COMMUNITY HEALTH NEEDS ASSESSMENT & IMPLEMENTATION PLAN

COMPLETED AND PUBLISHED: JUNE 2019

Southwest HEALTH

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PURPOSE

It is the vision of Southwest Health (SH) to create a healthier southwest Wisconsin. This community health needs assessment and implementation plan (CHNA) outlines concrete action plans that will help SH prioritize and address health needs in our communities. These are issues specific to community health above and beyond our organizational strategic plan.

There are, of course, health needs that cannot be fully addressed in the current implementation plan as among SH strategic priorities is maintaining its fiscal health in a responsible way that ensures its long term viability as a leading provider of quality health care services far into the future. Though all identified needs are addressed in the implementation plan, not all are address equally nor to an ideal extent. Nevertheless, through the current assessment and extensive action plans, we intend to continue very positively impacting the direction of health and health care on behalf of those we serve.

SUMMARY

Southwest Health is a not-for-profit health system serving the needs of southwest Wisconsin. This Community Health Needs Assessment (CHNA) and Implementation Plan provides a detailed view of demographic, behavioral, and health characteristics of the SH service area as they relate to the many diverse factors impacting the region's health and health care. The institution's primary service area and greater secondary service area together comprise a population of nearly 55,000 people, many of them rural and many lower income and poor families. Their complex health needs are first and foremost the product of their rural environment, including social determinants of health on both population and individual levels. Sedentary lifestyles and an unhealthy food culture combine to produce a population that is increasingly obese with somewhat less access to services, including lack of adequate insurance and struggles to pay for services.

Given such circumstances, metabolic syndrome [a cluster of at least three of these five conditions – high blood pressure, high blood sugar, high body fat around the waist, high cholesterol or triglyceride levels – increasing one's risk of heart disease, stroke, and diabetes] and its sub conditions are increasingly common. This greatly impacts community health and increases costs dramatically.

As our organization grows and as we learn to better communicate and engage our populations on their own plane of values, we can make a measurable upstream impact. This plan identifies strategies and actions – from increasing access to practitioners to providing education and outreach to addressing health literacy – through which our organization will impact the health of our population from both within and beyond the walls of our facilities.

METHODOLOGY

Southwest Health began the CHNA process in the fall of 2018 to follow up on its previous assessment and implementation plan published in June, 2016. The identified steps:

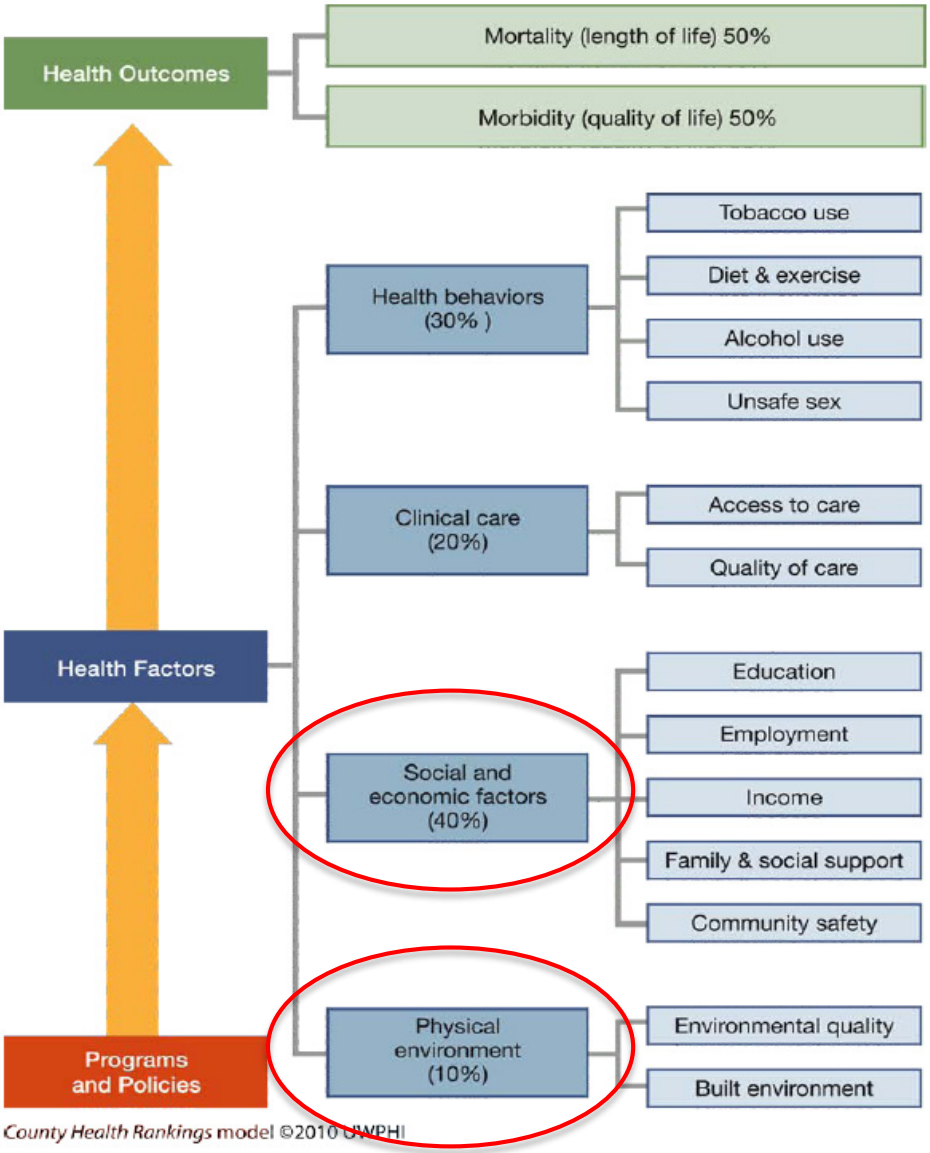
1. Obtain and review existing area Community Health Needs Assessment plans.
2. Compile existing data from a wide range of secondary sources.
3. Identify primary data needs and gather primary data.
4. Evaluate, rank, and prioritize health needs.
5. Establish practical alternatives for addressing needs.
6. Write plan under the supervision of Southwest Health leadership.

