

The Tennessee Men's Health Report Card: A Model for Men's Health Policy Advocacy and Education

American Journal of Men's Health
September-October 2019: 1–16
© The Author(s) 2019
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/1557988319882586
journals.sagepub.com/home/jmh



Derek M. Griffith^{1,2} , Andrea R. Semlow¹, Mike Leventhal³, and Clare Sullivan⁴

Abstract

Tennessee is the only state in the United States that has regularly published a document monitoring men's health and assessing men's health disparities. Vanderbilt University, Vanderbilt University Medical Center, the Tennessee Department of Health, Meharry Medical College, Tennessee Men's Health Network, and health providers and advocates across the state have come together to publish a set of indicators as the Tennessee Men's Health Report Card (TMHRC). This article describes the origins, structure, development, and lessons learned from publishing report cards in 2010, 2012, 2014, and 2017. The report card highlights statistically significant changes in trends over time, identifies racial, ethnic, age, and geographic differences among men, highlights connections to regional and statewide public health initiatives, and suggests priorities for improving men's health in Tennessee. State data were compared to Healthy People 2020 Objectives and graded based on the degree of discrepancy between the goal and the current reality for Tennessee men. Over the four iterations of the report card, the TMHRC team has made significant adjustments to the ways they analyze and present the data, utilize grades and graphics, consider the implications of the data for the economic well-being of the state, and disseminate the findings across the state to different stakeholders. It is important to go beyond creating a summary of information; rather, data should be shared in ways that are easily understood, actionable, and applicable to different audiences. It is also critical to highlight promising policy and programmatic initiatives to improve men's health in the state.

Keywords

men's health, health policy, advocacy, men's health report, men's health report card, men's health equity, monitoring, program evaluation, men's health disparities

Received July 11, 2019; revised September 19, 2019; accepted September 20, 2019

Whether measured by rates of premature mortality (World Health Organization, 2014), life expectancy (National Center for Health Statistics, 2018), or age-standardized death rates in leading causes of death (e.g., cardiovascular diseases, cancers, diabetes, chronic respiratory diseases; World Health Organization, 2014), or mortality (Bilal & Diez-Roux, 2018), the finding that men live shorter lives than women do has been a persistent one in the United States. When compared to men in other high-income countries (e.g., Australia, Canada, Japan, Sweden, the United Kingdom), the health and life expectancy of males in the United States has consistently remained near or at the bottom in recent decades (Woolf & Aron, 2013). The success of future efforts to improve the nation's economic and population health may rest on how well state and local health

departments are able to identify and address the needs of populations that are not benefitting equally from technological, medical, and public health advances (Fadich, Llamas, Giorgianni, Stephenson, & Nwaiwu, 2018; Rust,

¹Center for Research on Men's Health, Vanderbilt University, Nashville, TN, USA

²Center for Medicine, Health and Society, Vanderbilt University, Nashville, TN, USA

³Tennessee Men's Health Network, Knoxville, TN, USA

⁴Vanderbilt University Medical Center, Nashville, TN, USA

Corresponding Author:

Derek M. Griffith, Director of the Center for Research on Men's Health, 2301 Vanderbilt Place PMB# 401814, Nashville, TN 37240-1814, USA.

Email: Derek.griffith@vanderbilt.edu



Satcher, Fryer, Levine, & Blumenthal, 2010). Despite the economic and social advantages of being male in the U.S. society (Griffith, 2018; Griffith, Bruce, & Thorpe Jr, 2019), the health efforts aimed at creating a much-needed infrastructure to monitor and improve men's health in the United States (e.g., H.R. 632, The Men's Health Act 2001) have consistently failed. There has been little sustained federal effort to improve men's health through policies and programs that attend to the leading causes of death for men (Porche, 2010; Rovito et al., 2017; Williams & Giorgianni, 2010). There remains no national infrastructure to address or monitor men's health, and few local or state health departments have consistently and explicitly monitored the health of men (Fadich et al., 2018).

With the 2011 release of the European Commission's report on the state of men's health in Europe (White et al., 2011), many other countries (e.g., Australia, Brazil, Canada, Iran; Australian Men's Health Forum, 2019; Esmailzade, Mafimoradi, Mirbahaeddin, Rostamigooran, & Farshadfar, 2016; Goldenberg, 2014; Leal, Figueiredo, & Nogueira-da-Silva, 2012) and regions of the world (e.g., Asia; Ng, Teo, Ho, Tan, & Tan, 2014) have created similar reports or report cards describing the state of men's health. To date, however, the United States has not followed suit. Though Treadwell and Young (2013), Thorpe (Thorpe Jr, Griffith, Gilbert, Elder, & Bruce, 2016; Thorpe, Richard, Bowie, Laveist, & Gaskin, 2013), and others have called for a report on the state of men's health in the United States, there has yet to be such a national report. Treadwell and Young (2013), in particular, note that such an effort should be connected to a collaborative of diverse stakeholders ready to develop and implement broad policy initiatives and programmatic efforts at local, state, and national levels. The TMHRC is a useful model for monitoring the health of men in the United States, which is consistent with these recommendations and aims.

The United States needs a strategy for monitoring the health of men, particularly at the state level. Monitoring is the collection of primarily descriptive data for the purpose of keeping policies or programs on course in relation to a specific set of criteria. To allow for the repeated study of a question over time, monitoring requires ongoing collection of data (Braveman, 2003). Data are needed to provide scientifically credible information and balanced judgment to policy makers and other stakeholders about the effectiveness of strategies intended to produce social and health benefits in ways that are scientifically sound, reliable, simple, affordable, sustainable, and timely (Braveman, 2003; Griffith, Moy, Reischl, & Dayton, 2006). In the United States, there is a dire need for a system to monitor the health of men, but Tennessee is the only state to provide a regular and systematic process for monitoring the health and well-being of men.

One of the critiques of several of the national or regional reports from Europe and elsewhere is that they do not explicitly describe how patterns of health among men vary by race, ethnicity, and other demographic or social factors (Treadwell & Young, 2013). In the context of the United States and specifically in Tennessee, it is critical to attend to and highlight how men's health varies by socially meaningful factors such as race and ethnicity (Griffith, 2012, 2018). Healthy People 2020 has defined a health disparity as "a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage" (Healthy People 2020, 2010). The definition goes on to clarify that "health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion" (Healthy People 2020, 2010). While men may have worse health outcomes than women on a number of measures of health, because men are not socially or economically disadvantaged their poor health is not considered a disparity (Griffith, 2018); thus, men's health only becomes prioritized in the U.S. context if the population of men also fits the Healthy People 2020 definition of a health disparity based on some other socially meaningful characteristics noted in the preceding text. Consequently, it was important to document men's poor health and make the case that men's poor health is an important public health issue for economic and social reasons and to connect men's health to national- and state-level policies that may affect men's health in Tennessee.

The Tennessee Men's Health Report Card (TMHRC) has been published in 2010, 2012, 2014, and 2017. Each version of the TMHRC can be found at <https://www.vanderbilt.edu/crmh/tmhrc/index.php>. The goal of the TMHRC is to help policy makers, health-care providers, researchers, and other key stakeholders monitor the health of men in the state in a way that allows these diverse stakeholders to have informed dialogue about the patterns and determinants of men's health and to make data-informed decisions about policies and programs to improve the health of men. Ultimately, the goal of the report card is to educate stakeholders in ways that facilitate the targeting of public and private health resources and highlight and support local and state-wide efforts to promote men's health.

This article focuses primarily on decisions and choices made in publishing the 2014 and 2017 versions of the TMHRC. The 2010 and 2012 report cards were almost identical in the data analysis and presentation, but in the meetings with the core partners and advisory panel team

from 2013 to the present, there were a number of issues that the TMHRC team grappled with in an effort to enhance further the reach, utility, and impact of the report card by considering alternative data analysis, data presentation, and dissemination strategies. Consequently, the political and contextual factors identified by TMHRC stakeholders informed how the TMHRC team presented and framed the data. Specifically, based on conversations with various stakeholders, the TMHRC team learned that it was important for the report card to frame the data in such a way that the report card could not be used to affect the state economy adversely, seen as trying to take resources away from women's health initiatives, or foster hopelessness in stakeholders interested in investing time and resources in promoting men's health. A key aspect of the TMHRC is that the data are only one aspect of the report card. It is important to not only present the data that describe the state of men's health but also note and highlight what is being done and what can be done to improve men's health. How the TMHRC team continues to identify men's health needs and address men's poor health outcomes lies in their ability to engage, listen to, trust, learn from, and be responsive to a large and diverse group of institutional partners and advisory panel members.

This article begins with a discussion of the origins and foundations of the TMHRC, including a description of the sources of the data included in the report card. Following this section, there is a discussion of the choices made about how to analyze, present, and disseminate the data in collaboration with the TMHRC advisory panel members to facilitate better the stakeholders making use of the data. The TMHRC hinges on the ability of the team to package and disseminate data that are collected and made readily available by state and territorial health departments. Finally, an overview of the strategy is used to engage and mobilize the community and disseminate the findings of the report card.

