Call to Action: Rural Health
A Presidential Advisory from the American Heart Association and American Stroke Association

Executive Summary

2/10/20

Understanding and addressing the unique health needs of people residing in rural America is critical to the American Heart Association's pursuit of a world of longer, healthier lives. Improving the health of rural populations is consistent with the Association's commitment to health equity and its focus on social determinants of health to reduce and, ideally, eliminate health disparities. The presidential advisory summarizes existing data on rural populations, communities and health outcomes; explores three major groups of factors underlying urban-rural disparities in health outcomes; proposes a set of solutions spanning health system innovation, policy and research; and concludes with a call to action for the Association and other stakeholders to make rural populations a priority in programming, research and policy.

Rural Populations, Communities and Health Outcomes

"Rural" generally describes areas with low or geographically diffuse populations; rural populations tend to be older,[1] have lower population growth,[2] and higher rates of poverty. While whites comprise almost 80% of the rural population,[2] there is great racial and ethnic diversity in rural America by geography[2] (e.g., non-Hispanic black individuals in the rural South, Hispanic individuals in the southwest, and American Indian/Alaska Natives in Oklahoma, the Great Plains, the American Southwest and Alaska).

There is a three-year life expectancy gap between rural and urban populations,[3] with rural areas having higher death rates for cardiovascular disease (CVD) and stroke than urban areas;[4, 5] similarly, rural women face higher maternal mortality rates as compared to urban women, with the growth in maternal mortality largely driven by an increase in cardiovascular deaths.[6]

Rural areas have significantly higher rates of uncontrolled traditional cardiovascular risk factors compared with urban areas. Among rural populations, there are higher rates of tobacco use,[7] physical inactivity[8] and obesity,[9] as well as higher rates of diabetes and hypertension.[10] Rural areas also experience less favorable mental and behavioral health,[11] and in recent years there has been a marked increase in drug

misuse and in drug overdose deaths in rural areas, such that by 2015, drug overdose death rates were higher in rural areas than in urban areas. This disparity is in large part integrally related with the opioid crisis, which has disproportionately impacted specific rural areas.[12, 13]

Factors underlying urban-rural disparities in health outcomes

Inequalities in CVD, in part, relate back to the ways in which social determinants of health can negatively impact rural populations. Income, education, employment, housing, transportation and food insecurity each influence health outcomes, as does access to care. Rural Americans face unique challenges in each of these areas. From 2013-2017, the median household income in mostly rural counties was $47,020 – $10,000 less than the national median household income.[14] While school age children in rural areas of the U.S. perform comparably to their peers on standardized tests and graduate from high school at higher than national rates,[15] overall educational attainment is lower in rural compared with urban areas. Higher educational attainment is associated with lower odds of mortality in U.S adults across age category, sex and racial/ethnic subpopulations.[16]

The restructuring of the rural economy has been a source of stress in the rural United States. Unemployment in rural areas nearly doubled from 2000 to 2010, worse than the national trend,[17] and rural areas have been slower to recover jobs following the "Great Recession." Rental options are limited in rural areas[17] and housing options in rural areas, overall, are often poor quality: almost six percent of rural homes are moderately or severely substandard, with inadequate heating or plumbing systems, leaks or pests.[18] Transportation issues facing rural populations include infrastructure issues, high costs, lack of vehicle access and long travel distances, which can lead to delays in treatment, inappropriate medical treatment and unmet health care needs.[19] Food insecurity disproportionately impacts rural communities; according to Feeding America, 2.4 million rural households are food insecure, and 86% of the counties with the highest rates of child food insecurity are rural.[20]

There are also multiple health care delivery system factors that impact overall and cardiovascular health for rural residents. Hospital and outpatient facility care, clinician supply, insurance coverage and public health infrastructure all differ between urban and rural areas. Rural hospitals are markedly smaller and average lower volumes than urban hospitals. In addition, rural hospitals are often reimbursed differently from urban hospitals, although margins at rural hospitals are less than at urban ones, and have higher uncompensated care.[21] Sixty percent of rural hospitals are designated as Critical Access Hospitals,[21] which vary in size and capacity, but tend to have less capacity to provide intensive care and inpatient rehabilitation services than hospitals without a CAH designation,[22] which limits access to certain services for rural residents. Access continues to worsen nationwide as hospital closures accelerate in an increasingly difficult financial scenario as rural hospitals provide jobs and important infrastructure for rural communities and thus many have importance beyond their health care delivery role alone.