Primary data sources identified were a) a survey of community-at-large, including faculty, staff and students a the University of Wisconsin - Platteville, b) a survey of employers, c) a survey of key stakeholders, including health care providers and leaders. Survey tools were carefully written to solicit honest input that would serve to inform the process and fill gaps in secondary data.

SOCIAL DETERMINANTS OF HEALTH

Health starts in our homes, schools, workplaces, neighborhoods, and communities. We know health is determined by genetics and by our behaviors. Yet it's also determined to a very great extent by access to social and economic opportunities; by resources and supports available in our homes, our neighborhoods, and our communities; by the quality of our schooling; by the safety of our workplaces; by the cleanliness of our water, food, and air; and by our social interactions as well as our relationships with people and institutions. The conditions in which we live explain, in part, how healthy we are.

SOCIAL DETERMINANTS OF HEALTH DIAGRAM

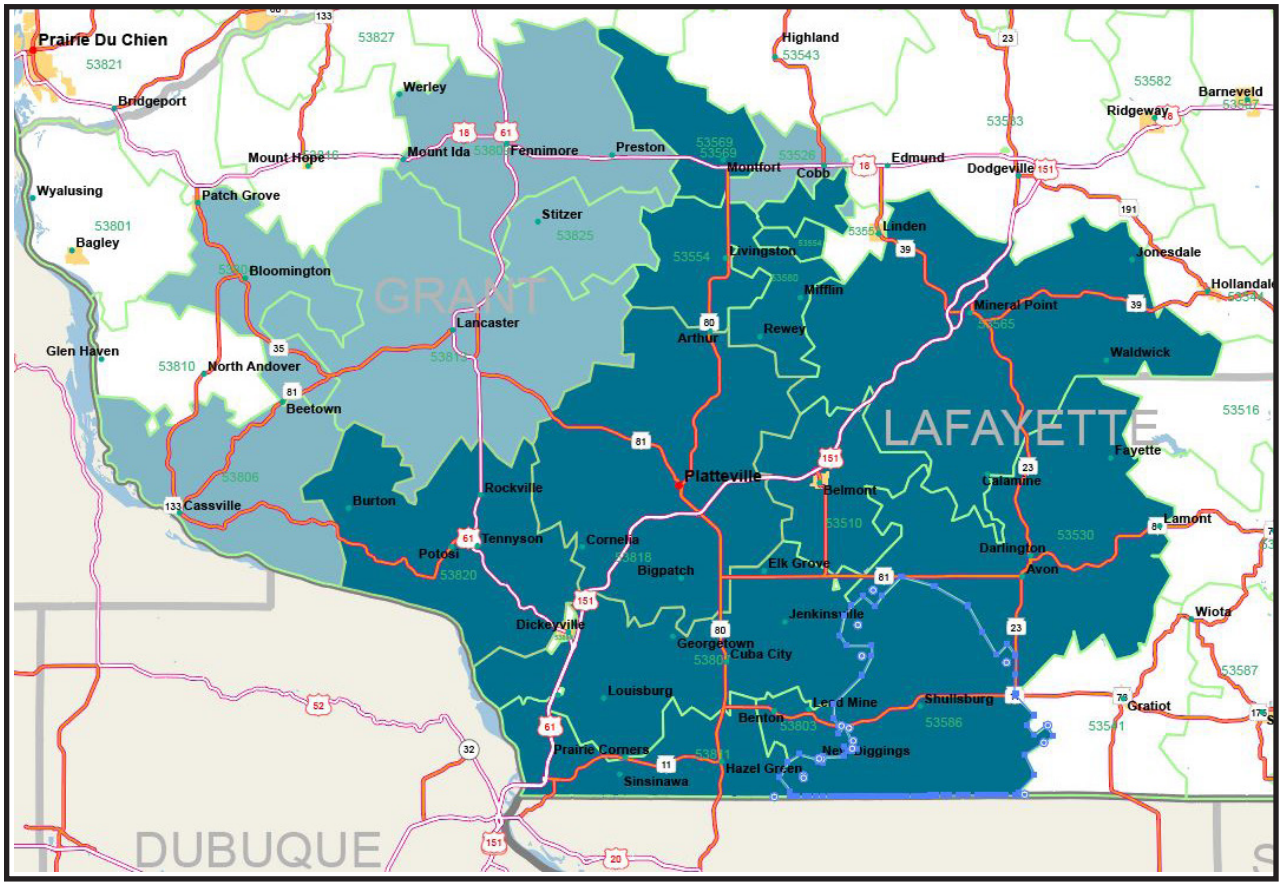


Social determinants of health

Source: University of Wisconsin Population Health Institute. County Health Rankings 2013, http://www.countyhealthrankings.org/our-approach

COMMUNITY DESCRIPTION