Origins and Foundations of the TMHRC

The idea of a population-specific state report card was brought to Tennessee and Vanderbilt University in 2006 by a women's health expert who was dually trained in obstetrics and gynecology and epidemiology. Modeled after what was done in North Carolina, she led the first Tennessee Women's Health Report Card in 2009. While the idea of a report often connoted something long, dense, and intimidating, the idea of presenting grades in a report card was familiar to Americans. Report cards—when compared with a report—tended to suggest that the document would present summary data in a brief, easily digestible format. In presenting the idea and findings to administrators in the medical center, one of them noted

that there was a need for a similar men's health report card. Thus, the Vanderbilt University Medical Center administrators and leaders of the Tennessee Women's Health Report Card identified and recruited an expert in urologic oncology, health services research, and health policy to lead the first TMHRC in 2010 and he also led the initiative in 2012. Because of the success of the women's health report cards, the 2010 and 2012 men's health report cards followed a similar structure and format as the women's health report cards, including creating a similar advisory panel.

The women's health report cards were released in odd years and the men's health report card were released in even years to avoid competition between the two. However in 2013, given improvements in educating the public, policy makers, and other stakeholders about women's health in the state and the nation, the Tennessee Women's Health Report Card team decided that there was no longer a need for the Tennessee women's health report card and chose not to continue publication. In 2014, leadership of the TMHRC was passed to a scholar in health promotion, men's health, and health equity, and he led the report cards in 2014 and 2017.

Core Partners and Advisory Panel Team

The idea of having a core partnership team and an advisory panel came from the Tennessee Women's Health Report Card team and was adopted by the TMHRC team. The chair of the report card teams has been a member of the faculty of Vanderbilt University or Vanderbilt University Medical Center. The TMHRC chair facilitated partnerships with the Tennessee Department of Health and Meharry Medical College and organized the TMHRC Advisory Panel. The advisory panel included other universities across the state (e.g., Belmont University, East Tennessee State University, University of Memphis, University of Tennessee, University of Tennessee Health Science Center), health-care service organizations (e.g., Baptist Memorial Health Care, Nashville Cares, Veterans Affairs' Tennessee Valley Healthcare System, Vanderbilt-Ingram Cancer Center), nonprofit organizations (e.g., National Health Care for the Homeless Council, Nashville Cares, Rural Health Services Consortium), and other advocacy organizations (e.g., Tennessee Academy of Family Physicians, Tennessee Cancer Coalition, Tennessee Men's Health Network), and it has continued to include representatives of these types of organizations in more recent iterations of the TMHRC. The team also included a graphic designer and staff to help research other data, conceptual models, and resources to include in the TMHRC, and staff to help organize meetings and events with the advisory panel members or other stakeholders.

Table 1. Sources of Data Included in the Tennessee Men's Health Report Card (From 2014 Report Card).

What are the sources of data for the Tennessee Men's Health Report Card?

- Death certificate data are provided by the Tennessee Department of Health. Deaths are reported as rates per 100,000 men.
 - New cases of infectious diseases are required to be reported to the Tennessee Department of Health from certified medical testing laboratories. These data are also reported as a rate per 100,000 men.
 - Health use and health behavior indicator data are from the Behavioral Risk Factor Surveillance Survey (BRFSS). These data are reported as a percentage of all men sampled. BRFSS is a random land-line phone and cell-phone based survey of Tennessee men and women ages 18 and older. It is conducted annually by the Tennessee Department of Health in collaboration with the U.S. Centers for Disease Control and Prevention (CDC). Changes in the sampling methods used to collect BRFSS data in 2011 mean that we cannot analyze trends for the BRFSS data.
 - Social issues that impact men's health data are estimated from the American Community Survey, conducted annually by the U.S. Census Bureau.
 - Population profile data used in the overview, to calculate rates, and to age-adjust data, are provided by the Tennessee Department of Health and based on data from the University of Tennessee, Center for Business and Economic Research.
-

Data Sources

When possible, it is important to try to put men's health behaviors, practices, and outcomes in their appropriate social, economic, and temporal context (Evans, Frank, Oliffe, & Gregory, 2011; D.M. Griffith, 2016). This section describes the data available for the TMHRC and the data used to contextualize these state data. Data for the TMHRC were collected by the Tennessee Department of Health, the Centers for Disease Control and Prevention, and the U.S. Census Bureau. The Tennessee Department of Health provided the most recent health indicator data available from three distinct state sources: (a) death certificate data: deaths were reported as rates per 100,000 men; (b) report rates of new cases of infectious diseases from the Tennessee Department of Health that are certified by medical testing laboratories, and (c) results of the annual Behavioral Risk Factor Surveillance Survey (BRFSS): a random sample, phone-based survey of Tennessee men and women ages 18 years and older conducted by the Tennessee Department of Health in collaboration with the U.S. Centers for Disease Control and Prevention (see Table 1). Approval by an institutional review board was not sought or obtained because the report only included deidentified secondary data and the current article summarized how these data were presented.

Health behaviors and health service utilization. BRFSS is designed to provide data on health behaviors and health services use by sex and race (e.g., Black vs. White and men vs. women) but not race by sex (e.g., for Black men, White men) or other factors of interest (e.g., age, rural/ urban, region of the state). The TMHRC data derived from the BRFSS only included data for all men in Tennessee. Where possible, the report card provides data from the most recent year available (usually the BRFSS data are 2 years old by the time of publication).

TMHRC presents data trends in men's health behaviors and men's health service utilization over periods of 5–10 years when possible, but this was not possible in 2017. There were changes in data collection and data sampling strategies (e.g., BRFSS changed their sampling strategy from just using landlines to including cell phones in 2011) that limited the ability to acquire data on changes in rates of health behaviors or health services utilization over time (see <https://www.cdc.gov/surveillancepractice/reports/brfss/brfss.html> or https://www.cdc.gov/surveillancepractice/reports/brfss/brfss_faqs.html#compared for more information). The 2017 report card provided data that compared the percentage of men who met a certain criterion or engaged in a particular behavior in 2012 and in 2015 in comparison with the Healthy People 2020 goal.

Social determinants of health, demographic trends, and economic factors. The TMHRC also includes data on social determinants of health from the U.S. Census Bureau's American Community Survey, such as mean earnings, high school graduation rates (or earned a General Education Diploma) by age 25 years, and incomes below federal poverty guidelines. The report card also includes population profile data from the Tennessee Department of Health that are provided by the University of Tennessee Center for Business and Economic Research on population size, age, race, and ethnicity that allow the data to be age adjusted where appropriate. Finally, the TMHRC team used the Centers for Disease Control and Prevention's National Center for Health Statistics *Mortality in the United States Report* to obtain data on life expectancy at birth in Tennessee and in the US by race and sex. Presenting the data in the context of social determinants of health, demographic profiles, and life expectancy of women in Tennessee as well as men and women in the US overall helps contextualize men's health in the state.

Data Analysis Decisions—How Should We Consider Race, Ethnicity, Age, and Geography?

Race and Ethnicity

Data included in the TMHRC were reported for all men in Tennessee 18 years of age and older. Where possible, the data were also stratified by race (Black or White) and age, but not consistently by ethnicity (Hispanic/Latino or non-Hispanic/Latino). Race and ethnicity are sociopolitical constructs, not anthropologically or scientifically based categories, which are useful when the aims of research are to understand how stratification by race influences health (Ford & Harawa, 2010). Within national boundaries, ethnic groups are subcultures maintaining certain patterns of behaviors, beliefs, and values that distinguish them from other cultural groups (Marger, 1997). While the sampling and data weighting strategies used to create representative samples within the state are designed to aggregate data to report Black–White differences in mortality, the sampling and weighting strategies used by the federal and state governments do not as consistently design their data collection strategies with the intention of reporting data for other racial groups (i.e., Asian; Native Hawaiian or other Pacific Islander; American Indian or Alaska Native) or the two recognized ethnic groups (i.e., Hispanic or Latino and not Hispanic or Latino; U.S. Office of Management and Budget, 1977). Even rarer are sampling strategies that present data for men by race or ethnicity within a state.

Data on Hispanic men were included in the 2014 report, but not in the 2017 report card. In concert with the biostatisticians from the state health department who provided the data and conducted the analyses, the TMHRC team agreed that the small sample size could potentially lead to inaccurate conclusions and recommendations. Because providing data on Hispanic men and by ethnicity is important to providing an accurate picture of the health of the state, the TMHRC advisory panel agreed to identify ways to include Hispanic men in future efforts to understand and improve men’s health in the state.

