

Chronic Disease Disparities Among Males and Females, Ohio, 2022

Introduction

Chronic diseases such as heart disease, stroke, diabetes, and many cancers are among the most common, costly, and preventable health problems in both the United States and Ohio. In 2020, six of the 10 leading causes of death in Ohio were attributed to heart disease, cancer, chronic lower respiratory disease (CLRD), stroke, diabetes, and kidney disease. Chronic disease disparities, which are avoidable differences in health status and outcomes that exist between different groups, occur both nationally and in Ohio between males and females. Disparities between males and females are associated with numerous factors, including differences in physiology, health behaviors, access to and utilization of healthcare, socioeconomic status, and cultural norms and practices (World Health Organization, 2021).

Prevalence

In Ohio, the prevalence (percent of existing cases) of heart disease in 2019-2020 was significantly higher among males (age 18+), compared with females, as shown in Table 1. The prevalence of cancer, asthma, and arthritis was significantly higher among females, compared with males, whereas the prevalence of stroke, prediabetes, diabetes, chronic obstructive pulmonary disease (COPD), and chronic kidney disease was similar by sex, according to self-reported survey data.

Table 1. Chronic Disease Prevalence (%) Among Adults (Age 18+) by Sex, Ohio, 2019-2020

	Males		Females	
	Prevalence (%)	95% CI	Prevalence (%)	95% CI
Heart Disease	9.4	8.5 - 10.3	6.0	5.3 - 6.7
Cancer*	5.9	5.2 - 6.6	8.4	7.6 - 9.2
Stroke	3.8	3.2 - 4.4	4.2	3.6 - 4.8
Diabetes	11.9	10.9 - 12.9	12.9	11.8 - 13.9
Prediabetes	9.5	8.3 - 10.7	10.1	9.0 - 11.3
Asthma	6.7	5.9 - 7.6	12.8	11.7 - 13.9
COPD	7.3	6.5 - 8.1	8.6	7.8 - 9.5
Kidney Disease	3.3	2.7 - 3.8	3.9	3.3 - 4.5
Arthritis	23.0	21.7 - 24.3	33.1	31.6 - 34.5

Source: 2019-2020 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2022.

* Excluding skin cancer.

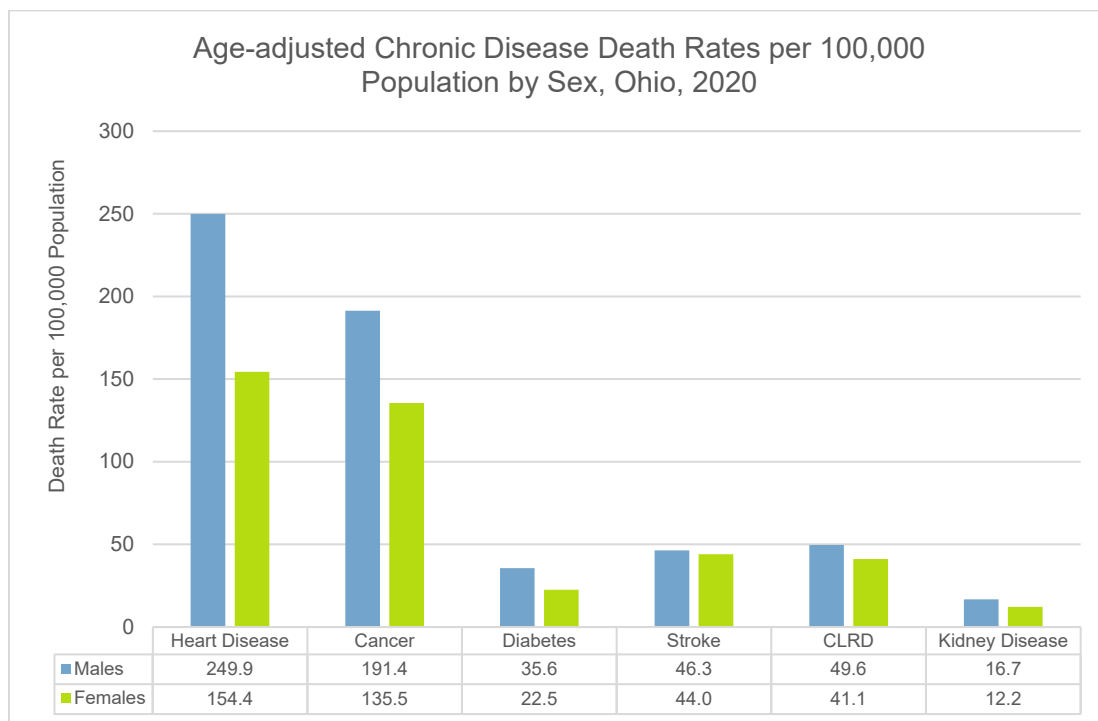
CI = Confidence interval.

COPD = Chronic obstructive pulmonary disease.

Mortality

Significant disparities exist for chronic disease mortality in Ohio between males and females. Males have higher death rates than females for all chronic diseases individually and combined. (Figure 1). In 2020, death rates were markedly higher among males for heart disease, cancer, diabetes, and kidney disease, compared with females.

Figure 1. Chronic Disease Death Rates per 100,000 Population by Sex, Ohio, 2020



Source: Ohio 2020 Mortality Data, Bureau of Vital Statistics, Ohio Department of Health, 2022.
CLRD = Chronic lower respiratory disease.