Geographically, Southwest Health's primary service area is centered around Platteville, Belmont, and Cuba City, Wisconsin. It also includes the surrounding towns of Benton, Shullsburg, Hazel Green, Dickeyville, Livingston, Montfort, and Potosi as well as the surrounding rural villages and townships. Our secondary service area extends to further outlying areas. We see fewer patients from these areas, yet for many, Platteville and Southwest Health are the area's center of commerce and the place they look to for health care. In this study, we include all residents and populations in our service areas and do not discriminate based on age, gender, income, race, religion, sexual orientation, gender identity, ability to pay, or any other criteria.



DEMOGRAPHICS

US CENSUS Bureau's 2017 American Community Survey Data

	ZCTA	City	Male	Female	Total
Primary Service Area	53818	PLATTEVILLE	8,888	7,238	16,126
	53807	CUBA CITY	2,371	2,410	4,781
	53510	BELMONT	704	755	1,459
	53554	LIVINGSTON	626	614	1,240
	53565	MINERAL POINT	2,280	2,518	4,798
	53569	MONTFORT	677	709	1,386
	53580	REWEY	265	285	550
	53586	SHULLSBURG	1,182	1,044	2,226
	53803	BENTON	601	597	1,198
	53808	DICKEYVILLE	624	577	1,201
	53811	HAZEL GREEN	1,446	1,817	3,263
	53820	POTOSI	1,251	1,135	2,386
	53530	Darlington	2,323	2,204	4,527
			23,238	21,903	**45,141**
Secondary Service Area	53825	Stitzer	321	256	577
	53804	Bloomington	694	668	1,362
	53526	Cobb	297	276	573
	53806	Casseville	858	887	1,745
	53809	Fennimore	2,219	2,066	4,285
	53813	Lancaster	2,811	2,998	5,809
			7,200	7,151	**14,351**
		Grand Totals	30,438	29,054	**59,492**