Age

In each of the report cards, it was important to describe the leading causes of death by age. Age is not just about chronology; there are psychosocial and physiological factors that accompany changes in age that need to be acknowledged in the presentation of men’s health. Role strains and stressors are rooted in men’s efforts to fulfill salient roles and responsibilities that change as men age (Bowman, 1989; Griffith, Gunter, & Allen, 2011;

Watkins, 2012). Each phase of life can be distinguished, in part, by men’s efforts to fulfill salient role performance goals: educational and professional preparation in the preadult and early adult years (approximately 18–34 years; Cunningham & White, 2019); being a provider for self and family in the middle-adult years (approximately 35–54 years; Griffith, Jaeger, Sherman, & Moore, 2019); and dignified aging as men move through older adulthood (approximately 55 years and older; Bowman, 1989; Erickson, 1980; Mitchell, Allen, & Perry, 2019). What tends to distinguish phases of life are age, maturity, developmental milestones (e.g., completing high school and/or college), labor force participation, role, responsibility, and family formation choices (i.e., having children or getting married; Gordon-Larsen, Nelson, & Popkin, 2004; Griffith et al., 2019; Rindfuss, 1991). The TMHRC reports leading cause of death data among men by ages 18–34 years, 35–54 years, and 55 years and older (see Table 2).

In addition to these psychosocial changes, there are notable physiological changes that vary by age or phase of life too. Men’s efforts to achieve success in the form of sexual prowess, risk taking, and substance abuse also may increase their risk of morbidity and mortality (Whitehead, 1997). While many of these demonstrations of strength and fearlessness are often celebrated among males particularly during young adulthood (Evans et al., 2011), depressive symptoms, suicidal ideation, heavy drinking, and marijuana use have been characterized as indicators of despair among adults in their 20s and 30s (Courtenay, 2000; Courtenay, 2011; Gaydosh et al., 2019; Griffith & Thorpe, 2016). These behaviors are not only consistently higher in men—or associated with health-harming behaviors that tend to occur at higher rates in men—but may also be more common in these earlier phases of life in part because they are associated with incomplete and uneven brain development (Cunningham & White, 2019). Men’s testosterone levels peak in adolescence and early adulthood, and the physical declines in men’s metabolism and testosterone that start when men are young adults can decrease to a point in their 40s where men can start having lower sex drive, erectile dysfunction (weaker erections), loss of muscle mass, increased fat accumulation, low bone mass, fatigue, sleep problems, and depression. The health of men who are 55 years and older is shaped by a range of factors including their access to health-promoting resources and capabilities, utilization of timely health-care services, high-risk behaviors, and support from both social networks and the health-care system. Chronic diseases such as heart disease, diabetes, and cancer tend to increase as men age, and approximately 83% of men aged 65 years or more have been diagnosed with at least one chronic disease (Mitchell et al., 2019).

Table 2. Leading Causes of Death by Age Group (Phase of Life; From 2017 Report Card).

Top 5 causes of death for Tennessee men by age group in 2015					
Age 18–34		Ages 35–54		Age 55+	
Cause	Percent	Cause	Percent	Cause	Percent
Accidents (minus motor vehicle)	21.6%	Diseases of Heart (Heart Disease)	22.7%	Diseases of Heart (Heart Disease)	26.3%
Suicide	16.9%	Malignant Neoplasms (Cancer)	16.5%	Malignant Neoplasms (Cancer)	25.1%
Motor Vehicle Accidents	16.3%	Accidents (Minus Motor Vehicle)	12.7%	Chronic Lower Respiratory Disease	6.8%
Assault (Homicide)	14.2%	Suicide	6.9%	Cerebrovascular Disease	4.7%
Diseases of Heart (Heart Disease)	7.1%	Motor Vehicle Accidents	4.8%	Alzheimer's Disease	3.4%
Total Number of Deaths in This Age Group—1,293		Total Number of Deaths in This Age Group—4,245		Total Number of Deaths in This Age Group—27,537	

Note. From Tennessee Department of Health, Division of Policy, Planning and Assessment Death Statistical System, 2015. Nashville, TN.

Geography

In addition to considering age, race, and ethnicity, there was interest in data that could help to identify potential geographic differences among men in Tennessee. There are a number of reports on the health of cities and counties (e.g., Robert Wood Johnson Foundation county health rankings), but none of them reports data by gender. Given the increased awareness of the unique health issues facing rural men (Erwin, 2017; Hiebert, Leipert, & Regan, 2019; Meit, Heffernan, Tanenbaum, & Hoffmann, 2017) and the mobilization of advocates for rural health in the state, it was important to identify ways to present the data that may highlight the unique patterns found in the state by rurality. Despite this interest, there were concerns that highlighting the poor health of specific counties or other explicit areas represented by elected officials could hurt the economy of the state and those areas. In other words, the TMHRC team was sensitive to the idea that if the report card presented a very negative health profile of specific geographies it could do harm to the economic health and well-being of the areas and populations they sought to help.

Presenting the data in ways that highlighted geographic differences was important to the highlighting of populations of men in the state who needed attention. Thus, in the 2014 and 2017 TMHRCs, the TMHRC team presented data in two different ways that highlighted the importance of place or geography. For example, the 2014 report card presented the two leading causes of death for men—heart disease and cancer—by Tennessee Department of Health region (see Figure 1). This allowed the TMHRC team to highlight differences by geography and rurality across the state in ways that they hoped

would encourage politicians and advocacy organizations to work with the Tennessee Department of Health and its regional offices to collaborate to understand better and determine optimally how to improve the health of men in those locales.

In 2017, the TMHRC team elected to present life expectancy and leading causes of death data by the three grand divisions of the state. These three regions of the state—east, west, and middle—are intuitive and familiar to Tennesseans. Each region has a unique culture, history, and context, and each region includes one of the three largest cities in the state (i.e., Knoxville in the east, Memphis in the west, and Nashville in the middle). Presenting life expectancy data for men and women in each region and the five leading causes of death within each region overall and for each age group (18–34, 35–54, 55+) allowed stakeholders to see the data in ways that highlighted key questions about why there were such stark differences within region (by age and gender) and across the state (within each age group; see Figure 2).

Presentation of Data

The report card includes statistically significant changes in trends over time, presents racial, ethnic, age, and geographic disparities among men, highlights connections to regional and statewide public health initiatives, suggests services to address key issues (e.g., suicide hotline), and offers priorities for improving men's health in Tennessee. While all the data used in the report card are publicly available, the format and location of state data on men's health was not optimally accessible for use by advocacy groups and local organizations. The authors of the report card aimed to

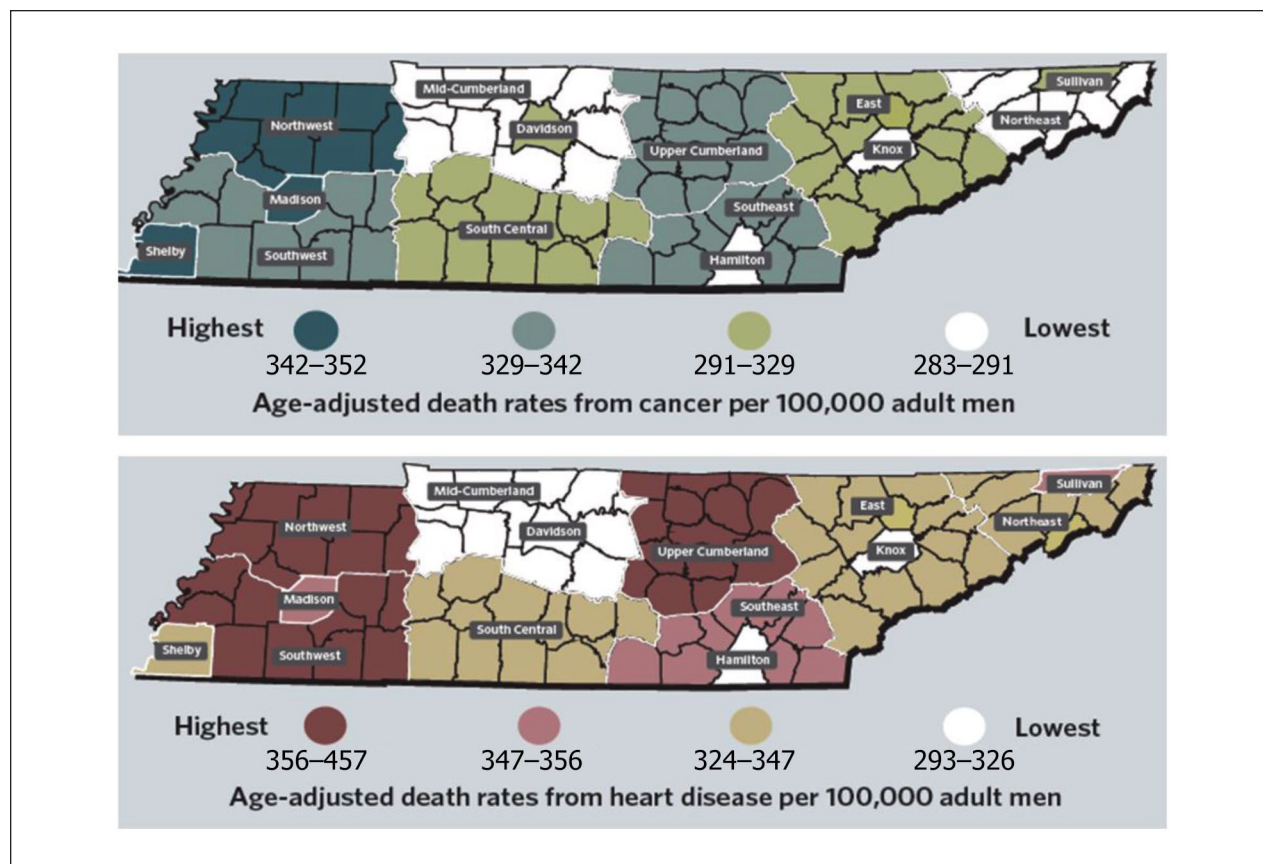


Figure 1. Illustration of geographic differences in patterns of leading causes of death (cancer and heart disease) Tennessee (from 2014 report card).

address this gap by reconfiguring the presentation of state data.