Premature Death

Premature deaths are defined in this report as those that occur before the age of 75 based on the definition by the National Center for Health Statistics. In addition to having higher chronic disease mortality rates, males in Ohio have higher rates of premature death from chronic disease than females. This difference is especially evident for heart disease, where 29.4% of deaths among females were premature, compared with 48.5% of deaths among males in 2020.

Risk and Protective Factors

A risk factor is something that increases a person's risk of developing a disease. Most chronic diseases share common risk factors. Some risk factors cannot be changed such as sex, age, and race. However, many risk factors are modifiable (can be changed), including health behaviors such as smoking, food choices, and physical activity. Controlling certain health conditions such as high blood pressure (hypertension), high cholesterol, obesity, and poor mental health with medication and lifestyle changes can also reduce the risk of developing chronic diseases. In addition, protective factors such as getting routine check-ups and cancer screenings can help to prevent chronic diseases or detect them early.

Higher Among Males

Heart disease and hypertension prevalence

Chronic disease mortality and premature mortality

Inadequate fruit and vegetable consumption

Lack of access to healthcare coverage

Higher Among Females

Cancer, asthma, and arthritis prevalence

Poor mental health, stress, and depression

No exercise in the past 30 days

Serve as a caregiver

According to 2020 data, women are significantly more likely than men to serve as a caregiver for a friend or family member with a disability or medical need, feel stressed, have poor mental health or depression, and not have any exercise in the past month. Men are significantly more likely to use marijuana, binge drink, have hypertension, eat fruits and vegetables less frequently, and be overweight. Men are also significantly less likely to have access to healthcare coverage and get routine medical checkups. There are no significant differences in the percentage of men and women who smoke, have high blood cholesterol, experience obesity, get enough sleep, and get recommended colorectal cancer screenings (Table 2).

Table 2. Prevalence (%) of Chronic Disease Risk and Protective Factors by Sex, Ohio, 2019 and 2020

	Adult Males		Adult Females	
	Prevalence (%)	95% CI	Prevalence (%)	95% CI
Risk Factors				
Current Smoking	20.0	18.6 - 21.4	18.6	17.3 - 19.9
Marijuana Use	14.9	13.4 - 16.4	9.6	8.5 - 10.7
Binge Drinking	20.3	18.8 - 21.8	12.5	11.3 - 13.7
Hypertension*	37.6	35.7 - 39.5	31.6	30.1 - 33.1
High Cholesterol *	31.8	29.9 - 33.7	29.6	28.0 - 31.2
Eat Fruit less than 1 Time per Day*	45.1	43.0 - 47.3	40.4	38.4 - 42.3
Eat Vegetables less than 1 Time per Day*	23.2	21.3 - 25.1	17.4	15.9 - 18.9
Overweight	39.3	37.6 - 41.0	27.5	26.0 - 29.0
Obesity	33.9	32.3 - 35.6	37.1	35.4 - 38.8
Caregiving	17.5	15.8 - 19.2	23.1	21.5 - 24.8
Stress	20.8	19.1 - 22.4	33.3	31.5 - 35.0
Poor Mental Health	11.9	10.7 - 14.1	18.4	17.1 - 19.7
Depression	15.8	14.5 - 17.1	27.9	26.4 - 29.3
Protective Factors				
Any Exercise in the Past 30 Days	78.2	75.2 - 77.3	72.9	71.5 - 74.3
Adequate Sleep	64.5	62.8 - 66.1	64.6	63.0 - 66.1
Access to Healthcare Coverage	88.2	86.9 - 89.4	93.1	92.2 - 94.0
Routine Checkup	72.4	70.8 - 74.0	81.1	79.8 - 82.5
Colorectal Cancer Screening	72.4	70.1 - 74.7	75.8	73.8 - 77.9

Source: 2019 and 2020 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2022.

* Most recent data is from the 2019 Ohio BRFSS.

CI = Confidence interval.

Definitions

Prevalence: The number of people with a disease or some other attribute present during a particular interval of time.

Age-Adjusted Rate: A rate that has been modified using statistical methods for fairer comparisons between groups with different age distributions. It is the weighted average of age-specific rates, where the weights represent the age distribution of a standard population. The rates presented in this report were standardized to the age distribution of the 2000 U.S. Standard Population.

Confidence Interval: A range of values for a measure or estimate (e.g., prevalence) calculated to determine the degree of uncertainty or certainty of the estimated measure. For example, for a 95% confidence interval, if the survey was repeated 100 times, 95% of the estimates would fall within the specified range.

Statistical Significance: A mathematical measure of difference between groups. The difference is said to be significant if it is greater than what might be expected to happen by chance alone. In this report, statistical significance between populations was determined by comparing confidence intervals; if the confidence intervals do not overlap, the difference is determined to be statistically significant.

Premature Death: Deaths of individuals before the age of 75 based on the definition by the National Center for Health Statistics.

Stress: Feeling tense, restless, nervous, anxious, or unable to sleep at night because the person's mind is troubled some of the time or most of the time in the past 30 days.

Adequate Sleep: Among adults, on average, sleeping for seven or more hours per night.

More Information and Resources

The Ohio Department of Health is pursuing a wide range of initiatives to address the burden of chronic disease in Ohio, including health disparities. Additional data, information, and resources are available at:

- [Ohio Department of Health, Chronic Disease Program](#)
- [Ohio Behavioral Risk Factor Surveillance System \(BRFSS\)](#)
- [Ohio Department of Health, Health Opportunity](#)
- [2020 - 2022 State Health Improvement Plan](#)
- [Ohio Department of Health, Vital Statistics](#)

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