US CENSUS Bureau's 2017 American Community Survey Data - Racial Minorities

ZCTA	City	African-Am	Native Am	Asian	Hispanic	Two or More Races
Primary Service Area						
53818	PLATTEVILLE	1.5%	0.4%	1.1%	1.5%	1.0%
53807	CUBA CITY	0.5%	0.2%	0.1%	1.4%	0.9%
53510	BELMONT	0.3%	0.0%	1.2%	2.8%	3.8%
53554	LIVINGSTON	0.6%	0.0%	0.0%	4.8%	1.0%
53565	MINERAL POINT	1.1%	0.6%	0.5%	1.6%	1.1%
53569	MONTFORT	1.4%	0.0%	0.3%	5.6%	0.4%
53580	REWEY	0.0%	0.0%	0.0%	0.5%	0.7%
53586	SHULLSBURG	0.1%	0.1%	0.0%	4.0%	0.8%
53803	BENTON	1.8%	0.0%	0.0%	0.0%	0.6%
53808	DICKEYVILLE	0.1%	0.0%	0.0%	0.2%	0.9%
53811	HAZEL GREEN	0.4%	0.2%	0.2%	1.3%	0.8%
53820	POTOSI	0.0%	0.0%	0.8%	0.6%	0.0%
53530	Darlington	0.8%	0.4%	0.0%	7.8%	0.1%
Secondary Service Area						
53825	Stitzer	0.0%	0.0%	1.2%	0.7%	0,9%
53804	Bloomington	1.8%	0.0%	0.0%	0.0%	0.6%
53526	Cobb	0.0%	0.0%	0.0%	0.0%	0.0%
53806	Casseville	0.0%	0.0%	0.0%	0.8%	1.7%
53809	Fennimore	0.0%	0.0%	1.1%	1.2%	0.2%
53813	Lancaster	0.8%	0.0%	1.4%	1.7%	0.3%

US CENSUS Bureau's 2017 American Community Survey Data - Seniors

ZCTA	City	65+
Primary Service Area		
53818	PLATTEVILLE	11.5%
53807	CUBA CITY	16.2%
53510	BELMONT	16.4%
53554	LIVINGSTON	15.2%
53565	MINERAL POINT	18.2%
53569	MONTFORT	15.3%
53580	REWEY	15.5%

US CENSUS BUREAU 2017 SENIOR SURVEY DATA CONTINUED

ZCTA	City	65+
Primary Service Area		
53586	SHULLSBURG	16.7%
53803	BENTON	20.5%
53808	DICKEYVILLE	16.6%
53811	HAZEL GREEN	24.1%
53820	POTOSI	19.3%
53530	Darlington	16.3%
Secondary Service Area		
53825	Stitzer	10.2%
53804	Bloomington	20.5%
53526	Cobb	18.3%
53806	Casseville	22.7%
53809	Fennimore	15.6%
53813	Lancaster	20.1%

OTHER MINORITIES

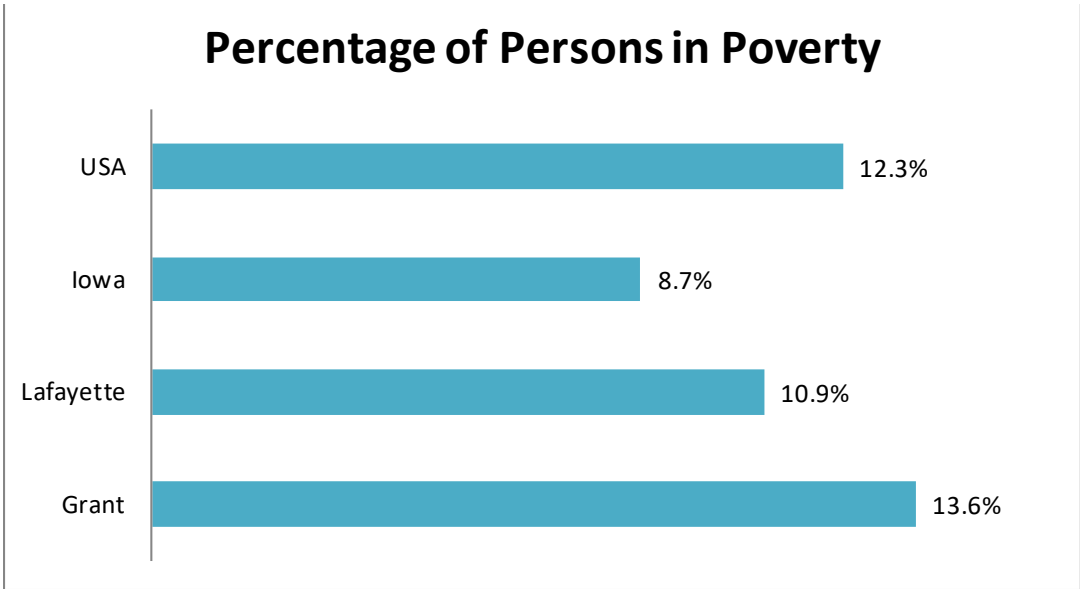
Minority groups are any group of people who, because of their physical or cultural characteristics, are singled out from the others in the society in which they live for differential and unequal treatment and who therefore regard themselves as objects of collective discrimination. Examples of minority groups include the LBGT community, religious practitioners whose faith is not widely practiced where they live, people of color, and people with disabilities.