The Pros and Cons of Using Healthy People 2020 as a Reference Point

One of the more challenging aspects of presenting data for diverse stakeholders is providing a context that helps them understand the importance or significance of the magnitude of differences. The TMHRC team had to identify reference points (Keppel et al., 2005) from which to measure and help interpret data on men's health in Tennessee. The TMHRC included two primary reference points: women and Healthy People 2020 objectives. In the context of the TMHRC, it was important to add life expectancy at birth to help put men's health in the context of the state and nation and in the context of women's health. Much of the epidemiologic case for focusing on men's health is because the life expectancy at birth for men is shorter than that of women in the United States (Griffith et al., 2019; Meryn & Shabsigh, 2009). In the United States, the sex difference in life expectancy at

birth emerged during the 20th century, while differences in life expectancy by race existed prior to 1900 and have persisted since this time (Griffith, Bruce, & Thorpe, 2019; Griffith & Thorpe, 2016; National Center for Health Statistics, 2018; Thorpe Jr et al., 2016). Life expectancy at birth data are an important overall proxy of population health because all of the factors are considered in how long a person of a particular group can expect to live in a particular geographic context (Adler, 2006; Bird & Rieker, 1999; Bird & Rieker, 2008). The goal of providing these data as some of the first data presented in the report card is to encourage readers and stakeholders to ask questions about why these differences exist and what can be done to close these gaps within the context of the state and the nation.

In the TMHRC, state data are presented in comparison with Healthy People 2020 objectives when available (US Department of Health Human Services, 2010). For almost five decades, the U.S. Department of Health and Human Services' Healthy People initiative has established a 10-year set of goals and objectives for monitoring and reporting on the health of the U.S. population (National

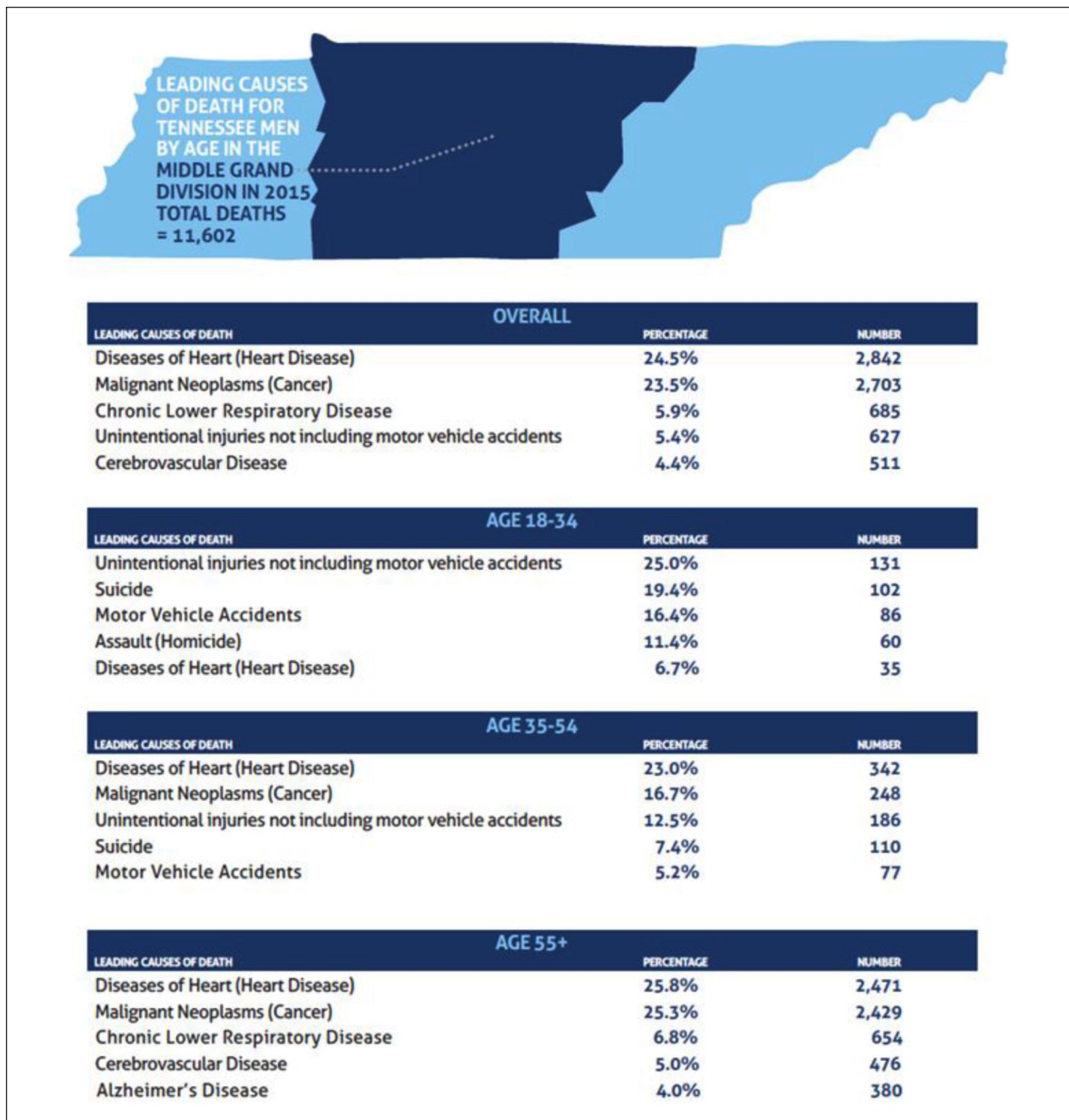


Figure 2. Regional differences in leading causes of death by age/phase of life in Tennessee (from 2017 report card).

Center for Health Statistics, 2016). The Healthy People 2020 objectives were selected as a point of comparison because it is a universally recognized benchmark in the United States. Alternative points of comparison were explored (e.g., comparing men in Tennessee to men in other southern states, comparing men in Tennessee to men in the state with the best outcomes in each topic area or measure, or comparing men in Tennessee to men in to

men in states bordering Tennessee), but there was no consensus, nor was there agreement on choosing another reference point by which to measure the health of men in Tennessee. Comparing men's health indicators to the Healthy People 2020 objectives, however, has presented some limitations and challenges. Porche et al. (2010) contends that "men's health issues are not accentuated to the extent that other gender-specific health issues are

