

HEALTH POLICY REPORT

The Challenging Quest to Improve Rural Health Care

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Major rural health issues — a chronic shortage of doctors, dentists, pharmacists, and nonphysician providers; a wave of hospital closures; and a widening gap in life expectancy that favors the urban populace over rural residents — continue to test the fragile system of rural care in the United States. Although rural voters were a critical factor in the Republicans' sweep to power, very few rural policy dividends were apparent in the tumultuous first year of the Trump administration. One action applicable to rural states was President Donald Trump's recent directive to the Department of Health and Human Services (HHS) to declare the opioid epidemic a "public health emergency." Of 10 states that had the highest rates of opioid-related deaths per 100,000 population in 2016, a total of 5 were states in which a majority of residents lived in rural areas: West Virginia (43.4), New Hampshire (35.8), Ohio (32.9), Maine (25.2), and Kentucky (23.6) (Blodgett M, Federal Office of Rural Health Policy: personal communication).

Ironically, the most important development affecting millions of rural Trump supporters was the failure of Republicans to repeal and replace the Affordable Care Act (ACA) through which many rural residents gained coverage. Had they succeeded under most of the GOP alternatives, the coverage of many rural residents would have been threatened or lost. Recognizing that, 11 governors, including 5 Republicans and an Alaska independent, urged the Senate to reject the GOP plans to dismantle the ACA, fearing that it may have cost their constituents their coverage. In addition, 3 Republican senators opposed the proposal of the party, thus denying the GOP the votes it needed to replace the signature domestic achievement of former President Barack Obama.

In this report, I cover major rural issues, including the growing rural–urban gap in life expectancy, the unsettled status of the ACA, efforts to expand the rural health workforce, and the pace of rural hospital closures.

RURAL LANDSCAPE AND LIFESTYLE

People who live in rural areas number some 60 million (19.3% of the population), according to the U.S. Census Bureau American Community Survey.¹ The federal government defines the word "rural" in at least 15 different ways, designations that are important because agencies apply them to parcel out approximately \$37 billion a year to support many forms of "rural development."²

Many rural residents cope with issues that are less common among persons who reside in urban centers. As the National Rural Health Association noted: "Economic factors, cultural and social differences, educational differences, lack of recognition by legislators and the sheer isolation of living in remote rural areas all conspire to impede rural Americans in their struggle to lead a normal, healthy life,"³ although some rural communities are not far from a larger city.⁴

The Centers for Disease Control and Prevention (CDC) reported that rural residents tend to be less healthy than urban dwellers, in part because of lifestyle choices; rural residents have higher rates of cigarette smoking, hypertension, and obesity and less leisure-time physical activity.⁵ From 2001 through 2015, rural counties consistently had higher rates of death by suicide (17.32 per 100,000 people) than medium or small metropolitan counties (14.86) and large metropolitan counties (11.92).⁶

In other CDC findings, researchers estimated that 62% of all U.S. deaths were related to the five leading causes of death: heart disease, cancer, unintentional injury, chronic lower respiratory disease, and stroke. During 2014, a higher percentage of rural residents died of these causes than did urban dwellers. The CDC concluded that targeted prevention efforts, combined with improved access to treatment for chronic conditions, might reduce the rural–urban gap in age-adjusted death rates.⁷ Most recently, the CDC documented that rural children from small com-

munities are more likely to have mental, behavioral, and developmental disorders than those living in cities and suburbs.⁸

An issue that is drawing closer attention is a widening of disparities in life expectancy between rural and urban populations.⁹⁻¹¹ Over the period from 1969 to 1971, life expectancy was 0.4 years longer in metropolitan than in non-metropolitan areas (70.9 and 70.5 years, respectively). By 2005 to 2009, the gap had widened: life expectancy was 79.1 years in metropolitan areas, as compared with 76.9 years in small urban towns and 76.7 years in rural areas.¹²

During a 2015 meeting with Kentucky officials in Appalachia, the National Advisory Committee on Rural Health and Human Services, which reports to the HHS secretary, emphasized that “social circumstances and behavior . . . are believed to contribute to over half the determining causes of premature deaths.”¹³ Kentucky officials agreed, citing “the current opioid epidemic and the rise of heroin use” in the state. The “diseases of despair” — drug and alcohol overdose, suicide, and alcoholic liver disease — have long occurred at much higher rates in Appalachia than in other regions.¹⁴