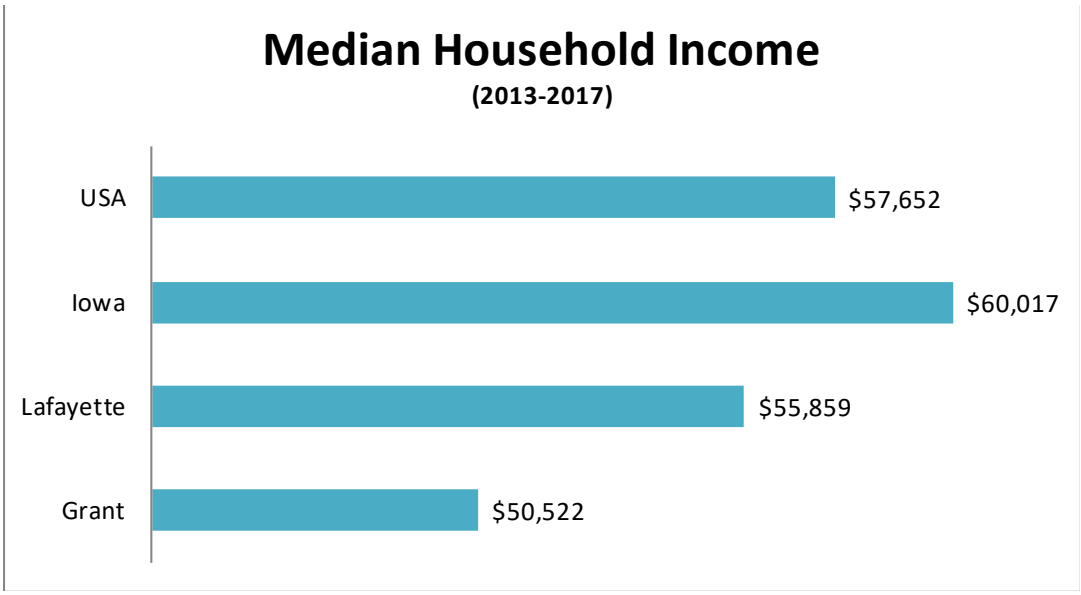
The preceding chart highlighting racial minorities does not include all racial identities but rather only those more major categories, more prevalent, or of concern in the region.

