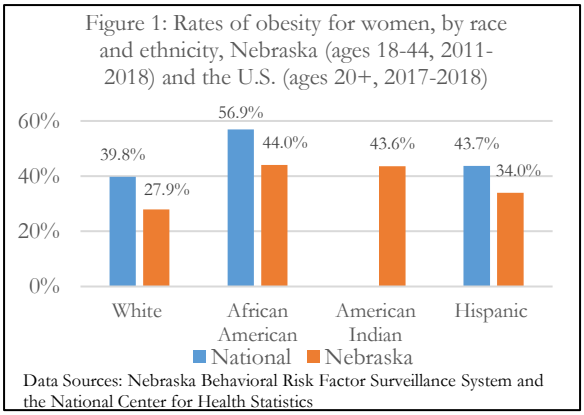
Cardiovascular Disease including Diabetes, Obesity, & Hypertension

National research has shown that African American, American Indian and Hispanic women suffer disproportionately from obesity, and the obesity related co-morbidities, diabetes and hypertension, when compared to White women.[1] According to 2017-2018 Behavioral Risk Factor Surveillance System (BRFSS) data, a similar trend can be found in Nebraska.[2] Racial disparities in health lead to elevated rates of death, earlier onset of illness, greater severity of disease and poorer survival for minority populations.[3]

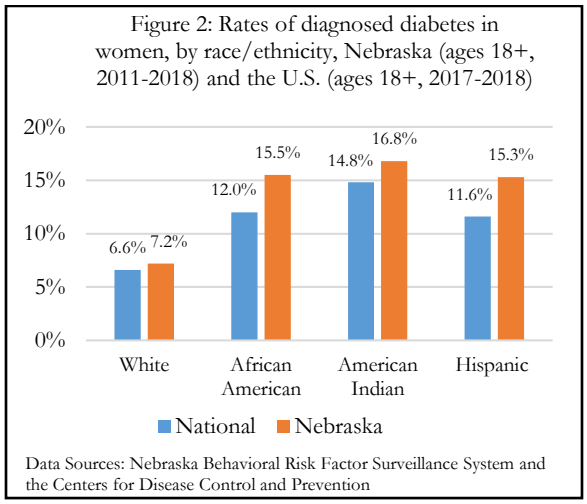
Criterion 1: Disparities Exist Related to Health Outcomes

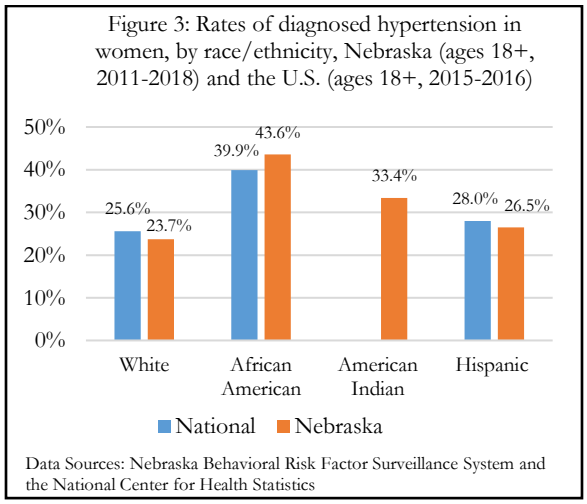
Obesity is associated with serious health risks, including hypertension and diabetes. Racial and ethnic disparities begin to exist by age two. The exact causes of these differences are not known, but the Centers for Disease Control and Prevention (CDC) suggests links to various factors, including differential rates of high school graduation, unemployment, food insecurity, access to high quality foods and convenient places for physical activity, and targeted marketing of unhealthy foods.[1]

Figure 1 provides information on rates of obesity from 2011 to 2018 for Nebraska women, ages 18 to 44, as reported by the Nebraska BRFSS.[2] National data in Figure 1 are for women aged 20 and older, for 2017-2018.[4] In Nebraska and the U.S., African American, American Indian and Hispanic women were more likely to be obese compared to White women.



Racial disparities also exist in diagnoses of diabetes and hypertension, with higher rates for African American, American Indian, and Hispanic women than their white counterparts in Nebraska and the U.S. (Figures 2 & 3).[5,6]





Criterion 2: Data Exists to Document the

Problem

The National Center for Health Statistics (NCHS), part of the CDC, has the responsibility for producing vital and health statistics for the U.S. This information is shared through the creation of data briefs and reports on current public health topics.[7] NCHS data briefs about adult obesity, hypertension and diabetes in the United States use data from the National Health and Nutrition Examination Survey, a program of studies designed to assess the health and nutritional status of adults and children in the United States.[8] The survey is unique in that it combines interviews and physical examinations.