On October 26, 2017, President Trump directed the HHS to declare the opioid crisis a public health emergency, one that had claimed more than 50,000 lives in 2016. Although the action included no new federal support, HHS Acting Secretary Eric Hargan said some funds would be made available to combat opioid abuse, including expansion of the use of telemedicine services in rural areas. However, of approximately 34 million Americans who still lack the necessary broadband Internet access, 23.4 million live in rural areas.¹⁵ Another step authorized by the President’s action enabled the waiver of a 1970s-era policy that blocked Medicaid payments to inpatient treatment facilities with more than 16 beds for patients receiving substance-abuse treatment, a step that should make treatment more widely available.

EVOLUTION OF RURAL HEALTH POLICY

Federal investments in rural health began in the late 1940s with \$3.8 billion, coupled with \$9.1 billion in state and local matching funds, to support building and expansion of rural hospitals and other health care facilities through the Hospital

Survey and Construction Act of 1946 (Hill–Burton Act). More than half of the support provided to some 10,700 projects went to communities of fewer than 25,000 people.¹⁶ The next milestone was the Social Security Amendments of 1965, a cornerstone of President Lyndon B. Johnson’s “Great Society” agenda that created the Medicare and Medicaid programs as well as the Community Health Center and National Health Service Corps programs. In 1977, Congress created the Medicare-certified Rural Health Clinic program and, 10 years after that, the Federal Office of Rural Health Policy was established within the HHS.

The ACA directed the Medicare Payment Advisory Commission (MedPAC) to delve into rural issues, including access to care, its quality, and the adequacy of Medicare payments to rural providers. Its June 2012 report¹⁷ stated that the use of ambulatory, inpatient, and postacute services was similar for rural and urban beneficiaries, in part because some patients travel to urban centers for care. Beneficiary satisfaction with access to care was similar in rural and urban areas, as were opinions related to quality of care, although rural hospitals tended to have below-average rankings on mortality — as subsequent research underscored¹⁸ — and some process measures. Rates of avoidable readmission were similar in rural and urban hospitals.¹⁹

Regarding provider payments, the MedPAC report said “the literature and our site visits indicate that physician incomes per hour are comparable in rural and urban areas However, the Commission has raised concerns about the adequacy of primary care physician payments relative to subspecialist payments — concerns that apply to physicians in rural and urban areas.” In 2017, the average salary offer made to family physicians in all locations was \$231,000, as compared with \$250,000 in communities of 25,000 or fewer residents, according to a national physician recruitment firm.²⁰

THE UNSETTLED FATE OF THE ACA

Even as the future of the ACA remains unsettled as Republicans turn to tax reform, one major issue that remains an open question is the future of Medicaid — a vast state-based program that provides health and long-term care services to persons with incomes up to 138% of the fed-

eral poverty level (\$33,948 for a family of four in 2017). The ACA required states to expand Medicaid, and 31 of them and the District of Columbia complied. But when the Supreme Court issued a ruling²¹ that granted states the option of whether to expand Medicaid, 19 states declined — many of which were southern states with large rural populations.

Before the ACA expansion of Medicaid took effect, rural states that opted for it and non-expansion states had similar rates of Medicaid coverage. However, in rural areas of states that expanded Medicaid, the coverage rate increased from 21% to 26% of the population between 2013 and 2015, whereas it increased just 1 percentage point — from 20% to 21% — in rural areas of non-expansion states.²² A recent study showed that the ACA Medicaid expansion was also associated with improved financial performance by hospitals and a substantially lower likelihood of closure, especially in rural markets and counties with large numbers of uninsured adults before the expansion of Medicaid.²³

Medicaid covers a larger share of children and families in small communities and rural spaces than in large metropolitan areas.²⁴ In March 2017, the Centers for Medicare and Medicaid Services sent a letter to state governors that signaled a willingness to use Medicaid demonstration waivers to test new approaches that differ from federal program rules, including landmark program changes such as in work requirements.²⁵ In January 2018, Kentucky became the first state to require many of its Medicaid recipients to work to keep their Medicaid coverage, and at least nine other states are seeking to impose work-related requirements.²⁶

RURAL WORKFORCE ISSUES

The shortage of physicians who practice in rural areas has been an enduring challenge for small communities. One reality is that relatively few medical schools strive to attract students who are interested in practicing primary care in rural settings.^{27,28} Of success stories, the most recognized is the Physician Shortage Area Program (PSAP) at Thomas Jefferson University (located, interestingly enough, in downtown Philadelphia).²⁹ Since 1974, the PSAP has preferentially admitted medical school applicants with three factors related to their background and future

plans: growing up in a rural area, planning to practice in a rural area, and planning to practice family medicine.

