The Intergenerational Cycles of Rural Health

See also the *AJPH* Rural Health section, pp. 1274–1343.

This issue of *AJPH* provides both a somber assessment of the challenges of rural health in America and several glimmers of hope for the future.

The articles and commentaries in this issue provide a valuable description of the status of health in rural America that will resonate with anyone who has been working in the field, and will benefit those in nonrural areas who wish to obtain a better understanding of rural health. It may also help nonrural readers better understand, more generally, their rural counterparts.

CREATING A NEW CENTER: MESSAGES FROM THE FIELD

In the process of establishing the new Center for Rural Health Research at East Tennessee State University, I spoke with about 100 rural health leaders—ranging from the presidents and CEOs of national professional organizations to elected officials, state-level leaders, and front-line workers. Although each had very specific, and helpful, perspectives on the challenges facing rural America, two consistent messages began to emerge.

The first was that rural America has significant resources that can be applied to addressing their health challenges. This fact is clearly reflected in this issue, with articles ranging from the use of telemental health as reported by Patel et al. (p. 1308) to buyback programs for opioids reported by Liu et al. (p. 1318), and from Buys and Rennekamp's report (p. 1300) on the use of extension services to Palma et al.'s article (p. 1304) on the use of mobile free clinics.

Meit and Knudson (p. 1281) appropriately refer to these strengths as "pride, independence, and creativity." It is noteworthy and reassuring that these resources transcend geography, as reflected in the fact that the authors of these articles and commentaries are located in 18 different states.

It is abundantly clear that across rural America, there are people and organizations that are dedicated to improving the lives of their rural neighbors. Frequently, they do not need outside "experts," nor do they usually want, or need, "the pros from Dover." They do sometimes need ideas, support, and especially resources, and this issue of *AJPH* provides some exciting starting points for collaboration.

The second recurring message that emerged from my discussions, however, was more somber and worrisome than the first. Consistently, I heard that many of the challenges facing rural America are worsening—either in absolute terms or compared with the rest of the country. Leider et al. (p. 1283) clearly present this disparity, and Probst et al. (p. 1325) document how these challenges are even worse among racial and ethnic minorities.

What is clear from Beatty et al.'s review (p. 1293) of funding challenges facing rural health departments, from DuPre et al.'s review (p. 1332) of the interrelationship of one epidemic (opioid addiction) with another (hepatitis A), and Kozhimannil et al.'s study (p. 1315) of obstetric services in rural hospitals, is that many parts of rural America are seeing a slow downward spiral, where, incrementally and over time, a variety of factors are combining to further erode the fragile health status of rural Americans, especially for those living in the poorest and most isolated areas.

CONVERGENCE OF SOCIAL FACTORS

In the Center for Rural Health Research, we have come to believe that the greatest challenge facing rural America is the confluence of four social vectors: poverty, educational underachievement, poor health behaviors, and lack of access to health care. These four factors have produced an intergenerational cycle in rural America that —sometimes slowly and sometimes more rapidly—is producing widening gaps between rural America and the rest of the country.

1. In terms of poverty, there are two overarching realities that affect Americans living in rural areas. First, over the past 50 years, the gap between the wealthiest and the poorest Americans has been widening consistently. In 2017, the ratio between the median household income for the top fifth of Americans compared with the bottom fifth was more than 50% wider, in constant dollars, than it was in 1967 (https://bit.ly/2WfB0ZL). This is exacerbated by the fact that an American who is born to parents living in the bottom fifth of the income range is 10 times more likely to remain in that bottom fifth for his or her lifetime than to reach the top fifth (https://bit.ly/32dAyyN).
2. It is well documented that parents' educational achievement is a significant predictor of the

ABOUT THE AUTHOR

Randy Wykoff is dean of the College of Public Health and director of the Center for Rural Health Research, East Tennessee State University, Johnson City.

Correspondence should be sent to Randy Wykoff, Room 104, Lamb Hall, College of Public Health, East Tennessee State University, Johnson City, TN 37604 (e-mail: wykoff@etsu.edu).
Reprints can be ordered at http://www.ajph.org by clicking the "Reprints" link.

