

implemented its own Earned Income Tax Credit (EITC), participated in the Affordable Care Act's Medicaid expansion, and has not preempted local governments from implementing health-promoting legislation such as paid sick days, a higher minimum wage, stricter firearm regulations, or requiring that calorie counts be posted. In sharp contrast, Mississippi has retained a negligible cigarette tax, does not offer its own EITC, did not participate in Medicaid expansion, and has preempted local laws in all four areas listed previously. The diverging mortality trends suddenly become much less mysterious.

RECENT EVIDENCE

States shape their population's health and mortality, irrespective of residents' own characteristics and local environments. Indeed, a large and robust literature has repeatedly shown the importance of states for their residents' well being.

Two recent studies also show that states are particularly important for individuals who are socioeconomically disadvantaged,

such as women and low-educated individuals. A 2016 study of adult mortality across states found compelling evidence that states matter more for women's mortality than for men's.⁶ The study estimated how much adult mortality varies across the 50 states, then partitioned that variation into the part attributable to individuals' characteristics (e.g., race) and the part attributable to states' characteristics (e.g., tax policy). For men, roughly 34% of their variation in mortality across states was attributable to men's attributes and 23% to the states. For women, roughly 30% was attributable to women's attributes and 53% to the states. A 2017 study of disability across US states found that states have their greatest impact on the probability of having a disability among the least-educated adults.⁷ States where having a low level of education is often a "poverty sentence" are particularly unhealthy places to live. The study concluded that the fewer resources that individuals have to build a healthy life, the more important their state of residence becomes in shaping their health.

WHERE DO WE GO FROM HERE?

The macrolevel mortality trends require macrolevel explanations. They also require interdisciplinary perspectives. Demography, sociology, and epidemiology remain central to the debate, but so too do political science, history, and geography. Longer time horizons must also be examined. Explanations for the historical mortality decline would not have been discernible from a decade-long comparison of causes of death; neither will explanations for more recent trends. Furthermore, macrolevel explanations such as deregulation, devolution, and preemption are not listed on death certificates. New and innovative study designs that can capture these broader factors are required. Lastly, better data are required. Publicly available mortality data often do not even contain state of residence. When they do, they do not contain state of birth or interstate migration histories. These data are available, however, in the restricted-use versions of many of these data sets (e.g., the National Health Interview Survey) and should be

made publicly available. Despite these obstacles, we must rethink and reexamine the reasons for worrisome contemporary mortality trends. It is time to hypothesize upwards. **AJPH**

Jennifer Karas Montez, PhD

REFERENCES

1. National Research Council. *Explaining Divergent Levels of Longevity in High-Income Countries*. Washington, DC: National Academies Press; 2011.
2. Montez JK, Zajacova A. Why is life expectancy declining among low-educated women in the United States? *Am J Public Health*. 2014;104(10):e5–e7.
3. Xu J, Murphy SL, Kochanek KD, Arias E. *Mortality in the United States, 2015*. Hyattsville, MD: National Center for Health Statistics; 2016. NCHS Data Brief No. 267.
4. Institute for Health Metrics and Evaluation. Available at: <http://ghdx.healthdata.org/us-data>. Accessed July 5, 2017.
5. Pomeranz JL, Pertschuk M. State preemption: a significant and quiet threat to public health in the United States. *Am J Public Health*. 2017;107(6):900–902.
6. Montez JK, Zajacova A, Hayward MD. Explaining inequalities in women's mortality across US states. *SSM Popul Health*. 2016;2:561–571.
7. Montez JK, Zajacova A, Hayward MD. Disparities in disability by educational attainment across US states. *Am J Public Health*. 2017;107(7):1101–1108.

Gaps in Federal and State Screening of Tuberculosis in the United States

Tuberculosis (TB) control in the United States has largely been a success story. Over the past 20 years, the total incidence of the disease has decreased by more than 60%, with fewer than 10 000 new cases reported in 2015.¹ The burden of TB in the United States is low compared with incidence worldwide, where it is the leading cause of death from

infectious disease. However, TB incidence in the United States continues to be marked by persistent racial and ethnic disparities, as well as a recent stagnation in the overall incidence rate.² TB control policy in the United States, with a focus on both active and latent TB, is no longer concerned with containing widespread epidemics, and new strategies

need to be incorporated to realize further improvements.³

However, the US response to TB is shaped by two challenges: fragmentation of responsibilities between state and federal governments and gaps in TB screening in state and federal regulations and laws, which result from fragmentation.

ABOUT THE AUTHORS

Phillip M. Singer is with the Department of Health Management and Policy, University of Michigan School of Public Health, Ann Arbor. Grace A. Noppert is with the Center for the Study of Aging and Human Development, Duke University Health System, Durham, NC. Charlotte H. Jenkins is with Steptoe & Johnson LLP, New York, NY.

Correspondence should be sent to Phillip M. Singer, Department of Health Management and Policy, University of Michigan School of Public Health, 1415 Washington Heights, SPH II M3050, Ann Arbor, MI 48109 (e-mail: pmsinger@umich.edu). Reprints can be ordered at <http://www.ajph.org> by clicking the "Reprints" link.