Of 1111 Jefferson graduates from the classes of 1978 to 1982, a total of 762 (69%) had complete data for all three predictive factors and a 2007 practice address. Of graduates who matched to all three predictors, 45% (45 of 99) practiced in rural areas three decades later, as compared with 33% (48 of 145) with two predictors, 21% (42 of 198) with one predictor, and 12% (37 of 320) with none.³⁰ Other pioneer programs with successful results are located at the University of Minnesota and Michigan State University. Approximately a dozen other medical schools have successful programs, known as rural training tracks, that attract students interested in pursuing rural practice.³¹

Even states and medical schools with a long-standing focus on building a sustainable rural health workforce find it a struggle to achieve their goals. The WWAMI (Washington, Wyoming, Alaska, Montana, and Idaho) program — established by the University of Washington School of Medicine (UWSOM) almost 50 years ago — has strengthened the primary care workforce in its largely rural region.³² The admission policy at the UWSOM, where WWAMI students attend medical school, seeks students who are likely to return to practice in medically underserved areas in their home states. Despite substantial improvement in the number of physicians per 100,000 people, of the five WWAMI states measured by that metric, only Washington had achieved the national mean, in part because an abundance of doctors practice in the greater Seattle area.

North Carolina, which operates one of the largest Area Health Education Center programs in the United States, strives to increase the number of primary care physicians committed to practicing in medically underserved areas.³³ In 1993, its General Assembly enacted legislation calling for “at least fifty percent” of the graduates of the four medical schools in the state to specialize in a primary care discipline. However, 5 years after 415 students had graduated in 2010 and were either in advanced training or had entered practice, 67 (16%) were primary care physicians in the state and only 11 (3%) had taken up practice in rural areas of North Carolina (Fig. 1).³⁴

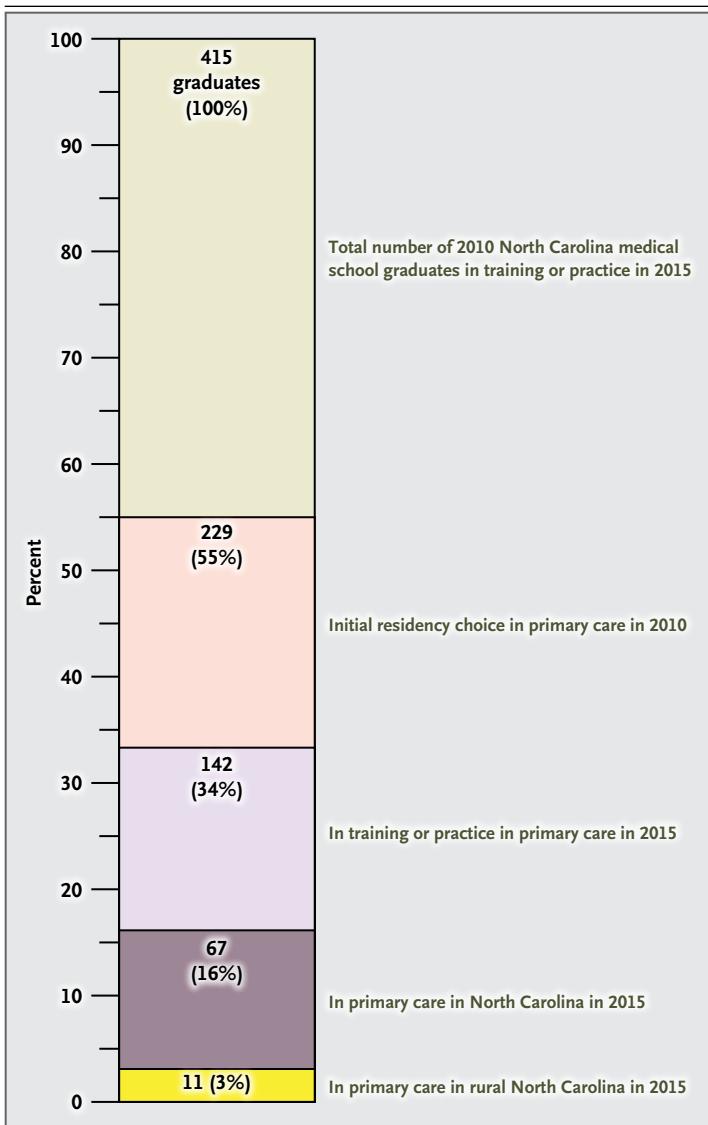


Figure 1. North Carolina Medical School Graduates and Primary Care Practice in Rural Areas.