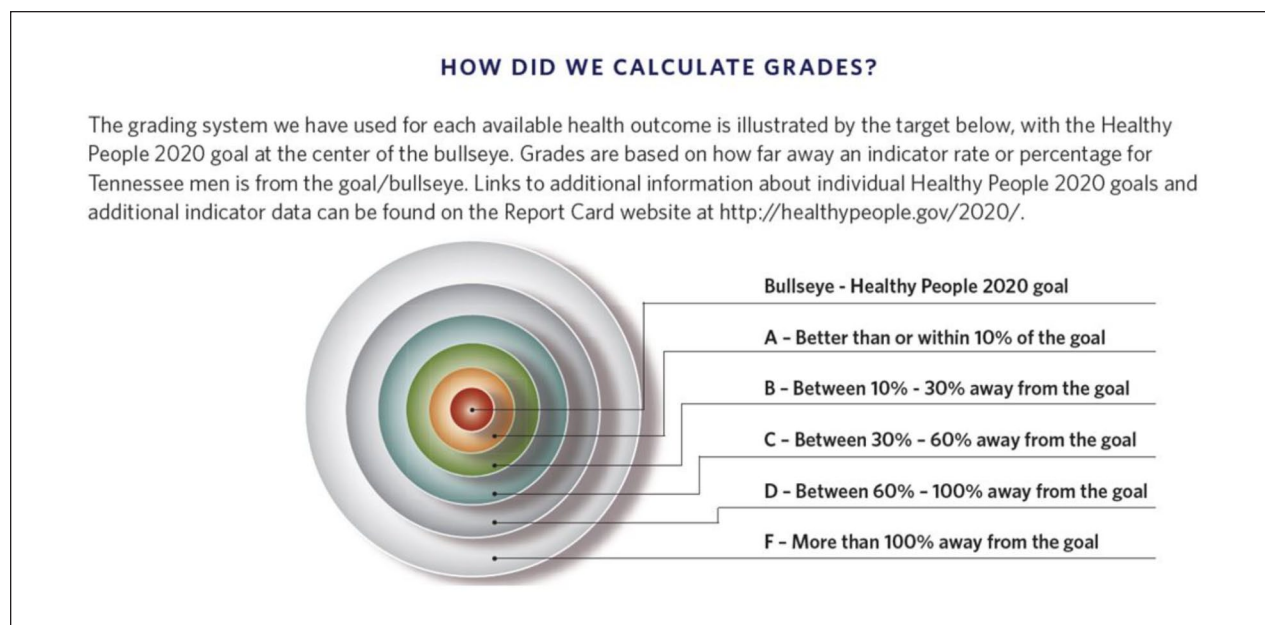


Figure 3. Example of the grading system used to compare men's health in Tennessee with Healthy People 2020 goals (from 2014 report card).

outlined and detailed as targeted national objectives" (p. 6). Previous reports compared state data points to Healthy People 2020 Objectives to determine grades based on the degree of discrepancy between the goal and the current reality for Tennessee men, but given the optimism or pessimism of some of the objectives, the significance of the discrepancies was not always intuitive.

To Grade or Not to Grade: How Do We Identify Health Issues Where Men Are Not Doing Well?

While comparing state data to those of the Healthy People 2020 objectives was helpful, simply presenting differences in percentages and rates is not always easy for people to understand. This is where the idea of a report card versus a report was most useful. Because report cards using an A-B-C-D-F grading system are ubiquitous in the United States, the originators of the report card decided to take the state data on men and compare it to the Healthy People 2020 goals and objectives using an A-B-C-D-F grading system with A representing outstanding achievement of health and F showing a clear failure to achieve Healthy People 2020 guidelines.

Regardless of the system, the goal of grading was to provide reference points for readers that were familiar and gave them a sense of the magnitude of the gap between the health outcomes for men in Tennessee and how much further they needed to go to reach the Healthy People 2020 goal. This proved very useful in providing

readers reference points for readers, but it created another issue. When using a standard scale of 10 percentage points for each grade from the reference point (A = 90+, B = 80–89, C = 70–79, D = 60–69, and F = 59 and below), most of the grades ended up being Ds and Fs, which indicated that men were faring poorly on those outcomes. The team recognized this and elected to curve the grades from the standard scale (A = <10% from the goal, B = 10%–30% from the goal, C = 30%–60% from the goal, D = 60%–100% from the goal, and F = 100+% from the goal) in an effort to identify areas where men were doing well or at least not as poorly as suggesting that they were failing (see Figure 3). Even with this more generous scale, most of the grades were poor in the 2010, 2012, and 2014 versions of the TMHRC. Thus, one of the few messages that readers received from reviewing the report was how awful men's health in Tennessee was. Though it was useful to highlight the urgent need to pay more attention to men's health by reporting these data, many on the advisory panel and in the media read this as bleak and hopeless. Others found that the curving of the grades undermined the issues documented. For example, using data from the BRFSS in Tennessee, the 2014 report card noted that 32.6% of men reported a body mass index in the obese range (>30). Because this was within 10% of the Healthy People 2020 goal of 30.5%, Tennessee men received a grade of "A." To give men and policy makers the message that having almost one third of men self-report being obese was good was viewed as sending the wrong message. In sum, the grades helped readers by

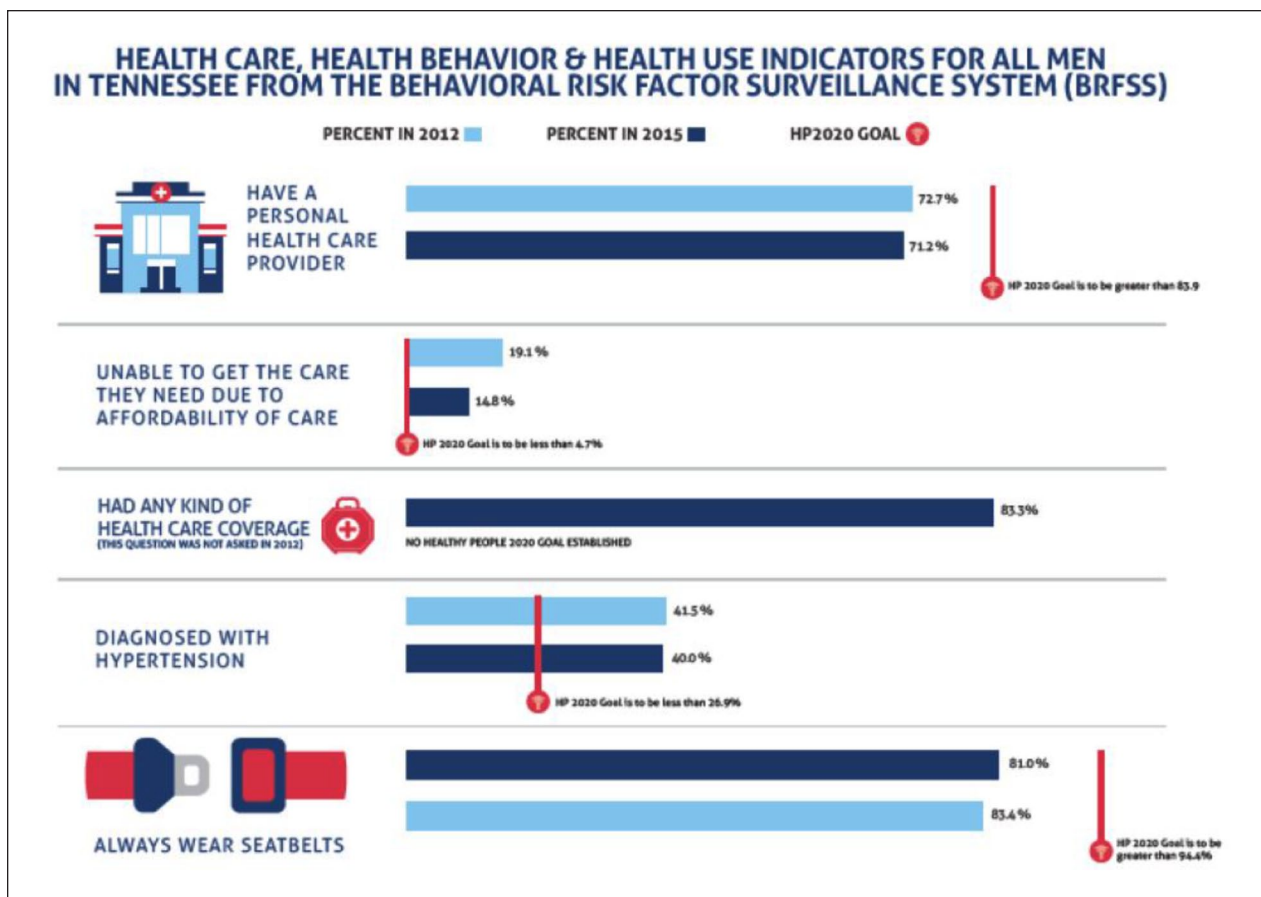


Figure 4. Illustration comparing health indicators to Healthy People 2020 goals (from 2017 report card).

giving them reference points for the data, but it may have unintentionally misinformed readers. One of the biggest limitations of using Healthy People 2020 as a goal was that stakeholders may incorrectly assume that achieving those goals was equivalent to ideal health. Approximating or achieving these goals are useful but—as with the prior example of obesity—can skew a sense of what population health goals should be and what individuals should strive to achieve. Thus, it is important to create reference points or benchmarks that balance what is biologically and physiologically possible within the allocated time-frame and highlight where resources and attention should

be concentrated to address important health conditions or health outcomes.

In the 2017 TMHRC, the leadership team and advisory panel agreed to do away with using grades as a way to compare Tennessee data to Healthy People 2020 goals. The team elected to simply use bar charts that showed where men in Tennessee were in 2012 (the data that were reported in the 2014 report card) and in 2015 (the most recent data available for the 2017 report card) relative to the Healthy People 2020 goal (and if the aim was to be greater or less than the Healthy People 2020 goal). This simpler visual allowed readers to see if there was any progress over the



Figure 5. Strategy used to communicate about trends in men's health outcomes over time (from 2017 report card).

3-year period and how men in the state were faring relative to the national reference point (see Figure 4).