This editorial was accepted June 17, 2020.

doi: 10.2105/AJPH.2020.305852

educational achievement of their children[1] (https://bit.ly/3gSNA90). Although we have seen impressive improvements in the rates of high school completion, there remain significant gaps in postsecondary education. The gap is therefore widening between areas in which parents have lower educational achievement—such as in many parts of rural America—and areas where parents have higher educational achievement.

3. Like poverty and educational underachievement, poor health behaviors are seemingly passed from one generation to the next. In parts of the country with higher rates of poverty and lower educational achievement, there are already higher levels of smoking, obesity, sedentary lifestyles, and other negative health behaviors, compared with wealthier parts of the country.[2] Children of parents who smoke are more likely to become smokers.[3] Children of parents who are obese are more likely to be obese.[4] Over the generations, this cycle results in many rural Americans engaging in poorer health habits than their nonrural counterparts.
4. It is well documented that many rural areas lack the number and range of health care providers found in nonrural areas (https://bit.ly/3j00e84). As economic factors cause more and more rural hospitals to close, it becomes harder to retain existing health care providers and even harder to recruit new ones. Even when rural hospitals can stay in business, the profit margin is often tenuous and extremely sensitive to any reduction in payment or increase in demand for services. Factors as different as the opioid crisis and the pandemic of COVID-19 can have a devastating impact on rural hospitals and rural providers.[5]

Although they are often described independently, these four factors are inexorably intertwined. When a rural hospital closes, for example, there is a strong residual impact on the host community, making it harder to recruit new businesses and retain existing ones. This can dramatically affect the host community's tax base, which, in turn, affects investment in education and social programs. Loss of jobs, reduced tax base, and lower investment in education exacerbate poverty, which itself is associated with poor health behaviors and poor health outcomes, and the cycle goes around and around (https://bit.ly/3j1eltV).

INTERRUPTING THE VICIOUS CYCLES

The overarching challenge facing all of us concerned with improving health in rural America is summarized in a single question: "How can we interrupt the intergenerational cycles of poverty, educational underachievement, poor health behaviors, and lack of access to health care?"

Nonrural Americans are sometimes perplexed by the behaviors and actions—especially the political activities—of rural Americans. When seen through the lens of these intergenerational cycles, however, the behavior of rural America can start to make more sense. Anyone who has been on the negative end of widening wealth gap, a worsening education gap, persistence of poor health behaviors, and a dwindling of health care resources, would be forgiven for being impatient in their desire to see significant and radical change.

Fortunately, there are many individuals and organizations—represented by the authors of the articles and commentaries in this issue, and many others—who are leading a nationwide effort to help rural Americans produce change in their own communities and, ultimately, interrupt the intergenerational cycles that so seriously threaten rural America. AJPH

Randy Wykoff, MD, MPH & TM

CONFLICTS OF INTEREST

The author has no conflicts of interest to declare.

REFERENCES

1. Sasson I, Hayward MD. Association between educational attainment and causes of death among white and black US adults, 2010–2017. *JAMA*. 2019;322(8):756–763.

2. Egen O, Beatty K, Blackley, Brown K, Wykoff R. Health and social conditions of the poorest versus wealthiest counties in the United States. *Am J Public Health*. 2017;107(1):130–135.

3. Mays D, Gilman SE, Rende R, et al. parental smoking exposure and adolescent smoking trajectories. *Pediatrics*. 2014;133(6):983–991.

4. Wang Y, Min J, Khuri J, Li M. A systemic examination of the association between parental and child obesity across countries. *Adv Nutr*. 2017;8(3):436–448.

5. Diaz A, Chhabr KR, Scott JW. The COVID-19 pandemic and rural hospitals—adding insult to injury. Health Affairs Blog, May 3, 2020. Available at: https://www.healthaffairs.org/do/10.1377/hblog20200429.583513/full. Accessed July 7, 2020.