2.census.gov/programs-surveys/popproj/tables/2017/2017-summary-tables/np2017-t3.xlsx>
Note: 2018 estimate calculated from UnitedHealth Group analysis of Census data.
- ⁶ U.S. Census Bureau, Table 3, March 2018.
Note: 2018 estimate calculated from UnitedHealth Group analysis of Census data.
- ⁷ U.S. Census Bureau, Table 3, March 2018.
Note: 2018 estimate calculated from UnitedHealth Group analysis of Census data.
- ⁸ U.S. Census Bureau, Table 3, March 2018.
Christine Buttorff, Teague Ruder, and Melissa Bauman, "Multiple Chronic Conditions in the U.S.," RAND, 2017. <https://www.rand.org/pubs/tools/TL221.html>
- ⁹ UnitedHealth Group analysis of AHRF data, which includes the most recent physician counts from the American Medical Association (2015).
Note: Primary care includes physicians providing direct patient care who practice principally in one of the four primary care specialties: general or family practice, general internal medicine, pediatrics, and obstetrics and gynecology.
UnitedHealth Group, "Advancing Primary Care Delivery: An Update," 2017. <http://www.unitedhealthgroup.com/~media/UHG/PDF/2017/Primary-Care-Update.ashx?la=en>
U.S. Department of Health and Human Services (HHS) Health Resources and Services Administration (HRSA), "National and Regional Projections of Supply and Demand for Primary Care Practitioners: 2013-2025," November 2016. <https://bhw.hrsa.gov/sites/default/files/bhw/health-workforce-analysis/research/projections/primary-care-national-projections2013-2025.pdf>

- ¹⁰ UHG analysis, 2018.
UHG, 2017.
HRSA, November 2016.
- ¹¹ Tim Dall, Terry West, Ritashree Chakrabarti, Ryan Reynolds, and Will Iacobucci. "The Complexities of Physician Supply and Demand: Projections from 2016 to 2030," HIS Markit Ltd. Prepared for: Association of American Medical Colleges (AAMC), March 2018. https://aamc-black.global.ssl.fastly.net/production/media/filer_public/85/d7/85d7b689-f417-4ef0-97fb-ecc129836829/aamc_2018_workforce_projections_update_april_11_2018.pdf
- ¹² Thomas Bodenheimer, Hoangmai H. Pham, "Primary Care; Current Problems and Proposed Solutions," Health Affairs, 2010, 29(5):799-805. <https://www.healthaffairs.org/doi/10.1377/hlthaff.2010.0026>
- ¹³ National Resident Matching Program, "National Resident Matching Program, Results and Data: 2017 Main Residency Match," 2017. <http://www.nrmp.org/wp-content/uploads/2017/06/Main-Match-Results-and-Data-2017.pdf>
- ¹⁴ Dall et al., March 2018.
- ¹⁵ AANP, "NP Fact Sheet," March 16, 2018. <https://www.aanp.org/all-about-nps/np-fact-sheet>
HRSA, November 2016.
- ¹⁶ UHG, 2017.
- ¹⁷ AANP, March 2018.
HRSA, November 2016.
- ¹⁸ UHG, September 2014.
AANP, March 2018.
Cristina Boccuti, Christa Fields, Giselle Casillas, and Liz Hamel, "Primary Care Physicians Accepting Medicare: A Snapshot," Kaiser Family Foundation, October 30, 2015. <http://kff.org/medicare/issuebrief/primary-care-physicians-accepting-medicare-a-snapshot/>
- ¹⁹ UHG, September 2014.
- ²⁰ American Association of Nurse Practitioners (AANP), "What's an NP?" 2018. <https://www.aanp.org/all-about-nps/what-is-an-np#qualifications>
- ²¹ National Commission on Certification of Physician Assistants (NCCPA), "2016 Statistical Profile of Certified Physician Assistants," 2017. <https://prodcmsstoragesa.blob.core.windows.net/uploads/files/2016StatisticalProfileofCertifiedPhysicianAssistants.pdf>
U.S. Department of Labor Bureau of Labor Statistics, "Physician Assistants," 2017. <https://www.bls.gov/ooh/healthcare/physician-assistants.htm>
HRSA, November 2016.
- ²² NCCPA, 2017.
HRSA, November 2016.