Similarly, rather than only presenting leading cause of death data relative to the Healthy People 2020 benchmarks, the 2017 TMHRC decided to additionally present 10-year trends in rates of leading causes of death for men overall, for White men, and for Black men. The 2017 TMHRC team created infographics that used a “Worse—Same—Better” format that highlighted where health deteriorated and where it improved (see Figure 4). These did not include any comparison to the Healthy People 2020 reference points because the data comparing the leading causes of death among men to the Healthy People 2020 goals appeared elsewhere in the TMHRC. Nevertheless, it was important to highlight these 10-year trends to help stakeholders see changes that were negative, nonexistent, or positive.

Though the TMHRC team settled on this “Worse—Same—Better” format, it is instructive to note some of the options the team considered but decided against (see Figure 5). Initially, they planned to use a speedometer, thermometer, or stoplight, but when those options were presented to the TMHRC advisory panel, one of the members noted that it was unclear if the green (good) would mean that the goal has been achieved or that there is a need for action. It was essential for the TMHRC team to work with their advisory panel and other stakeholders to make sure that the data would have the best chance to be interpreted as intended.

Inability to Connect the Data Within the Report Card

Often definitions of men’s health and approaches to men’s health promotion decontextualize men’s health and do not consider how social determinants affect men’s health behaviors, men’s health practices, and, ultimately, men’s health outcomes (Elder & Griffith, 2016; Evans et al., 2011). It is important that the report card include data on social determinants of health, health behaviors, infectious diseases, and causes of death; however, it could be even more useful to stakeholders and policy makers if there were ways to present the data such that people could see how these factors relate to one another. To help readers understand the relationship between health outcomes, health behaviors, and the contexts of behavior, the TMHRC team evaluated adaptations of existing models of factors that are estimated to influence mortality (McGinnis, Williams-Russo, & Knickman, 2002) and models that portray determinants of health as summing to 100% (e.g., the model used in the Robert Wood Johnson Foundation County Health rankings). The TMHRC team elected not to include either type of model, however, because both of these types of models

are conceptually flawed and would lead readers to misinterpret the data and misconstrue relationships among determinants of health. This could lead stakeholders and policy makers to propose, advocate for, and potentially adopt policies that are conceptually flawed but consistent with the model (Krieger, 2017). The sum of contextual factors, health behaviors (including behaviors associated with health care), and health outcomes cannot sum to 100% because they are not mutually exclusive determinants of health (Krieger, 2017). In addition, presenting the data used in the TMHRC as though the data sources could accurately be combined in this way would also be inaccurate and lead readers to draw inaccurate conclusions.

What Can be Done to Improve Men’s Health?

The TMHRC serves at least two purposes: First, it offers a benchmark that describes the state of men’s health at a specific point in time, and second, the TMHRC is a road map that gives citizens and policy makers ideas and suggestions about what can be done to improve men’s health. The 2014 and 2017 TMHRCs explicitly offered suggestions to improve men’s health, but the 2010 and 2012 versions of the report card did not. In 2014, the report card included a section entitled “Potential Strategies for Improving Men’s Health in Tennessee,” which included a bulleted list of recommendations and strategies. For example, the TMHRC suggested that the state develop a specific plan to improve men’s health and allot more resources to issues that were particularly problematic in the state such as suicide, homicide, drug-related overdoses, and sexually transmitted infections. The list noted that education is a determinant of health and state investments in promoting educational attainment could have important positive health benefits.

In 2017, the TMHRC included an adaptation of former director of the U.S. Centers for Disease Control and Prevention Thomas Frieden’s Health Impact Pyramid (Frieden, 2010). This figure entitled “What we can do to improve men’s health in Tennessee” incorporated metrics captured by the data sources in the report card and organized them in a way that highlighted and described different strategies that could be implemented at different levels of a social ecological framework (McLeroy, Bibeau, Steckler, & Glanz, 1988; see Figure 6). Consistent with the Frieden (2010) model, the figure included arrows highlighting what strategies are likely to have the least and most impact on improving the health of the population and what strategies are likely to require the least and most individual effort. This was an important tool because it represented the need for individual responsibility in addition to efforts to address contextual factors and social determinants that facilitate agency and health behaviors.

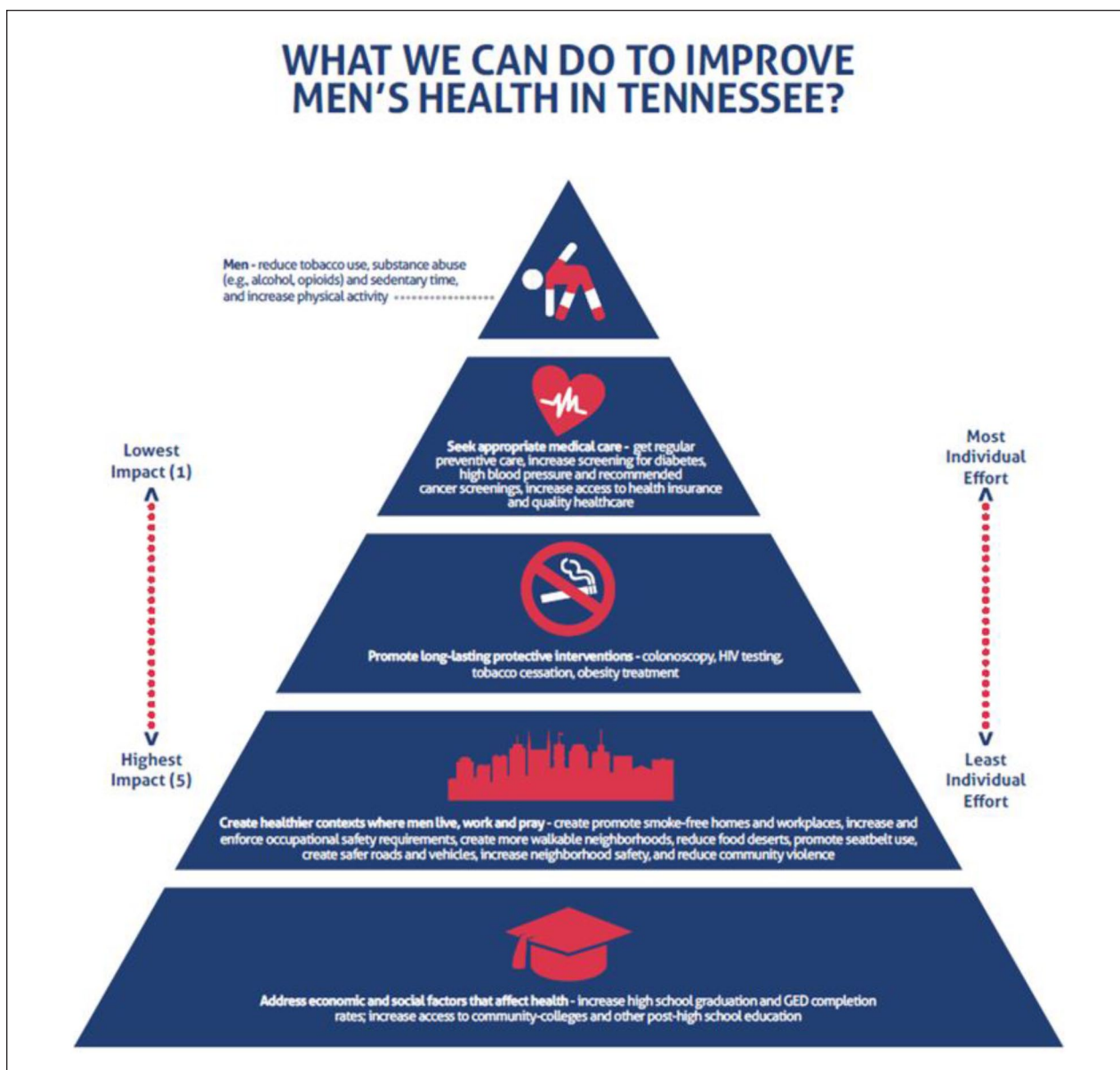


Figure 6. Illustration of how to communicate a range of intervention options to improve men's health in Tennessee (from 2017 report card).

Source: This figure was adapted from Frieden, T.R. (2010). A framework for public health action: The health impact pyramid. *American journal of public health*, 100(4), 590-595.

The hope was that this approach might include some place for all, regardless of political perspective or affiliation, to advocate for and support some type of strategy to improve men's health.

Dissemination and Engagement

In 2010 and 2012, the report card was primarily disseminated through printing paper copies, creating a press release of the main findings, and holding a press conference at

Vanderbilt University or in Nashville. These dissemination strategies tended to feature Vanderbilt University Medical Center faculty, Meharry Medical College faculty, local celebrities (e.g., the Vanderbilt University head football coach), and a representative from the Tennessee Department of Health. Copies of the report card were visible in many parts of the Vanderbilt University Medical Center, were available at local events by request, and often were distributed to partner organizations for them to disseminate in their organizations and local areas. Despite the success of this

strategy, in 2013 TMHRC leadership and advisory panel members argued for a broader dissemination strategy.

