communities and eliminate geographic health inequities.

The basic capacities to use this investment are already in place. Although often not as strong or secure, rural public health infrastructure and capacities exist in many of our rural communities across the nation. Many of our public health workers serve in rural local and state health departments around the country, and they can be our envoys to help address the needs of rural populations, putting a positive face on our field and growing support for the work that we do. (Indeed, 59% of local health departments in the United States are classified as rural.[7])

Empowering our rural public health workforce to better conduct the work of public health and to more effectively communicate the benefits they bring to their communities will help engage rural residents, which will in turn create demand for public health among rural policymakers. All of us who work in public health, regardless of our population focus or the disparities and inequities that our programs seek to address, stand to benefit from broader support for our field, which includes rural residents, institutions, partners, and policymakers. The bottom line is this: what's good for rural residents is good for us all. AJPH

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Deaths of Despair: Why? What to Do?

See also Erwin, p. 1533.

This issue of *AJPH* includes a further analysis by Stein et al. (p. 1541) of a phenomenon first identified by Case and Deaton in a *Proceedings of the National Academy of Science* publication. Case and Deaton documented a rise in the mortality and morbidity of middle-aged White non-Hispanic men in the United States after 1998, but not in Hispanics or African Americans. This phenomenon was not the case in other Organization for Economic Cooperation and Development (OECD) countries where the mortality and morbidity rates for this group continued to decline annually.

WHAT WE KNOW

Case and Deaton found that the increase in mortality was largely related to suicide, accidental poisonings (including opioids), and chronic liver disease or cirrhosis, and was associated with a substantial increase in psychological distress among this population group. Moreover, this increase in cause-specific mortality drove the all-cause mortality for middle-aged White non-Hispanic men up, a previously unnoted finding, and this increase in mortality was more prevalent in those with a high-school-or-less education. All-cause mortality for Black non-Hispanics and Hispanics continued to improve in the same population, creating a diminishing divergence in mortality among those three groups. This increase in mortality has been described as "deaths of despair."[1] Subsequent analyses by these same authors have shown that this trend is continuing.[2]

The article by Stein et al. further defines the population experiencing this increase in mortality between 1999–2001 and 2013–2015. The authors examined the nature of place (urban, suburban, small or medium metro, and rural), as well as race/ethnicity, age, and cause of death. This stratification produced 48 subpopulations for analysis. In 39 of the 48 subpopulations, mortality rates improved. In the nine in which improvement did not occur, the rates were highest in non-Hispanic Whites, largely in rural or small or metro counties, and were the result of suicide, accidental poisonings (including opioids), and liver disease.

Although Blacks continue to have higher mortality rates, the difference in the Black versus White rates has been steadily decreasing. Rates for Hispanics also show a decreasing difference in mortality between Whites and Hispanics. In all cases, the risk of death increased 40% to 50% in rural as opposed to suburban counties. Whites aged 45 to 55 years in rural counties were the most likely to die prematurely. Surprisingly, in addition to other causes of death in this population, they also showed an increase in death from chronic diseases, such as cancer and heart disease, which was not the case in older populations aged 55 to 65 years in the same setting. However, in all cases in which there was an increase in mortality, it was primarily related to suicide, accidental poisonings, and liver disease.

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WHY IS THIS HAPPENING? WHAT CAN WE DO?

We clearly have a phenomenon that needs attention and further study. White, middle-aged, undereducated, rural residents are experiencing a substantial increase in mortality related to self-destructive behavior as opposed to others in different geographical, educational, and racial groups. The question is, why? A corollary is, what can we do about it?

In their original article, Case and Deaton reflect on the rise in deaths associated with opioid use. They speculate that the pain for which opioids were to be the answer has increased and ask which came first—the opioids or the pain? In any case, public health is now tasked with developing an approach to the primary prevention and management of opioid use and addiction in this vulnerable population, an area that has not received adequate attention.

Income inequality has been expanding in the United States over the past two to three decades, but accelerated during and after the recession of 2008. Globalization and automation have been the main contributors to the loss of low-tech manufacturing jobs and wage stagnation. Workers today with a limited education can no longer be guaranteed well-paying jobs with good benefits, and find themselves in a situation in which they will not fare as well as their parents economically and socially. Adding to the problem is the reality that funding available for retraining and financial help for the jobless is significantly less in the United States than in other OECD countries.[1]

This has resulted in a crisis of joblessness, increased poverty, hopelessness, and a breakdown in traditional support mechanisms rooted in family, community, or religion. Individuals blame themselves for their changing circumstances and feel desperate and depressed. But the same is true of African Americans and Hispanics, so why have they not experienced this increasing mortality? One can speculate that Whites have a greater expectation that they will have a job, family, and reasonable economic life. African Americans and Hispanics, because of their experience with racism, may not have the same expectations.

In addition, Putnam, in his seminal work, *Bowling Alone*, describes the loss of social capital in the baby boom population; the closing of bowling alleys and the loss of members in Masonic lodges are examples of this phenomenon.[3] Social networks, whether constructed by government to absorb the shocks of contemporary life, or fashioned by society through reciprocal social arrangements, can certainly improve the lot of those who are negatively impacted by unemployment or the depression associated with a recognition of one's financial downturn.

Compounding the problem has been the gradual deterioration of the health care safety net for this population, especially in rural areas. The passage of the Affordable Care Act (ACA) in 2010 and its expansion of Medicaid in some states has helped to improve access to needed health and mental health services. The current push by the Republican Party to repeal and replace the ACA, if successful in something close to its current form, would erase recent gains in coverage and treatment of drug and alcohol abuse or mental health conditions, especially for the population most at risk. None of the work to date has looked at this problem geographically to determine whether there is a difference in health outcomes between those states that expanded Medicaid as opposed to those states that did not.

In some respects, what we are observing in the United States is "new wine in old bottles." Large disparities in health status among subpopulation groups is nothing new to public health. We are used to large differences in health outcomes among populations related to race/ethnicity, income, and geography, and have only recently realized that other OECD countries have addressed similar disparities much more effectively than we have. Indeed, our awareness that factors outside the health system have a significant impact on health has fueled our growing interest and attention to these social determinants of health.[4] What is new to us is the reversal of health status in the majority population in which, previously, measures of health were improving.

Although continued analysis of this phenomenon is needed, we believe that the ultimate etiology will be social and economic in nature. We are trapped in our culture of hyperpartisan politics in which too many of our policymakers are driven to support small government and a focus on profit before people, to the degree that developing a needed and coherent national approach to address the issues identified by the authors seems impossible. Our gerrymandered political system fueled by large amounts of dark money is ill-suited to help address the problem. Solutions to this public health crisis must start with political change—that may be the ultimate social determinant of health.[5] AJPH

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