Primary Care Physicians
Missouri Workforce Update
SPECIAL REPORT | AUGUST 2018
For consistency, this report uses the same rural/urban definition as the most recent edition of the Missouri Department of Health and Senior Services’ Health in Rural Missouri Biennial Report. It defines urban counties as those with a 2013 population density of greater than 150 persons per square mile plus any county that contains at least part of the central city of a Metropolitan Statistical Area based on 2004 Census guidelines. Using this definition, 14 Missouri counties are urban. The remaining 101 counties in Missouri are rural. See www.health.mo.gov/living/families/ruralhealth/pdf/biennial2015.pdf for more information.
OVERVIEW

Primary care is the front line of health care delivery. A primary health care system with the capacity to ensure that individuals receive the care they need, manage chronic conditions and live healthy lives is essential to individual and community health.

Missouri’s primary care provider landscape has changed since 2014 (when this report was last published) with an increased number of physicians throughout the state — most significantly in rural Missouri. But, the shortages remain and will continue into the future, which will require diligent efforts to maintain and increase the supply.

An analysis by the American Association of Medical Colleges projects that overall physician demand will grow faster than supply, leading to a shortfall of between 42,600 and 121,300 physicians by 2030.\(^1\) A shortage of primary care physicians is projected to be between 14,800 and 49,300 by 2030. These assumptions are shaped by the supply of advanced practice registered nurses and physician assistants — their role in providing care, and trends in supply and demand. The U.S. Health Resources and Services Administration estimates that 13,800 PCPs are needed to remove the primary care shortage designation from all currently designated shortage areas.
For the first time in the nation’s history, the U.S. Census projects older people to outnumber children in 2030. This marks an important demographic turning point. By 2030, all baby boomers will be older than 65, expanding the size of the older population so that one in every five residents will be retirement age — 78 million people will be 65 years and older compared to 76.4 million under the age of 18. The population is expected to grow at a slower pace, age considerably, and become more racially and ethnically diverse.

In Missouri by 2030, more than one-fifth of persons will be over age 65 — this represents an increase of 87 percent between 2000 and 2030 when there are projected to be 1.4 million seniors. During the same time period, Missouri’s 18 and over population will increase by nearly 25 percent. The implications of an older population have an effect not only on the demand for health care services, but also for the workforce to care for them. In addition, the health of the population has a direct effect on demand for health care services. Missouri’s health ranking continues to decline from 37th nationally in 2014 to 40th in 2017. The state ranks 42nd for senior health and 35th for the health of women and children.

“As the population ages, the ratio of older adults to working-age adults, also known as the old-age dependency ratio, is projected to rise. By 2020, there will be about 3 ½ working-age adults for every retirement-age person. By 2060, that ratio will fall to just 2 ½ working-age adults for every retirement-age person.”

KEY POINTS

→ In Missouri by 2030, more than one-fifth of persons will be over age 65 — this represents an increase of 87 percent between 2000 and 2030 when there are projected to be 1.4 million seniors. During the same time period, Missouri’s 18 and over population will increase by nearly 25 percent.

→ Missouri’s health ranking continues to decline from 37th nationally in 2014 to 40th in 2017. The state ranks 42nd for senior health and 35th for the health of women and children.

→ Rural Missourians are at a significant income and education disadvantage compared to their urban counterparts. Missouri’s nearly 18 percent rural poverty rate is 22.1 percent higher than its urban poverty rate of 13.85 percent.
Increasing the number of primary care clinicians is important; so is the location of the clinician’s practice. The distribution of physicians can result in large primary care “deserts” in areas of rural Missouri, as well as underserved areas of urban Missouri. In many parts of Missouri, the primary care provider shortage limits access to primary care for low-income, uninsured and rural residents.

An increased demand for care, a primary care practitioner shortage, an aging workforce and worsening health status create serious challenges for the state’s health care system. In addition, the closure of rural hospitals limits the ability of PCPs to effectively treat local hospital patients. In 2018, one rural hospital closed in southeast Missouri, and others are endangered. Since 2010, four rural hospitals have closed.

To ensure that the health care system is able to meet the demands caused by an aging workforce, an aging population and increasing rates of chronic disease, we must address the issues at the core of the physician shortage debate. This may include strategies to incentivize PCPs while addressing the financial inequities seen between primary care and specialty care; identifying the infrastructure changes that will be needed to address a changing health care delivery system; and establishing the best models to efficiently deliver primary care statewide while supporting policies that help recruit and retain the providers needed to deliver care.