The dissemination plan for the 2014 TMHRC expanded on the prior strategies to try and increase the sense of ownership and engagement with stakeholders and experts across the state. In addition to printing copies of the report card, creating a press release, and hosting a press conference in Nashville, in 2014 these strategies were augmented with an electronic version of the report card and four other launch events in other areas of the state, and an explicit effort was made to engage and promote expertise of advisory panel members and other key stakeholders across the state, particularly the Tennessee Men's Health Network. This organization was instrumental in identifying partners that could be featured and pin-pointing events focused on men's health that the TMHRC team could participate in or complement.

For each of the TMHRC launch events, the TMHRC team provided a standard set of PowerPoint slides that included an overview of the findings of the report card. For example, the Tennessee Men's Health Network team identified a Church Health Center Wellness event in Memphis, Tennessee, that regularly engaged hundreds of African American men in this city and region of the state. In this city and region of the state, chronic disease (including HIV/AIDS) and homicide rates were particularly high among African American men. These patterns were important to note and discuss how unique men's health patterns, determinants, and priorities were in the region and how those were similar to or different from the picture of men's health in the overall state. In this region of the state, it was particularly important to explore and discuss local and regional contextual factors that may help to explain these patterns and to identify strategies and initiatives that are currently working in the region. While it did not include faculty from Vanderbilt University, Meharry Medical College, or the Tennessee Department of Health, the TMHRC report card launch event featured local physicians, advocates, pastors, and other stakeholders, along with the executive director (and other staff) of the Tennessee Men's Health Network who led and organized this event.

There were similar events on the other side of the state that featured a very different demographic—rural White men—and some of the unique health issues that were common in that part of the state (e.g., prescription and nonprescription drug abuse). The event in Upper East Tennessee featured physicians, faculty at East Tennessee State University, and other stakeholders who could talk about the patterns and determinants of men's health in that local area. In total, there were five launch events during June—Men's Health Month—that presented the TMHRC findings and overall picture of men's health in the state, but these events also spotlighted local experts and issues that leveraged the state initiative to help local

stakeholders and advocates highlight men's health issues that were most relevant to their communities.

In 2017, the TMHRC dissemination strategy included all of the 2014 dissemination activities and then added a 5-minute, freely accessible video for stakeholders across the state to use (see <https://www.vanderbilt.edu/crmh/tmhrc/>). The video summarized the main findings of the report card and highlighted local efforts to improve men's health across the state. The video also featured diverse men from across the state discussing reasons men do not prioritize their health, go to the doctor, or engage in other healthy behaviors that were not explicitly captured by the available data. The men and events in the video helped to humanize the data in ways that viewers may resonate with even if they do not fully understand the data. This may be particularly important for policy makers and policy advocates who would like to be able to give examples of real people who are affected by policies and programs funded by policies. Again, the Tennessee Men's Health Network was instrumental in identifying these men and events across the state and the executive director of the Tennessee Men's Health Network was featured in the video. By scaling up dissemination strategies, the TMHRC became a platform for local efforts to be an anchor for sustainable men's health promotion campaigns and advocacy across the state.

Conclusion

Despite calls for more and better data on men's health in the pursuit of men's health equity, few U.S. states have a coordinated strategy for understanding men's health or men's health disparities (Griffith et al., 2019). There are a number of factors to consider in identifying and presenting data from various sources in ways that are most accessible and useful to the range of stakeholders who need to be informed by these data. As of 2017, when the most recent report card was released, data were not in an ideal format or location to help stakeholders and policy makers make the most informed decisions about policy or programmatic strategies to improve men's health. It is critical for other states and the nation to implement a strategy for regularly monitoring the health of men in ways that would educate policy makers and other stakeholders' decisions about programs, policies, and allocation of resources. Data need to be sampled and presented in ways that allow not only to examine factors by gender but also to look at socially meaningful subgroups of men that lead to modifiable strategies to improve men's health. Future state and federal data on men's health should be available by gender identity, sexual orientation, disability status, military veteran experience, education, income, social class, and other factors that have important implications for health.

The TMHRC is one of the few efforts, if not the only one, to regularly publish how men's health is monitored in the state, and this article presents lessons learned from the first four TMHRCs. In addition to presenting determinants of health and epidemiologic patterns of health behavior, disease morbidity, and mortality across the state, the TMHRC is an opportunity to raise awareness of the heterogeneity of men's health issues and examples of what can and are being done to improve men's health. The TMHRC has grown in scope and impact from engaging more actively with partners like the Tennessee Men's Health Network and listening to and supporting the efforts of advisory panel members and stakeholders from across the state. In sum, it is not enough simply to publish a report; data are an anchor to health promotion initiatives that engage, collaborate with, inform and guide initiatives, programs and policies to improve men's health. The TMHRC is an important model for other states and a blueprint for a national men's health report.

Acknowledgments

We would like to thank Dr. Katherine Hartmann for bringing the idea of a report card to Tennessee and Dr. David Penson for leading the 2010 and 2012 report cards. We would like to thank the members of the Tennessee Men's Health Report Card advisory panels and development committees. We also would like to thank the staff and students in the Institute for Research on Men's Health and the Center for Research on Men's Health at Vanderbilt University for their work on previous iterations of the report card. Finally, we would like to thank Prof Kevin P Balanda from the Institute of Public Health in Ireland, Mr. Colin Fowler from the Men's Health Forum in Ireland, and Dr. Noel Richardson from the Institute of Technology, Carlow for their review and comments on earlier versions of this manuscript.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Derek M. Griffith  <https://orcid.org/0000-0003-0018-9176>

References

- Adler, N. (2006). Overview of health disparities. In F. M. G. E. Thompson, & M. B. Williams (Eds.), *Examining the Health Disparities Research Plan of the National Institutes of Health: Unfinished Business* (pp. 121-174). Washington, D.C.: The National Academies Press.
- Australian Men's Health Forum. (2019). *Men's Health Report Card 2019: Rating the state of male health in Australia*. Retrieved from
- Bilal, U., & Diez-Roux, A. V. (2018). Troubling Trends in Health Disparities. *New England Journal of Medicine*, 378(16), 1557-1558. doi:10.1056/NEJMc1800328
- Bird, C. E., & Rieker, P. P. (1999). Gender matters: an integrated model for understanding men's and women's health. *Social Science & Medicine*, 48(6), 745-755.
- Bird, C. E., & Rieker, P. P. (2008). *Gender and Health: The Effects of Constrained Choices and Social Policies*. Cambridge, United Kingdom: Cambridge University Press.
- Bowman, P. J. (1989). Research perspectives on Black men: role strain and adaptation across the adult life cycle. In R. L. Jones (Ed.), *Black Adult Development and Aging* (pp. 117-150). Berkeley, CA: Cobb & Henry Publishers.
- Braveman, P. A. (2003). Monitoring equity in health and healthcare: a conceptual framework. *Journal of Health, Population and Nutrition*, 21(3), 181-192.
- Courtenay, W. H. (2000). Constructions of masculinity and their influence on men's well-being: A theory of gender and health. *Social Science and Medicine*, 50(10), 1385-1401.
- Courtenay, W. H. (2011). *Dying to be Men*. New York: Routledge.
- Cunningham, M., & White, A. (2019). Young adulthood and health disparities in African American males. In D.M. Griffith, M. A. Bruce, & R. J. Thorpe, Jr. (Eds.), *Men's Health Equity: A Handbook* (1st ed.). New York, NY: Routledge.
- Elder, K., & Griffith, D. M. (2016). Men's Health: Beyond Masculinity. *American Journal of Public Health*, 106(7), 1157-1157.
- Erickson, E. H. (1980). *Identity and the Life Cycle*. New York: Norton.
- Erwin, P. C. (2017). Despair in the American Heartland? A Focus on Rural Health. *American Journal of Public Health*, 107(10), 1533-1534.
- Esmailzade, H., Mafimoradi, S., Mirbahaeddin, E., Rostamigooran, N., & Farshadfar, F. (2016). *Devising a National Men's Health Policy Document: The Current Challenges to Men's Health in Iran*.
- Evans, J., Frank, B., Oliffe, J. L., & Gregory, D. (2011). Health, Illness, Men and Masculinities (HIMM): A theoretical framework for understanding men and their health. *Journal of Men's Health*, 8(1), 7-15.
- Fadich, A., Llamas, R. P., Giorgianni, S., Stephenson, C., & Nwaiwu, C. (2018). 2016 Survey of State-Level Health Resources for Men and Boys: Identification of an Inadvertent and Remediabale Service and Health Disparity. *American Journal of Men's Health*, 12(4), 1131-1137.
- Ford, C. L., & Harawa, N. T. (2010). A new conceptualization of ethnicity for social epidemiologic and health equity research. *Social Science and Medicine*, 71(2), 251-258.
- Frieden, T. R. (2010). A framework for public health action: the health impact pyramid. *American Journal of Public Health*, 100(4), 590-595.
- Gaydos, L., Hummer, R. A., Hargrove, T. W., Halpern, C. T., Hussey, J. M., Whitsel, E. A., . . . Harris, K. M. (2019). The depths of despair among US adults entering midlife. *American Journal of Public Health*, 109(5), 774-780.