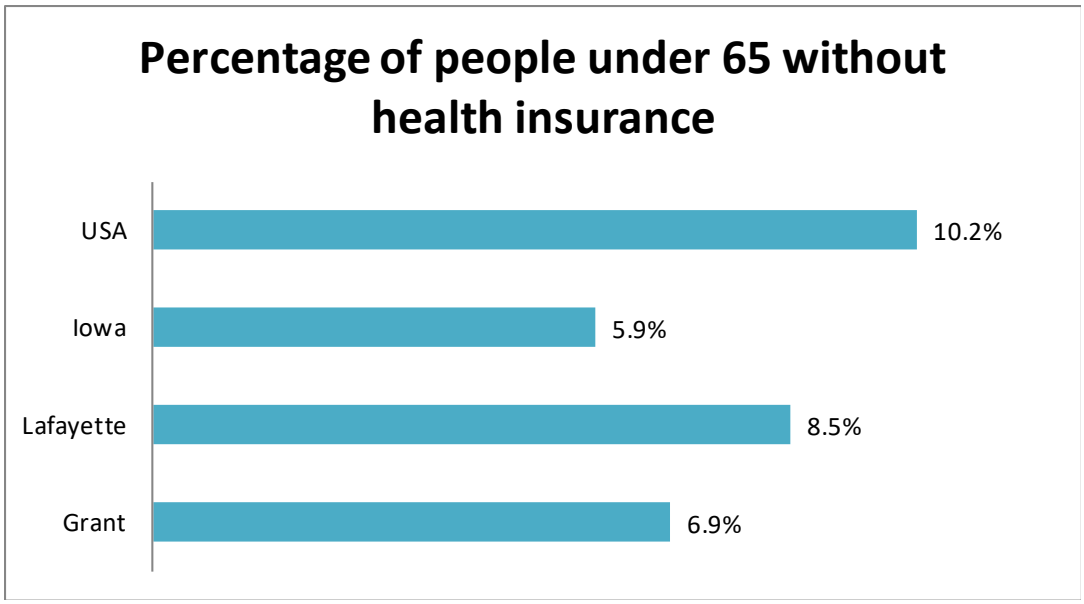
Numbers are unavailable for southwest Wisconsin residents with disabilities, including the blind and visually impaired, the deaf and hard of hearing, those with developmental disabilities, and the physically disabled. This organization's programs will strive to the extent possible, however, to accommodate these groups.

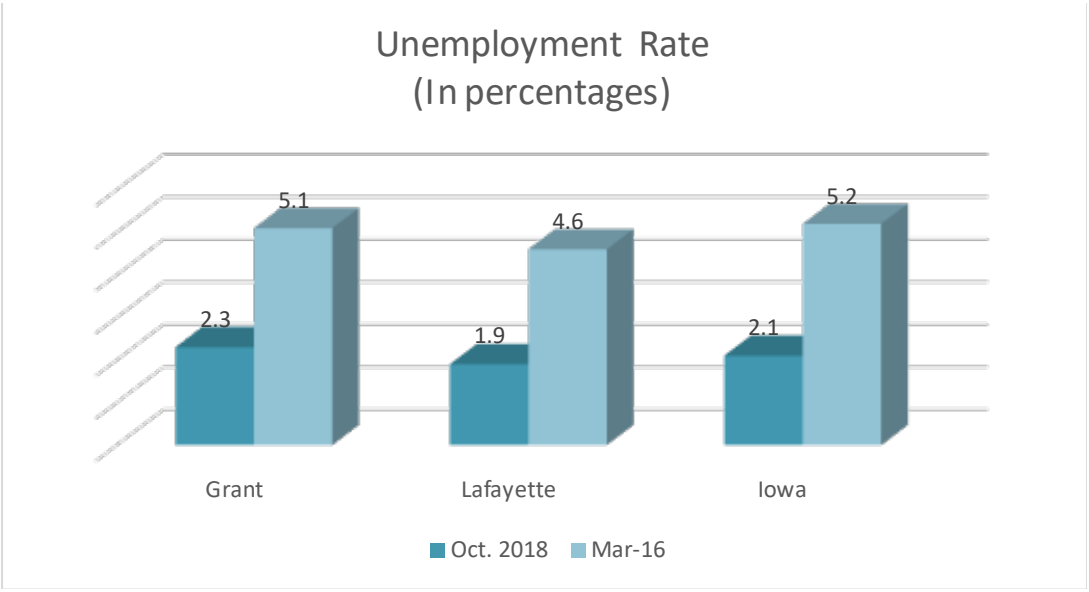
Percentages of our region's population who identify as LGBTQI are equivalent to national averages known from surveys. Gay, lesbian, bisexual (roughly 10%), transgender (0.6%), gender non-conforming (approximately three percent in youth), and intersex (up to 2% counting subtle variations that may not be immediately discovered). Other populations, including economically disadvantaged, obese, and unemployed are included in subsequent sections of this assessment.