Professional literature examining interventions to improve the recruitment and retention of health professionals who provide primary care services to rural populations shows that a combination of individual interventions may be the most effective way to expand and maintain the rural primary care workforce.

The strategies shown to have some positive effect on both recruitment and retention are as follows.

1. **targeted recruitment of specific groups**
2. **professional development opportunities for rural practitioners**
3. **taking actions to ensure a stable, well-resourced work environment**

Developing a larger primary care workforce improves access and quality of health care, emphasizing a focus on prevention, population health and community health to reduce health care costs.

Of the 143 licensed hospitals in Missouri, 69 are located in rural counties, leaving 32 rural counties without a hospital.

Missouri’s rural/urban divide is more pronounced than the nation as a whole. There are 55.9 primary care physicians for every 100,000 rural residents in Missouri. That compares to 139 per 100,000 urban residents.

Although Missouri has managed to grow its primary care physician population by more than 600 since 2014, the number of available residency slots constrains the pipeline, meaning only 21.5 percent of students who graduate from medical schools remain in Missouri.
RURAL MISSOURI AND ITS RESIDENTS

Of the nearly 6 million Missouri residents, 2.23 million, or 38 percent, live in rural areas. From 2005 to 2015, the population in rural Missouri counties increased an estimated 3.3 percent while it increased 6.1 percent in urban counties.

During this time period, 15 rural counties lost more than 5 percent of their population. Twelve of the 15 counties were located north of the Missouri River.

Rural Missourians are at a significant income and education disadvantage compared to their urban counterparts. Missouri’s nearly 18 percent rural poverty rate is 22.1 percent higher than its urban poverty rate of 13.85 percent. The statewide 2016 poverty rate is 14 percent, a 0.8 percent change from 2015. Although it has declined, 23 counties have a poverty rate above 20 percent.

Demographically, rural Missouri has an older population than urban Missouri. An average of 19.4 percent of the rural population is over age 65, while only 14.7 percent of the urban population is over age 65. Missouri’s aging population (60 and older) will continue to grow, as shown in the following estimates.

As Missourians continue to live longer, those with chronic diseases will increase, and the need to access health care services and PCPs will increase substantially.

According to the Missouri Department of Health and Senior Services, of the 101 rural counties in Missouri, 99 are considered Primary Medical Care Health Professional Shortage Areas. HPSAs are designated by the Health Resources and Services Administration as having shortages of primary medical care, and dental or mental health providers, and may be geographic (a county or service area), demographic (low-income population) or institutional (comprehensive health center, federally-qualified health center or other public facility). Medically underserved areas/populations include areas or populations designated by HRSA as having too few primary care providers, high infant mortality, high poverty and/or a large elderly population.
HEALTH STATUS AND ACCESS TO HEALTH CARE IN RURAL MISSOURI

Missouri’s rural residents tend to be older and have higher rates of chronic diseases than their urban counterparts. Poor health means higher health care costs, which punctuates the importance of having medical services close to home to avoid the additional costs of travel to receive services. Rural Missourians’ health status shows a higher level of risk factors, which lead to chronic health conditions.

Compared to urban residents, rural residents reflect the following.

• higher rates of smoking
• increased rates of obesity
• higher rates of population with no high school diploma
• lower life expectancy
• higher heart disease death rates
• higher cancer death rates

Primary care plays a large role in the management of chronic diseases. Developing a larger primary care workforce improves access and quality of health care, emphasizing a focus on prevention, population health and community health to reduce health care costs. In 2017, Missouri ranked 40th or below among all states in 13 out of 35 measures documented by the United Health Foundation’s American Health Rankings.

To realize lower health care costs, Missouri must improve the overall health of the population. This requires primary care access for all residents.

With lower incomes, an older population and more limited access to local health care services, rural residents experience less consistent care. Of the 143 licensed hospitals in Missouri, 69 are located in rural counties, leaving 32 rural counties without a hospital. Of the 69 rural hospitals, 36 are critical access hospitals with 25 or fewer beds. As a result, rural Missourians often are required to travel farther than urban residents to obtain specialty services.