Nebraska-specific data on health conditions and chronic diseases, including obesity, hypertension and diabetes, are reported by the BFRSS. The Nebraska program is part of the national BRFSS system, a system of health-related telephone surveys that collect state data from U.S. residents on their health-related risk behaviors, chronic health conditions, and use of preventive services.

Criterion 3: Alignment

Obesity and its related diseases (e.g., cardiovascular disease (CVD), diabetes, hypertension, etc.) are priority areas for both Nebraska and the nation. At the national level, the Association of State and Territorial Health Officials conducted an environmental scan of available State Health Improvement Plans (SHIP); all 44 included chronic disease (which includes diabetes, obesity and hypertension) as a priority.[9] Nebraska SHIP specifically includes obesity as a priority area.

At the local level, 15 of Nebraska's 18 local health departments include obesity in their current Community Health Improvement Plans. For example, activities of the Elkhorn Logan Valley Public Health Department to improve obesity rates include working with businesses to choose healthier snack and vending option as well as enhancing community planning and design practices by developing parks and trails.[10] In South Heartland District Health Department, they are aiming to increase counseling and communication in clinical settings as well as increase healthy eating and physical activity in schools and worksites, among other initiatives.[11]

Criterion 4: Strategies Exist to Address the Problem/An Effective Intervention is Available

The CDC Division of Nutrition, Physical Activity and Obesity recommends multiple evidence-based strategies to decrease overweight and obesity in the areas of nutrition, physical activity, and breastfeeding in child care, health care, worksite and community-wide settings.[12] Strategies for nutrition include: increase access to healthy foods and beverages, promote adoption of federal food service guidelines and other nutrition standards, and have salad bars in schools. Strategies for physical activity include: increase physical activity access and outreach, design streets and communities for physical activity, and implement physical activity in Early Care and Education settings. Finally, for breastfeeding, strategies include: increase access to breastfeeding friendly environments, provide access to professional and peer support for breastfeeding, ensure workplace compliance, and provide general breastfeeding resources.

The CDC works with national, state and local groups to aid in the creation of programs with the goal of preventing overweight and obesity. The Radical and Ethnic Approaches to Community Health program funds and supports local culturally-appropriate programs to address health issues of minority communities. These programs are often focused on weight, poor nutrition, physical activity, tobacco use and well-being.[13]

In Nebraska, the National Institutes of Health supported the creation of the Nebraska Center for the Prevention of Obesity Diseases through Dietary Molecules (NPOD) as a Center of Biomedical Research Excellence.[14] The NPOD supports cutting edge research core facilities that provide researchers from the center, and external users, with services in bioinformatics, biostatistics, large-capacity and high-speed computation, molecular biology, animal imaging and phenotyping, and metabolomics with a goal of translating research discoveries into patient care and consumer behavior.

Criterion 5: Severity of Consequences

Obesity has been associated with elevated risk for CVD, diabetes, hypertension, dyslipidemia, and all-cause mortality in the overall population and key subgroups. According to the CDC, various cardiovascular diseases rank among the leading causes of death in women of all races.[15]

For all ages combined, heart disease is the leading cause of death for women in the US. That means 20% or 1 in 5 female deaths are attributed to heart disease. It is the leading cause of death for African American and White women. For American Indian and Alaska Native women, heart disease causes about the same amount of deaths as cancer. While heart disease is the "cause of death", many other chronic diseases attribute to heart disease as risk factors including diabetes and overweight and obesity.[16]

If this issue is selected as one of the Title V MCH priority needs in 2020, what do you expect this issue to look like five years from now? What kind of progress can you expect in the next five years?

This "health topic," as a single topic, is hard to nail down because it is made up of various diseases – cardiovascular disease, diabetes, obesity, hypertension, heart disease, stroke, and unhealthy eating & lack of physical activity. The data, be it from BRFSS or other trusted sources, mostly exists in silos with studies focused on obesity, another on hypertension, others on food insecurity. This issue is important because it kills women. It's also a hard nut to crack because it's more than just one identifiable issue.

Addressing these chronic conditions requires large systemic efforts at all socioecological levels. Results of targeting childhood obesity will be more visible in future generations than in five years. However, that doesn't make this issue not priority worthy. It is still the leading cause of death among women. Generational changes won't happen if we don't start now and make it a priority. Progress in this area could include integrated efforts to combat the cluster of heart-related diseases (CVD, obesity, etc.), looking at the effects of other issues (abuse, violence, mental health, etc.) on their prevalence. In the next five years, we will be able to make the stronger connections between CVD, other health conditions, and their risk/protective factors, providing a greater

understanding of cause of death, root cause, and appropriate targets of intervention for women.

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