

## Macro-level perspective to reverse recent mortality increases

Life expectancy is like a social mirror that reflects the overall wellbeing of a population. It has been increasing steadily for nearly two centuries in many parts of the world, in large part because of improved standards of living, public health interventions, and medical advances. Only severe epidemiological or sociopolitical shocks, such as the 1918 flu epidemic and the fall of the Soviet Union, have temporarily interrupted the steady rise in life expectancy.

How long will the rise continue? The findings reported by Meredith Shiels and colleagues<sup>1</sup> in *The Lancet* paint a fairly grim picture, at least for the USA. Their comprehensive analysis of trends in premature mortality from 1999 to 2014 in US adults aged 25–64 years in all major racial and ethnic groups showed that age-specific mortality in white individuals and in American Indian and Alaska Native individuals increased during the first part of the 21st century across most of the studied age range. The increases were particularly large in those aged 25–30 years and in women. For instance, between 1999 and 2014, mortality at age 25 years increased by 3.0% (95% CI 2.8–3.1) in white women and 5.0% (3.9–6.1) in American Indian and Alaska Native women. Their findings add to an emerging body of evidence that, since the early 1990s, mortality has increased in young and middle-aged white individuals,<sup>2–4</sup> especially for women and for those with low educational attainment.<sup>5–7</sup> Shiels and colleagues' use of the age-period-cohort model to analyse death certificate data make their findings an especially valuable contribution to our understanding of these troubling trends.

The analyses by Shiels and colleagues revealed that the causes of death largely responsible for the mortality increase are poisoning, including drug overdoses, as well as liver disease and cirrhosis, and suicide. Clearly, these causes are not a random collection. They often result from efforts individuals use to cope with psychological distress, depression, loneliness, and hopelessness. To be clear, to say that individuals' coping behaviours and choices are related to these causes of death does not mean that they are the root cause of the mortality increase. Although individuals' behaviours and choices are an important part of the story, the macro-level mortality trends require macro-level explanations.

Shiels and colleagues focus on medical care: encouraging safe prescribing practices for opioids, expanding treatment of drug abuse and overdoses, and improving access to quality medical care. These are all necessary steps and the opioid epidemic needs to be a public health priority. However, we encourage the next generation of studies on US mortality trends to investigate broader, macro-level explanations. Identification of the contribution of changes in the economy, policy environment, and social fabric should become a priority. Focusing on the macro-level explanations will help to ensure that the findings can be used to eradicate the underlying causes rather than to attempt to treat its stubborn and ever-evolving symptoms—eg, the smoking epidemic in the mid-20th century, the current obesity epidemic, the emerging opioid epidemic. Focusing on only the symptoms is like the parable of a man on the bank of a river, exasperated that he is too busy pulling drowning people out of the river to look upstream and see who is pushing them in.<sup>8</sup>

The striking differences in mortality trends across US states reported by the new study suggest a promising place to start examining the macro-level factors—understanding the disparities across states' social, economic, and policy environments and their effect on mortality. Have the states with more favourable mortality trends invested in their populations' wellbeing—eg, in terms of tax policies, education expenditures, employment opportunities, and

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affordable health care? In fact, studies have shown that US states' socioeconomic and policy contexts matter for health and mortality, especially for women.<sup>9,10</sup>

Governments at all levels—local, state, and federal—can have a powerful role in moderating or aggravating the population health consequences of recent social and economic changes. The policies of the new federal administration, as well as state-level governance, will be responsible not only for revitalising the US economy but also for ensuring the health and survival of American children and adults.

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