This editorial was accepted August 12, 2017.

doi: 10.2105/AJPH.2017.304076

TABLE 1—Analysis of Tuberculosis (TB) Screening Policies Across the 50 US States

TB Screening Policy	No. of States
Health care facilities and workers	
All health care workers	18
Hospital personnel only	7
Personnel at a nonhospital care facility (e.g., nursing homes, long-term care facilities, surgery centers)	36
Correctional facilities	
All staff at correctional facilities	13
All inmates	13
School-based screening	
All school employees	14
All child care providers (e.g., day care facilities)	10
All schoolchildren	4
Community centers	
Personnel at community-based substance abuse treatment centers	12
Personnel at homeless shelters	4
Risk-based screening alone	5
Immigrant-based screening	
Foreign-born teachers and students	1
Students arriving from “high risk countries”	1
Foreign-born students at state universities or residential educational facilities	1
Foreign-born children admitted to child care centers	1

Note. Results are based on overview of TB policies from 50 states. All TB screening policies are not represented in the table.

Source. Adapted and expanded from The Centers for Law and the Public's Health.⁵

FRAGMENTATION IN FEDERAL AND STATE RESPONSIBILITY

One of the striking characteristics of the United States is the fragmented nature of its political system, especially related to managing public health. The federal government has several responsibilities related to screening for active TB. First, whereas the Executive Branch and Congress have broad authority to establish and enforce immigration policy, the Centers for Disease Control and Prevention (CDC) is primarily responsible for the juncture of immigration and disease management. The CDC requires that, prior to receiving approval for permanent residency in the

United States, migrants be examined by panel physicians for active TB.⁴ Individuals already within the United States who request to become permanent residents must also undergo similar testing from a civil surgeon for active TB.

Second, the federal government has the organizational and content expertise to provide recommendations to state and local government agencies and policymakers related to infectious disease. The CDC has a central role in identifying active TB outbreaks within the United States and supporting containment efforts that are led by state and local health departments. Lastly, the federal government has the resources, including financial and staffing, to help manage TB.

These resources are necessary, as state governments—many of which are required to balance their budgets—often do not provide sufficient funding to achieve TB elimination goals. Federal agencies support the goals of TB control by encouraging or requiring state and local governments to screen for TB, especially for individuals at increased risk, if they receive certain federal grants.

However, in practice, the day-to-day public health management of active and latent TB, including responsibility for treatment, is under the authority of state and local governments. With 50 states and thousands of local public health departments, one result of this fragmented responsibility for managing TB is geographic variation in regulations and laws. This variation dictates which populations are targeted for screening of active or latent TB, the frequency of screenings, and follow-up procedures. Wide state-to-state variation in TB control makes it difficult to implement best practices for high-risk populations or screening approaches.

STATE VARIATIONS IN SCREENING

Typical TB screening procedures test for the presence of any TB infection, either active or latent. Our analysis of state legislation and regulations found that official TB screening policies for either type of TB vary widely across the states, if they exist at all (Table 1). This variation in prevention, identification, and management of TB is especially pronounced within high-incidence settings, including hospitals, correctional facilities, and schools. The highest

percentage of states that explicitly require TB screening for all workers is within the health care industry. However, only 18 states specifically mention that all health care workers are to be screened, with an additional seven states requiring only that health care workers in the hospital setting be screened for TB. Correctional facilities similarly demonstrate inconsistent state regulations, with only 13 states requiring all staff and all inmates to undergo screening for any type of TB. Within public schools, only 14 states require all employees to be screened for TB before employment begins, and only four states require TB screening among schoolchildren before they are allowed entry.

The CDC, in their role as content experts, has widely advocated for the use of risk-based policies for occupation-based TB screening. The risk of TB infection is not the same across different work environments. Risk-based screening gives facilities autonomy to develop screening policies based on context-specific factors, taking into account the type of facility, the risk of TB infection among clients served, and the probability of exposure to pathogens. Following a risk-based screening approach would mitigate inconsistent screening requirements within high-risk occupations and settings, but only five states have adopted this approach.

FEDERAL GAPS IN SCREENING

Gaps in federal TB screening regulations also exist, particularly related to nonimmigrant visitors. About 20% of the world's migrants settle in the United States,⁶ with 450 000 persons admitted

each year on immigrant visas and 50 000 to 70 000 admitted as refugees.⁷ Moreover, nearly 66% of TB cases in the United States are among foreign-born persons.² However, screening for communicable diseases, including active TB, is required only for immigrants and refugees seeking permanent US residence. For the millions of individuals who arrive in the country on temporary visas for work or study, no TB screening is conducted. Thus, states are left with the responsibility of filling in the screening gaps for this high-risk population. Currently, only a handful of states have adopted additional postarrival screening measures for foreign-born persons, including foreign-born teachers and primary, secondary, and university students.