Of students who had graduated from North Carolina medical schools in 2010 and were either in training or practice in 2015, only 3% were primary care physicians in rural areas. Adapted from Fraher and Spero.³³

Given the physician shortage, advanced practice registered nurses (APRNs), physician assistants,^{35,36} and community health workers^{37,38} have been hired in greater number to expand the staffs of rural hospitals, clinics, and medical practices. The Department of Veterans Affairs (VA) took the most aggressive action, effective January 2017, by expanding the authority of APRNs (approximately 5825 VA employees) to practice “to the full extent of their education,

training and certification, without the clinical supervision or mandatory collaboration of physicians.”³⁹ The action followed a recommendation by a Commission on Care created by Congress that had concluded the access problems of the VA were based on staffing shortages, including “failing to optimize use of advanced practice registered nurses.”⁴⁰

Although recruitment of nonphysician providers has improved rural access, the scarcity of medical specialists is acute in many sparsely populated places, particularly general surgeons, hospitalists, internists, obstetricians, gynecologists, oncologists, and psychiatrists. The number of general surgeons per 100,000 population in rural communities decreased by 21% from 1981 to 2005, and continues downward, placing a substantial strain on hospitals that rely on revenue from routine and emergency procedures.⁴¹ Of rural counties, 45% (898) had no hospitals with obstetric services over the study period of the research (2004 to 2014), and the number of counties without these services is still declining.⁴²

STUDENT ATTITUDES AND NATIONAL NEEDS

Fifteen years ago, to address an estimated physician shortage, the Association of American Medical Colleges (AAMC) recommended a 30% increase in the first-year enrollment of the medical schools in the nation, establishing 2002 as the base year. In a 2015 news release,⁴³ the AAMC reported that first-year medical school enrollment in 2019–2020 would reach 21,304, a 29.2% increase over the base-year level and only 130 positions short of its target. The expanding enrollment was propelled in part by the opening of 22 new medical schools. An AAMC research team compared an earlier stage of expansion (2009 to 2011) to a preexpansion period (1999 to 2001) and found an average decline of 500 applicants from rural backgrounds per year across those two periods. Given the earlier experience, the team expressed doubt that the current effort would result in an increase of new physicians who consider rural practice.⁴⁴

Another indicator of how many new graduates might consider a rural location is taken from the 2016 results of the AAMC annual graduating-student questionnaire (80% response rate).⁴⁵ The results showed that 7.4% of new graduates

would consider practicing in an underserved area, with more than half (4.0%) favoring a small community — not including suburban areas — rather than more isolated locales. In the 2016 survey of graduates of the American Association of Colleges of Osteopathic Medicine (77% response rate),⁴⁶ 12% favored communities with up to 100,000 residents, 11% communities with up to 50,000, 4% communities with up to 10,000, and only 1% areas of 2500 or less. Total first-year enrollment of all colleges and branches of osteopathic medicine has expanded dramatically,⁴⁷ jumping from 3079 in 2002 to 7575 (146% increase) in the 2016–2017 academic year.

Graduate medical education (GME) determines the overall number, specialization mix, and geographic distribution of the physician workforce. The federal government is the major funder of GME training, but it generally does not influence what specialty a resident selects. In a report requested by four Republican senators, the Government Accountability Office (GAO) was asked to “ensure that federal funding is aligned with the nation’s health care needs.”⁴⁸ Its report noted that, of 72 health education and training programs for multiple professions that the HHS administers for workforce development, two Medicare GME programs accounted for three quarters of the 2014 expenditures of the department — about \$14 billion. The GAO explained that the HHS cannot target existing Medicare GME program funds to projected areas of workforce shortages “because the programs were established by statute and funds are disbursed based on a statutory formula that is unrelated to projected workforce needs.”⁴⁸

RURAL HOSPITALS

In recent decades, Congress has enacted policies designed to preserve rural hospitals, often the largest employer in a small community. Currently, some 60% of rural hospitals (approximately 1325) are designated as “critical access hospitals” (CAHs); in 2012 alone, CAHs received Medicare payment adjustments that totaled some \$2 billion more than the program would have allocated under its typical payment schedule.⁴⁹ Rural stakeholders would note, however, that the extra payments, authorized by Congress, are a recognition of the financial challenges that rural hospitals face operating in a low-volume, high

fixed-cost environment in many communities with declining numbers of residents.