MHA last reported on the physician workforce in its 2014 publication, “Primary Care Physicians: Rural and Urban Disparities in Missouri.” Since then, the number of licensed and practicing PCPs in Missouri has increased from 789 in 2014 to 1,246 in 2018 in rural Missouri and from 5,201 in 2014 to 5,379 in 2018 in urban Missouri.

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*Percentages may not total 100 percent due to rounding.
RURAL PCP CHARACTERISTICS

Missouri’s rural/urban divide is more pronounced than the nation as a whole. There are 55.9 PCPs for every 100,000 rural residents in Missouri. That compares to 139 per 100,000 urban residents. Nationally, there are 68 primary care residents per 100,000 in rural areas and 84 per 100,000 urban residents.

Another complicating issue is that PCPs in rural Missouri are older than their urban counterparts by more than six years. (See Table 1.)

FACTORS CONTRIBUTING TO PCP SHORTAGES

The Institute of Medicine’s Committee on the Future of Primary Care defined primary care as, “The provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community.”

Primary care promotes effective communication with patients and encourages the role of patients as partners in their health care. This includes health promotion, disease prevention, health maintenance, counseling, patient education, and diagnosis and treatment of acute and chronic illnesses in various health care settings. Primary care usually is performed and managed by family practice and internal medicine physicians, pediatricians, physician assistants, and nurse practitioners who often collaborate with other health professionals and use referrals, as appropriate. For purposes of this report, PCPs are identified as those practicing in family medicine, general medicine, internal medicine and pediatrics.

With nearly 240,800 PCPs, the U.S. will require between 14,800 and 49,300 PCPs by 2030. Population growth and aging from 2016 to 2030 are the primary drivers of that increasing demand, with seniors being the largest consumers of health care services.

As researchers attempt to quantify what future demand for physicians will look like, a number of scenarios must be considered.

• the retirement age of physicians
• millennial physicians working fewer hours
• changes to the Affordable Care Act that affect the number of individuals with health insurance
• the impact of the rapid growth of APRNs and their incorporation into primary care practice
• the potential impact of care delivery models, such as Accountable Care Organizations

Although Missouri has managed to grow its PCP population by more than 600 since 2014, the number of available residency slots constricts the pipeline, meaning only 21.5 percent of medical school graduates remain in Missouri. Although Missouri’s medical school enrollment increased by 10.6 percent from 2006 to 2016, residency slots have not kept pace. In 2018, a report published by the National Residency Matching Program showed the state has 725 residency slots for about 1,000 graduating medical students. This is important because 68 percent of physicians who complete all of their training in the same state end up in practice there, according to the AAMC.

Further complicating the inadequate supply of PCPs is the differential in their salaries compared to other specialties. According to the 2018 Medscape Physician Compensation Report, the average overall physician salary was $299,000, with PCPs earning $223,000 — a $6,000 increase from 2017. Throughout the past seven years, physician salaries have been increasing. When comparing regions of the U.S., Missouri falls into the area with the highest compensation rates (see illustration). This is likely because of competition and physician density.

Source: Medscape Physician Compensation Report 2018
Medicine and primary care continue to be a profession that is desirable and rewarding. Of physicians overall, 77 percent would go into medicine again, with reasons cited including helping patients, the knowledge that one provides competent care and good earnings. However, when asked if they would choose the same specialty again, that number declines to 62 percent. But, nearly three-quarters of PCPs would choose their specialty again.22

To make the health system work for all who seek care, reform in the health care delivery system will be necessary. Changes in the reallocation of clinical responsibilities could greatly increase physicians’ capacity to meet patient needs in preventive, chronic and acute care. One-fifth of primary care visits involve preventive care, most of which consist of cancer screening, counseling and immunizations.23 Today, numerous primary care practices have delegated many of these services to nondiagnosing health professionals, such as health educators, pharmacists and medical assistants.

In addition, nonphysician clinicians, including nurse practitioners and physician assistants, are playing a much larger role in the delivery of health care. The number of these health care professionals has grown rapidly throughout the past several years, so much so that by 2025, no state is projected to have a shortage of primary care nurse practitioners.24 In Missouri, the State Board of Nursing reports 7,222 licensed APRNs, an increase of more than 2,900 (67 percent) since 2010.25 Only 2.2 percent are unemployed, pointing to a limited supply to meet the needs. Most — 36 percent — of Missouri APRNs work in hospitals, with 19.6 percent working in physician offices or primary care clinics.26