POLICY IMPLICATIONS

There are two important policy implications that arise from the current landscape of gaps in federal and state TB screening. First, future improvements will require states, as the locus of screening and infection control, to take a more

proactive approach against TB. This can be done by embracing the CDC-supported risk-based screening policy, which gives local health divisions and facilities the autonomy to develop their own screening procedures based on their specific context. Additionally, states can carefully consider which populations may need special screening considerations. For example, Minnesota, which is a leading state for relocating refugees, offers post-arrival screening for active and latent TB infection for all refugees. Finally, even with limited resources, states can take steps to strengthen the infrastructure of their public health systems. Whether through increased funding or the implementation of innovative public health programs that support monitoring, screening, and treatment of TB, complex health problems require increased capacity at the state level.

Second, the federal government can take a more prescient and comprehensive approach to funding and screening for TB. TB remains a global threat, and as the world grows more connected, the risks of future disease outbreaks in the United States increase. Rather than

addressing public health emergencies on an ad-hoc basis, a dedicated fund created by the federal government can improve the responsiveness of the United States to future infectious disease outbreaks. Additionally, given that a large proportion of TB cases in the United States continue to occur among foreign-born populations, supplementary postarrival screening regulations in this population, regardless of visa status, represent a critical opportunity to reduce the burden of TB in the United States. Policymakers and practitioners should be lauded for prior efforts to curb TB transmission in the United States, but continued and creative efforts are necessary for future improvements. **AJPH**

Phillip M. Singer, MHSA
Grace A. Noppert, PhD
Charlotte H. Jenkins, BA

CONTRIBUTORS

The authors jointly conceptualized the study, carried out the research, and wrote the editorial.

ACKNOWLEDGMENTS

G. A. Noppert received partial support from National Institute on Aging grant T32-AG000029-41.

REFERENCES

1. *Tuberculosis Fact Sheets—Trends in Tuberculosis*. Atlanta, GA: Centers for Disease Control and Prevention; 2016.
2. Salinas JL, Mindra G, Haddad MB, et al. Leveling of tuberculosis incidence—United States, 2013–2015. *MMWR Morb Mortal Wkly Rep*. 2016;65(11):273–278.
3. Theron G, Jenkins HE, Cobelens F, et al. Data for action: collection and use of local data to end tuberculosis. *Lancet*. 2015; 386(10010):2324–2333.
4. Bush GW. *Executive Order 13295: Revised List of Quarantinable Communicable Diseases*. Washington, DC: White House; 2003.
5. Cabrera O, Hodge J, Gostin L. Express tuberculosis control laws in selected US jurisdictions: a report to the Centers for Disease Control and Prevention. Centers for Law and the Public's Health: a collaborative at Johns Hopkins and Georgetown Universities. 2009. Available at: https://www.cdc.gov/php/docs/centers_report-express_tb_control_laws-final.pdf. Accessed February 2, 2017.
6. Nwosu C, Batalova J, Auclair G. Frequently requested statistics on immigrants and immigration in the United States. Migration Information Source. 2014. Available at: <http://www.migrationpolicy.org/article/frequently-requested-statistics-immigrants-and-immigration-united-states-3>. Accessed January 26, 2017.
7. Posey DL, Naughton MP, Willacy EA, et al. Implementation of new TB screening requirements for US-bound immigrants and refugees—2007–2014. *MMWR Morb Mortal Wkly Rep*. 2014;63(11):234–236.

Can the FDA Help Reduce Drug Prices or the Cost of Medical Care?

The new US Food and Drug Administration (FDA) commissioner Scott Gottlieb has worked for pharmaceutical companies for most of his career, so it may have surprised some public health advocates when he responded to congressional pressure by taking on the hot issue of drug pricing as one of his first priorities.

In his blog written for the FDA Web site, Commissioner Gottlieb echoes the view of many public health advocates when he says:

Too many patients are being priced out of the medicines they need. While FDA doesn't have a direct role in drug pricing, we can take steps to help address this problem by facilitating increased competition in the market for prescription drugs through the approval of lower-cost, generic medicines. (bit.ly/2sqamP7)

“We're working on a Drug Competition Action Plan,” he explained, and although there are no details yet, he states that a major strategy is for the FDA to

approve safe and effective generic medicines more quickly, even if that requires preventing brand-name pharmaceutical companies from “gaming the system.” He gave examples of companies

preventing generic drug companies from gaining access to sufficient doses of brand-name drugs that they need for testing as well as various other legal maneuvers that are used to delay generic drugs from obtaining FDA approval.

I agree with Commissioner Gottlieb that these sound like useful strategies, because generic

ABOUT THE AUTHOR

Diana M. Zuckerman is the president of the National Center for Health Research, Washington, DC.

Correspondence should be sent to Diana M. Zuckerman, National Center for Health Research, 1001 Connecticut Ave, NW, Suite 1100, Washington, DC 20036 (e-mail: dz@center4research.org). Reprints can be ordered at <http://www.ajph.org> by clicking the “Reprints” link.

This editorial was accepted August 14, 2017.
doi: 10.2105/AJPH.2017.304093