In rural areas, acutely ill or injured persons may face geographic and other transportation barriers to reaching definitive care expediently. Outpatient care (including primary care, specialty care, and other services) in rural settings may also be more difficult to access, resulting in fewer preventive or chronic care visits, which can impact cardiovascular health. [23]

Rural areas face significant workforce shortages across primary and specialty care. These shortages are expected to worsen in coming years as the population ages and demand for primary care physicians continues to rise.[24,25] The provision of emergency care in the rural United States also faces challenges related to personnel. Adequate provision of acute care is further complicated by the national shortage of registered nurses, which is more significant in rural areas than urban, again leading to potential quality and access issues.[26,27] The national nursing shortage also affects staffing in skilled nursing facilities and home health agencies.

Rural populations have higher rates of uninsurance than urban populations. A greater proportion of rural residents are covered by Medicaid than their suburban and urban counterparts.[28] The fact that many of the most rural states in the U.S. are those that have not elected to expand Medicaid, therefore, has had a significant adverse impact on rural communities, likely with a negative effect in terms of financial strain. This dynamic has also likely contributed to the widening gaps in health between urban and rural areas.[29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43] Private insurance markets operate less efficiently in rural areas, leading to difficulties in the availability of affordable private plans.[44] Veterans Affairs hospitals and the Indian Health Service play a disproportionate role in rural health care provision. Rural local health departments provide direct patient care and do so more often than urban Local Health Departments.[45] Health departments often provide services such as immunizations as well as screening for and treatment of tuberculosis and sexually transmitted diseases, but more comprehensive primary care is much less commonly offered.[45] Despite the limited capacity and services, in many small communities, the local health department functions as the safety net provider.

Promising Solutions

Given the multi-factorial and highly complex nature of issues facing rural populations. broad, innovative and sustained approaches are needed, including those related to care delivery, complementary policy reforms and supporting research.

These approaches fall into the following four areas:

Expanding the workforce and fostering team-based care: Efforts to address the shortage of rural health care professionals, such as supporting medical schools and education in rural areas and of rural individuals, loan forgiveness and rural rotations, should be considered. Developing new rural-specific team-based care models that leverage a multi-disciplinary care team, including emergency medical technicians, pharmacists and community health workers, along with assuring scope of practice laws facilitate rural workforce development, should also be explored.

Exploring new models and sites of care delivery: Approaches that leverage telehealth and digitally enabled health care supported by an adequate digital technology infrastructure may improve access to health services for rural populations by connecting across geographies. Models that use existing infrastructure, such as schools, churches, pharmacies and retail sites, Federally Qualified Health Centers, Rural Health Centers, the Veterans Administration and Indian Health Service, should be leveraged. Regionalization that formally connects health care provider organizations and clinicians in rural areas to larger, urban systems of care with greater resources could be further utilized.

Fostering sustainable funding models and flexible payment to support rural care delivery: Sustainable funding models that recognize the unique elements of rural health care delivery must be created to enable rural facilities to remain viable and new or altered funding mechanisms developed that address barriers to sustainability in rural health facility and program funding.

Expanding affordable insurance coverage and broader economic development: Policies including Medicaid expansion and insurance market reform could be particularly impactful in rural areas to improve access to health insurance and health care services. The financial sustainability of health care systems will also rely on the overarching economic prosperity and revitalization of rural communities.

Research Gaps

In order to support these investments in workforce, retooling of infrastructure and policy reforms, a major research program is needed to fill current gaps and examine emerging areas of innovation. Research is needed to better understand which delivery models are most effective, scalable and efficient, as well as which configuration of clinicians and community-based practitioners and associated clinical and payment models are most effective. This includes assessing the training and competency needs for these clinicians and more robust and more systematic data collection. This data could be used to assess triage and transfer patterns across rural and rural-serving facilities and facilitate development of rural-specific quality measures. Across this research, more dedicated funding and support for community-centered approaches to research is necessary.

Call to Action

The American Heart Association is committed to working with strategic partners to develop solutions to improve rural health in America. We pledge to work with stakeholders across the ecosystem in support of our collective goals. Examples of focus areas include:

- Virtual expansion of quality improvement initiatives that have traditionally been facility-based.

- Advocacy in support of policy priorities that support an affordable, accessible and adequate system of care for all residents of the United States.
- Application of technologies to address health equity and drive a more accessible model in health care for all.
- Development of the evidence base in support of approaches to address the needs of rural populations.
- Examination and testing of emerging approaches in cardiovascular care that are particularly relevant to rural areas.
- Identification and support of the training needs of the variety of health care professionals.
- Facilitating the spread and coverage of new models.
- Extending reach of educational initiatives to rural consumers.
- Improving awareness of rural health challenges among lawmakers and policymakers.

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