

Determining Public Health Priorities in Rhode Island

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Public health in Rhode Island and across the United States has evolved over the past decades in response to changing patterns of disease, demographic shifts, pandemics (eg, COVID-19) and development of novel interventions to address health. While significant progress has been made in controlling infectious diseases such as HIV/AIDS and vaccine-preventable diseases, the country faces other emerging and important public health challenges, as well as a resurgence of other infectious diseases due to misinformation and funding cuts. Furthermore, efforts are still needed to continue trends and successes in public health, such as those related to infant mortality, which has also been increasing across certain areas of the country.¹ Defining public health priorities in Rhode Island and across the United States is important to help guide strategic goals and allocation of resources. We review leading causes of morbidity and mortality in the United States and identify major public health priorities.

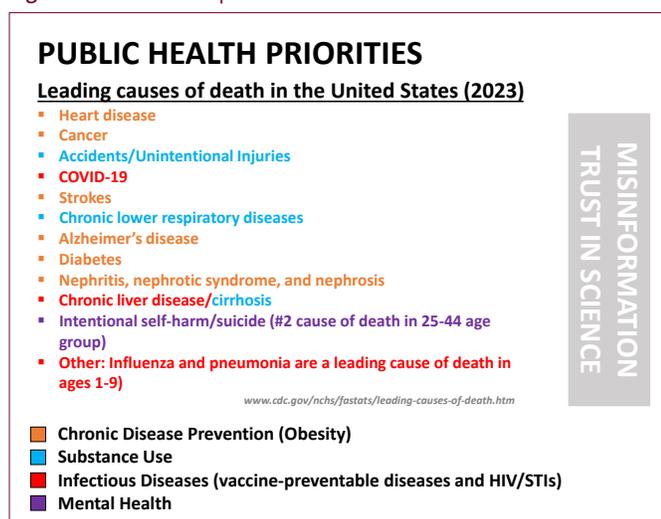
The Centers for Disease Control and Prevention conducts comprehensive surveillance on causes of death in the United States [Figure 1].² Identifying and understanding the leading causes of mortality can help guide public health priorities. In 2023, the overall top causes of death included: 1) heart disease; 2) cancer; 3) accidents and unintentional injuries (eg, drug overdoses); 4) COVID-19 infection; 5) strokes; 6) chronic lower respiratory disease (eg, chronic obstructive pulmonary disease [COPD]); 7) Alzheimer's disease; 8) diabetes; 9) renal disease such as nephritis, nephrotic syndrome,

and nephrosis; 10) chronic liver disease (eg, cirrhosis); and 11) intentional self-harm or suicide. Notably, leading causes of death in different age groups, and specifically younger populations are important to consider. For example, intentional self-harm, or suicide is the second leading cause of death in 25–44-year-olds; influenza and pneumonia are the leading causes of death in children 1–9 years old.

Also important to consider are trends over time. Similar to previous years, heart disease and cancer continue to be the top two leading causes of death.³ Diabetes moved down to the 8th leading cause of death during 2020–2022, but overall deaths due to diabetes have increased in number and rate since 2019. Intentional self-harm and suicide was the 10th leading cause of death in 2019 and prior years, but dropped to 11th because of COVID-19. Influenza and pneumonia were the 9th leading causes of death in 2019, but dropped from the top 10 in subsequent years. Mortality related to chronic liver disease and cirrhosis has increased in prior years. Historically, the majority of chronic liver disease was due to viral hepatitis, but effective vaccination has reduced mortality in the United States. However, alcohol-related liver disease and metabolic dysfunction-associated steatotic liver disease (MASLD), which is strongly associated with obesity, have both increased.⁴ Similarly, obesity, diabetes and hypertension are the main drivers of end-stage renal disease.⁵ Renal disease and chronic liver disease are also significant risk factors for cancer and heart disease.

Knowledge of the leading causes of death in other countries provides important context to understanding current public health successes in the United States (eg, what diseases are less of a concern in the United States due to successful public health interventions). At a global level, the top 10 leading causes of death according to the World Health Organization (WHO) include⁶: 1) ischemic heart disease; 2) COVID-19; 3) strokes; 4) COPD; 5) lower respiratory infections; 6) trachea, bronchus, and lung cancers; 7) Alzheimer's disease and other dementias; 8) diabetes; 9) renal disease; and 10) tuberculosis. Importantly, deaths from HIV/AIDS have decreased by 61%, moving from the 7th leading cause of death in 2000 to the 21st in 2021 (although HIV/AIDS remains the 10th leading cause of death in low-income countries). Chronic diseases now account for seven of the top 10 leading causes of death worldwide. There is significant variation depending on country and income level (eg, high-income versus low-income country). However, trends in leading causes of death and, specifically in higher-income countries, including the United States, remain consistent.

Figure 1. Public health priorities



Based on leading causes of death as well as other analysis, clear priorities emerge in terms of public health. Notably, chronic disease and specifically obesity and related conditions contribute to at least seven of the top 10 leading causes of death (ie, heart disease, cancer, strokes, Alzheimer's, diabetes, renal disease, and chronic liver disease). This is by far the most pressing public health concern based on morbidity and mortality. Unintentional fatal overdoses are a leading cause of death, and substance use in general is highly prevalent in the population (including alcohol and tobacco use). Infectious diseases, including vaccine-preventable diseases, also contribute to the leading causes of death (eg, COVID-19, influenza, chronic lower respiratory disease, and chronic liver disease). Building on the success of lower death rates from HIV/AIDS, prevention efforts used to achieve this success should be noted and continued. Finally, intentional self-harm and suicide are a leading cause of death, and mental health illness in general is highly prevalent in the population. In summary, addressing the major public health challenges related to obesity, substance use, infectious diseases, and mental health would address leading causes of morbidity and mortality in Rhode Island and across the United States.

In addition to the four priorities above, addressing health misinformation should also be considered a top public health priority. Misinformation, defined as health-related claims that are based on anecdotal evidence, false, or misleading, continues to undermine efforts to improve public health outcomes.^{7,8} For example, misinformation has led to low rates of vaccination in some communities, resulting in a resurgence of measles and other diseases.⁹ COVID-19 vaccination misinformation is rampant on social media, leading to lower rates of vaccination and concerns about the vaccines themselves.¹⁰ Misinformation and continued attacks on public health have also led to funding cuts and even violence against public health workers.¹¹ Addressing misinformation and promoting evidence-based interventions are needed to fully realize the potential of public health efforts.

Health equity and disparities in mortality are important to consider in terms of improving public health. For example, the all-cause mortality rate among African-American/Blacks is 24% higher than among White populations nationally, resulting in 74,402 excess African-American/Black deaths annually.¹² Addressing public health priorities also means achieving health equity and addressing social determinants of health. Effective interventions for achieving health equity could include interventions related to early childhood development, child poverty, job opportunities, and environmental conditions in disadvantaged communities.¹² Public health priorities in Rhode Island should focus on addressing obesity-related chronic disease, substance use, infectious diseases, mental health, and misinformation. These public health priorities overlap and are shaped by a complex dynamic of demographics, social determinants of health, health inequities, and evolving disease burdens.

An overall focus on achieving health equity is important to make progress in addressing these priorities. Coordination and action across government, healthcare, community organizations, and individuals is needed. By investing in these priorities, Rhode Island has the potential not only to improve life expectancy and quality of life, but also to create a more resilient healthcare and public health system for future and emerging threats to our health.

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Disclosures

Declarations: PAC was the sole contributor to this article.

Competing Interests: No conflicts of interest.

Funding Source: None.

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