Increasing the use of nurse practitioners and physician assistants by expanding the scope of their practice could help alleviate the primary care shortage. The majority of nurse practitioners are trained in primary care. Researchers estimate that 60 percent of preventive care services can be performed by nondiagnosing health professionals. Based on this estimate, 10 percent of clinicians’ time could be saved, which could translate into a 10 percent increase in primary care capacity.23

DEVELOPMENTS DESIGNED TO ALLEVIATE PCP SHORTAGES

In 2013, the Missouri General Assembly passed community paramedic legislation to close the access to care gap in rural communities by expanding the role of emergency medical services personnel. The program allows first responders to serve communities more broadly in the area of primary care. Community paramedics provide patients in rural communities with access to care not otherwise available. Moreover, the community paramedic system is defined by, and adapts to, local needs.

In 2014, the legislature passed the Show-Me Extension for Community Healthcare Outcomes Program and assistant physician legislation. The ECHO program uses telehealth technology to expand the capacity to treat chronic, common and complex diseases in rural and underserved areas of the state. The technology is used to distribute information from a team of multidisciplinary medical experts to local primary care providers who deliver the treatment. This program reduces the need for travel and allows patients to receive treatment in a timelier manner.

Missouri’s assistant physician collaborative practice arrangement allows some medical school graduates to obtain a temporary assistant physician license to enter into “assistant physician collaborative practice arrangements” with a physician. Through the arrangement, an assistant physician is authorized to provide primary care services in medically underserved rural or urban areas of Missouri or in any pilot project areas. Although no mechanism has been established for assistant physicians to be paid for their services by insurers, Missouri had 57 active assistant physicians as of July 27, 2018.27

Effective April 2018, an emergency rule change increased the mileage restriction from the APRN’s collaborating physician to 75 miles, for both rural and urban practice. The permanent rule change has been filed and should be in effect before the emergency rule change expires. Another significant change to the collaborative practice statute that goes into effect Aug. 28, 2018, doubles — from three to six — the number of APRNs a collaborating physician can oversee.
BUILDING ON SUCCESSFUL PROGRAMS

Several programs have been implemented throughout the country to help recruit and retain physicians desiring to work in rural and underserved communities.

The MHA Health Institute has contributed more than $12 million since 1993 to PRIMO — the Primary Care Resource Initiative for Missouri.

PRIMO Student Loan Program is a competitive state program that awards forgivable loans for PCPs. To earn loan forgiveness, participants are required to work in one of Missouri’s rural or underserved areas.

Studies have shown that medical students who come from rural areas are more likely to practice there. Some states have designed programs to increase the number of medical students in rural areas. The University of Missouri-Columbia School of Medicine developed its Rural Track Pipeline Program to support rural medical training for undergraduate and medical student education. The goal of the program is to produce practicing physicians for rural and underserved areas of Missouri. The rural track program is a highly sought-after experience for students that has enhanced the collaboration between the school and rural communities, area health education centers, and local health care providers. In addition to offering unique learning experiences, it is designed to help address the state’s physician workforce needs in rural areas.

Each year, the National Health Services Corps’ scholarship program awards scholarships to students pursuing careers in primary care. The Texas Department of Agriculture helps rural communities “grow their own” health care professionals by providing loan repayment for professionals who return to their rural communities to practice. Several states offer loan repayment programs to professionals who practice in medically underserved areas.

Another notable model for helping students from rural areas is the Physician Shortage Area Program in Pennsylvania. The PSAP is an admissions and educational program designed to recruit and educate medical students who grew up in rural areas or small towns and who intend to practice in rural communities — with a priority placed on those medical students planning to practice in family medicine. According to The New England Journal of Medicine and The Journal of the American Medical Association, outcomes of the PSAP have shown that its graduates are eight times more likely than their peers to become rural family physicians.

One of the reasons that Ohio University’s Heritage College of Osteopathic Medicine exists is to attract and train students willing to work in high-need areas. But, a new program was launched in 2013 to ensure that in medically underserved communities, graduates have a solid grasp of what it takes to succeed before establishing their practice.

Through a combination of workshops, intense group case-study discussions and field immersion experiences, the Rural and Urban Scholars Pathways Program is meant to teach self-reliance and creative problem solving needed by physicians who work alone or in a small practice.

It will continue to take innovative programs and focused efforts to address the health care needs of rural Missouri. The future economic stability and health status of Missourians depends on it.
REFERENCES