- ²³ Ellen T. Kurtzman and Burt S. Barnow, "A Comparison of Nurse Practitioners, Physician Assistants, and Primary Care Physicians' Patterns of Practice and Quality of Care in Health Centers," Medical Care, 55(6):615-522, June 2017. <https://www.ncbi.nlm.nih.gov/pubmed/28234756>
- ²⁴ American Academy of Physician Assistants (AAPA), "What is a PA?" 2018. <https://www.aapa.org/what-is-a-pa/>
- ²⁵ American College of Nurse-Midwives (ACNM), "Essential Facts about Midwives," 2017. <http://www.midwife.org/Essential-Facts-about-Midwives>
- ²⁶ ACNM, 2017.
U.S. Department of Health and Human Services (HHS) Health Resources and Services Administration (HRSA), "National and Regional Projections of Supply and Demand for Women's Health Service Providers: 2013-2025," December 2016. <https://bhwh.hrsa.gov/sites/default/files/bhw/health-workforce-analysis/research/projections/womens-health-report.pdf>
- ²⁷ American College of Nurse-Midwives (ACNM), "Midwifery: Evidence-Based Practice," Revised April 2012. <http://www.midwife.org/acnm/files/cclibraryfiles/filename/000000002128/midwifery%20evidence-based%20practice%20issue%20brief%20finalmay%202012.pdf>
Institute of Medicine, "The Future of Nursing: Leading Change, Advancing Health," Washington, DC: The National Academies Press, 2011. <https://www.nap.edu/catalog/12956/the-future-of-nursing-leading-change-advancing-health>

- ²⁸ American College of Nurse-Midwives (ACNM), "Definition of Midwifery and Scope of Practice of Certified Nurse-Midwives and Certified Midwives," December 2011. <http://www.midwife.org/ACNM/files/ACNMLibraryData/UPLOADFILENAME/000000000266/Definition%20of%20Midwifery%20and%20Scope%20of%20Practice%20of%20CNMs%20and%20OCMs%20Dec%202011.pdf>
- ²⁹ Ateev Mehotra, Hangsheng Liu, John Adams, Margaret C. Wang, Judith Lave, N. Marcus Thygeson, Leif I. Solberg, and Elizabeth A. McGlynn, "The Costs and Quality of Care for Three Common Illnesses at Retail Clinics as Compared to Other Medical Settings," *Annals of Internal Medicine*, September 2009,151(5): 321-328. <http://europepmc.org/articles/pmc2805258>
- ³⁰ Urgent Care Association (UCA), "2017 Benchmarking Report Summary," 2017. https://c.ymcdn.com/sites/ucaoa.site-ym.com/resource/resmgr/benchmarking/2017_benchmarking/UCAOA-BenchmarkSurvey17_v4.pdf
- ³¹ Deborah Bachrach, Jonah Frohlich, Allison Garcimonde, and Keith Nevitt, "The Value Proposition of Retail Clinics," Manatt, Robert Wood Johnson Foundation, April 2015. https://www.manatt.com/uploadedFiles/Content/5_Insights/White_Papers/Retail_Clinic_RWJF.pdf
- ³² RAND, "Use of Retail Medical Clinics Continues to Grow; Older Patients and Preventive Services on Rise," August 15, 2012.
- ³³ American Academy of Home Care Medicine, "Number of House Calls." www.aahcm.org/page/Number_house_calls
Note: The estimate of in-home visits was calculated by summing the American Academy of Home Care Medicine's Medicare fee-for-service in-home visit total and an estimate of one million Medicare Advantage visits.
- ³⁴ Soeren Mattke, Dan Han, Asa Wilks, and Elizabeth Sloss, "Medicare Home Visit Program Associated with Fewer Hospital and Nursing Home Admissions, Increased Office Visits," *Health Affairs*, 34(12), December 2015. <https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2015.0583?siteid=healthaff&keytype=ref&ijkey=uLYknWGvBkZWU>
Dan Han, Asa Wilks, and Soeren Mattke, "Detection of Undiagnosed Disease in Medicare Beneficiaries After a Clinical Home Visit," *Population Health Management*, 20(1), 2017. <https://www.liebertpub.com/doi/abs/10.1089/pop.2015.0187>
- ³⁵ UHG analysis, 2018.
- ³⁶ UHG analysis, 2018.
- ³⁷ American Medical Association (AMA), "Scope of Practice," 2018. <https://www.ama-assn.org/about/scope-practice>
- ³⁸ Federal Trade Commission (FTC), "Competition and the Regulation of Advanced Practice Nurses, 2014. <https://www.ftc.gov/system/files/documents/reports/policy-perspectives-competition-regulation-advanced-practice-nurses/140307aprnpolicypaper.pdf>
- ³⁹ AANP, "State Practice Environment," 2017. <https://www.aanp.org/legislation-regulation/state-legislation/state-practice-environment>