Despite the supplemental payments, 83 rural hospitals have closed since 2010 — citing financial factors as the major reason — out of approximately 2400 rural hospitals. Texas had the greatest number of closures (14), followed by Tennessee (8), Georgia (6), Alabama (5), Mississippi (5), and North Carolina (5).⁵⁰ Generally, the definition of “closure” is the cessation of acute inpatient care at a rural hospital, but at least one third of them have remained open, providing primary care, emergency services, and other necessities of value to their community.

Approximately two thirds of the 83 hospital closures were in states that had declined to expand Medicaid. In an assessment tool developed to predict whether hospitals facing financial distress might close within 2 years,⁵¹ researchers concluded that closures would continue and, thus, new models of reimbursement and care delivery would be needed.

In its June 2016 report,⁴⁹ MedPAC questioned whether the median Medicare supplement (\$500,000) provided to CAHs that closed could have yielded greater value if used “to preserve access to emergency services rather than being used to support inpatient services.” It outlined two outpatient-only options as possibilities: if an isolated hospital closed its inpatient service but continued to provide outpatient care, it would be eligible for an annual Medicare grant or fixed payment to help cover the standby costs of 24/7 emergency services. In communities that could not support a 24/7 emergency department (ED), they could convert their inpatient capacity into a primary care clinic with an affiliated ambulance service.

In its discussions on rural health, the commission recognized that alternatives to traditional inpatient rural hospitals could have their own set of issues. It was struck by how few stand-alone EDs were located in rural spaces. In its June 2017 report,⁵² MedPAC noted that, since 2010, the number of stand-alone EDs had grown rapidly, but “very few . . . are located in rural areas. In 2016, almost all of the 566 stand-alone EDs were located in metropolitan areas that have existing ED capacity and were often located in more affluent ZIP codes with higher household incomes and higher shares of privately insured patients.”⁵³

THE WAY FORWARD

Rural hospitals are prized assets in their communities, but as closures have increased and more facilities face financial troubles, there is greater recognition by stakeholders who advocate for rural providers that delivery alternatives may be necessary. Alan Morgan, chief executive officer of the National Rural Health Association (NRHA), emphasized their need in an interview: “The current delivery configuration is not structured for success in this new environment. While it is critically important to sustain rural safety-net providers, it is equally important to outline a meaningful, phased, and nondestructive transition strategy that successfully links today’s payment and patient care structures to the health systems of the future.” Topping his list of priorities was “stabilization of the current rural market to maintain 24/7 [ED] services.”

Shortly before the 2016 election, Morgan said that rebuilding U.S. infrastructure was a top priority of the NRHA. During the campaign, Trump pledged to champion a \$1 trillion infrastructure plan, but more than a year later, no proposal has been introduced. At a January 2018 retreat at Camp David that focused on infrastructure ideas, President Trump and his chief economic advisor (Gary Cohn) seemed to offer “mixed signals” on an infrastructure plan, and the threshold for federal support has been greatly lowered to approximately \$200 billion, with hopes that private resources⁵⁴ and states and localities⁵⁵ could provide the rest.

The American Hospital Association, a powerful lobby that represents hospitals of virtually every size and location, encouraged its members in a 2016 report⁵⁶ to consider new delivery options and social challenges. Addressing the matter during its annual meeting that year, its chief executive officer (Rick Pollack) said: “This is our time to redefine the hospital,” to address “at least two key forces pushing structural shifts in what we do: chronic conditions and consumerism. Redefining the ‘H’ begins with developing new approaches to both of them Spending on patients with multiple chronic conditions consumes 84% of all health care dollars across all settings.” The first of its nine “emerging strategies” was addressing the social determinants of health.

Disclosure forms provided by the author are available with the full text of this article at NEJM.org.

Mr. Iglehart is a national correspondent for the *Journal*.

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