- Goldenberg, S. L. (2014). Status of men's health in Canada. *Canadian Urological Association Journal*, 8(7-8 Suppl 5), S142.
- Gordon-Larsen, P., Nelson, M. C., & Popkin, B. M. (2004). Longitudinal physical activity and sedentary behavior trends: adolescence to adulthood. *American Journal of Preventive Medicine*, 27(4), 277-283.
- Griffith, D. M. (2012). An intersectional approach to men's health. *Journal of Men's Health*, 9(2), 106-112.
- Griffith, D. M. (2016). Biopsychosocial Approaches to Men's Health Disparities Research and Policy. *Behavioral Medicine*, 42(3), 211-215.
- Griffith, D. M. (2018). "Centering the margins": Moving equity to the center of men's health research. *American Journal of Men's Health*, 12(5), 1317-1327.
- Griffith, D. M., Bruce, M. A., Thorpe, J., & Roland J. (2019). *Men's Health Equity: A Handbook* (1st ed., pp. xx-xxiii). New York, NY: Routledge.
- Griffith, D. M., Bruce, M. A., & Thorpe, R. J., Jr. (2019). Introduction. D. M. Griffith, M. A. Bruce, & R. J. Thorpe, Jr. (Eds.), *Men's Health Equity: A Handbook* (1st ed.). New York, NY: Routledge.
- Griffith, D. M., Gunter, K., & Allen, J. O. (2011). Male gender role strain as a barrier to African American men's physical activity. *Health Education & Behavior*, 38(5), 482-491.
- Griffith, D. M., Jaeger, E. C., Sherman, L. D., & Moore, H. J. (2019). Middle-aged men's health: Patterns and causes of health inequities during a pivotal period in the life course. In D. M. Griffith, M. A. Bruce, & R. J. Thorpe, Jr (Eds.), *Men's Health Equity: A Handbook* (pp. 72-85). New York, NY: Routledge.
- Griffith, D. M., Moy, E., Reischl, T. M., & Dayton, E. (2006). National data for monitoring and evaluating racial and ethnic health inequities: Where do we go from here? *Health Education & Behavior*, 33(4), 470-487.
- Griffith, D. M., & Thorpe, J. R. Jr. (2016). Men's physical health and health behaviors. In Y. J. Wong, & S. R. Wester (Eds.), *APA Handbook on the Psychology of Men and Masculinities* (pp. 709-730). Washington, DC: American Psychological Association.
- Hiebert, B., Leipert, B., & Regan, S. (2019). Being a man in the countryside. In D. M. Griffith, M. A. Bruce, & R. J. Thorpe, Jr. (Eds.), *Men's Health Equity: A Handbook* (1st ed.). New York, NY: Routledge.
- Keppel, K., Pamuk, E., Lynch, J., Carter-Pokras, O., Kim, I., Mays, V., . . . Weissman, J. S. (2005). Methodological issues in measuring health disparities. *Vital and health statistics. Series 2, Data evaluation and methods research*(141), 1.
- Krieger, N. (2017). Health equity and the fallacy of treating causes of population health as if they sum to 100%. *American Journal of Public Health*, 107(4), 541-549.
- Leal, A. F., Figueiredo, W. S., & Nogueira-da-Silva, G. S. (2012). O percurso da Política Nacional de Atenção Integral à Saúde dos Homens (PNAISH), desde a sua formulação até sua implementação nos serviços públicos locais de atenção à saúde. *Ciência & Saúde Coletiva*, 17, 2607-2616.
- Marger, M. (1997). Immigrant business as a form of ethnic economic adaptation: The North American context. In W. W. Isajiw (Ed.), *Multiculturalism in North America and Europe: Comparative Perspectives on Interethnic Relations and Social Incorporation* (pp. 261-271). Toronto: Canadian Scholars' Press.
- McGinnis, M. J., Williams-Russo, P., & Knickman, J. R. (2002). The case for more active policy attention to health promotion. To succeed, we need leadership that informs and motivates, economic incentives that encourage change, and science that moves the frontiers. *Health Affairs (Millwood)*, 21(2), 78-93.
- McLeroy, K. R., Bibeau, D., Steckler, A., & Glanz, K. (1988). An ecological perspective on health promotion programs. *Health Education Quarterly*, 15(4), 351-377.
- Meit, M., Heffernan, M., Tanenbaum, E., & Hoffmann, T. (2017). Appalachian Diseases of Despair. *Report for the Appalachian Regional Commission. The Walsh Center for Rural Health Analysis*. Bethesda, MD: National Opinion Research Center (NORC) at the University of Chicago.
- Meryn, S., & Shabsigh, R. (2009). Men's health: past, present and future. *Journal of Men's Health*, 6(3), 143-146.
- Mitchell, J., Allen, J. O., & Perry, R. (2019). Men's Health In Later Life. In D.M. Griffith, M. A. Bruce, & R.J. Thorpe, Jr. (Eds.), *Men's Health Equity: A Handbook* (1st ed.). New York, NY: Routledge.
- National Center for Health Statistics. (2016). Healthy People 2020 midcourse review. *National Center for Health Statistics, Hyattsville, MD*.
- National Center for Health Statistics. (2018). National Vital Statistics Report. 67(5). https://www.cdc.gov/nchs/data/nvsr/nvsr67/nvsr67_05.pdf.
- Ng, C. J., Teo, C. H., Ho, C. C. K., Tan, W. P., & Tan, H. M. (2014). The status of men's health in Asia. *Preventive Medicine*, 67, 295-302.
- Porche, D. J. (2010). Healthy Men 2020. *American Journal of Men's Health*, 4(1), 5-6.
- Rindfuss, R. R. (1991). The young adult years: Diversity, structural change, and fertility. *Demography*, 28(4), 493-512.
- Rovito, M. J., Leonard, B., Llamas, R., Leone, J. E., Talton, W., Fadich, A., & Baker, P. (2017). A Call for Gender-Inclusive Global Health Strategies. *American Journal of Men's Health*, 11(6), 1804-1808.
- Rust, G., Satcher, D., Fryer, G. E., Levine, R. S., & Blumenthal, D. S. (2010). Triangulating on success: innovation, public health, medical care, and cause-specific US mortality rates over a half century (1950-2000). *American Journal of Public Health*, 100(S1), S95-S104.
- Thorpe Jr, R. J., Griffith, D. M., Gilbert, K. L., Elder, K., & Bruce, M. A. (2016). Men's Health in 2010s: What Is the Global Challenge? *Men's Health in Primary Care* (pp. 1-17): Springer.
- Thorpe, R., Richard, P., Bowie, J., Laveist, T., & Gaskin, D. (2013). Economic Burden of Men's Health Disparities in the United States. *International Journal of Men's Health*, 12(3), 195-212.
- Treadwell, H. M., & Young, A. M. W. (2013). The right US men's health report: High time to adjust priorities and attack disparities. *American Journal of Public Health*, 103(1), 5-6.

- US Department of Health Human Services, Office of Disease Prevention and Health Promotion. (2010). *Healthy People 2020*. Retrieved from <https://www.healthypeople.gov/>.
- US Office of Management and Budget. (1977). Directive No. 15 *Race and Ethnic Standards for Federal Statistics and Administrative Reporting*. Retrieved from <https://wonder.cdc.gov/wonder/help/populations/bridged-race/directive15.html>.
- Watkins, D. C. (2012). Depression Over the Adult Life Course for African American Men: Toward a Framework for Research and Practice. *American Journal of Men's Health*, 6(3), 194-210.
- White, A. K., De Sousa, B., De Visser, R., Hogston, R., Madsen, S., Makara, P., . . . Zatonski, W. (2011). *The State of Men's Health in Europe*: European Commission Brussels.
- Whitehead, T. L. (1997). Urban low-income African American men, HIV/AIDS, and gender identity. *Medical Anthropology Quarterly*, 11(4), 411-447.
- Williams, S., & Giorgianni, S. (2010). Survey of state public health department resources for men and boys: Identification of an inadvertent and remediatable service and health disparity. *American Journal of Men's Health*, 4(4), 344-352.
- Woolf, S. H., & Aron, L. (2013). *US Health in International Perspective: Shorter lives, poorer health*. Retrieved from <https://www.ncbi.nlm.nih.gov/books/NBK115854/>.
- World Health Organization. (2014). *Noncommunicable diseases country profiles 2014* (9241507500). Retrieved from Geneva, Switzerland: <http://apps.who.int/iris/bitstream/handle/10665/128038/9789241?sequence=1>