ECONOMIC INDICATORS






Percentage of people under 65 without health insurance
USA
Iowa
Lafayette
Grant
10.2%
5.9%
8.5%
6.9%


Unemployment Rate
(In percentages)
2.3
5.1
1.9
4.6
2.1
5.2
Grant
Lafayette
Iowa
Oct. 2018
Mar-16

ZIP CODE LEVEL COMMUNITY NEEDS INDICATORS

Dignity Health and Truven Health jointly developed a Community Need Index (CNI) in 2004 to assist in the process of gathering vital socio-economic factors. The CNI is strongly linked to variations in community healthcare needs and is a strong indicator of a community's demand for various healthcare services. Based on a wide array of demographic and economic statistics, the CNI provides a score for every populated ZIP code in the United States on a scale of 1.0 to 5.0. A score of 1.0 indicates a ZIP code with the least need, while a score of 5.0 represents a ZIP code with the most need.

The CNI score is an average of five different barrier scores that measure various socio-economic indicators of each community using the source data. The five barriers are listed below. These barriers, and the statistics that comprise them, were carefully chosen and tested individually by both Dignity Health and Truven Health:

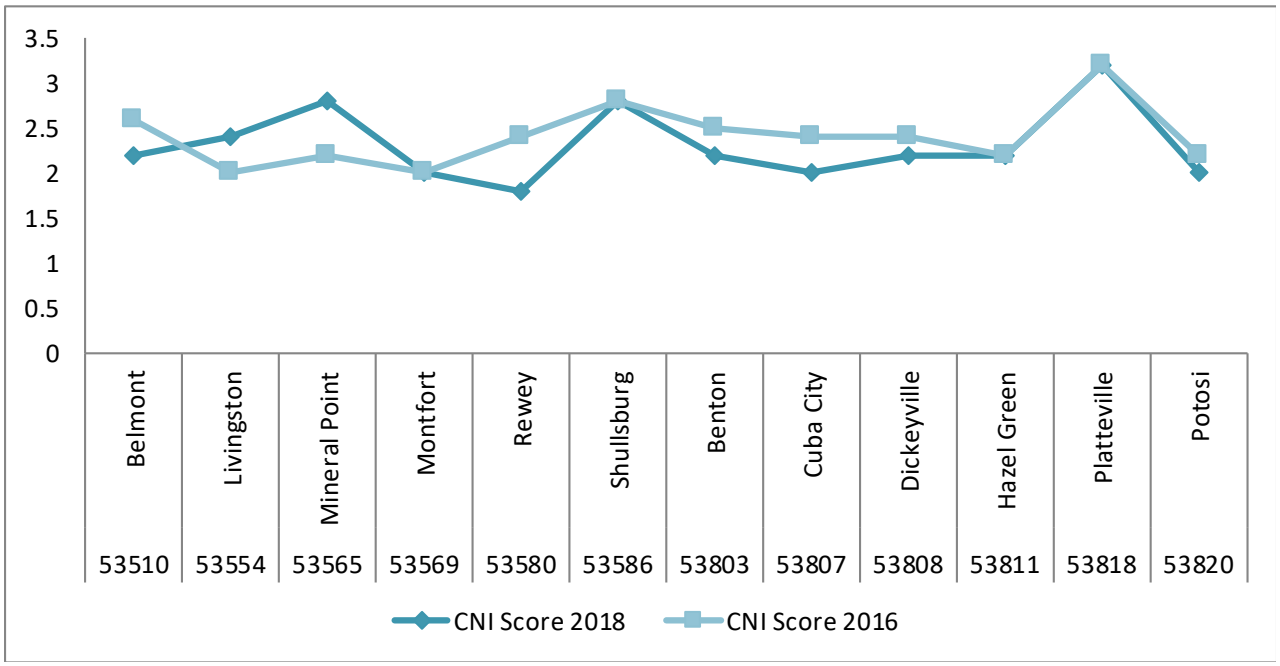
1. Income Barrier
    - Percentage of households below poverty line, with head of household age 65 or more
    - Percentage of households with children under 18 below the poverty line
    - Percentage of single female-headed families with children under 18 below poverty line
2. Cultural Barrier
    - Percentage of population that is minority (including Hispanic ethnicity)
    - Percentage of population over age 5 that speaks English poorly or not at all
3. Education Barrier
    - Percentage of population over 25 without a high school diploma
4. Insurance Barrier
    - Percentage of population in the labor force, aged 16 or more, without employment
    - Percentage of population without health insurance
5. Housing Barrier
    - Percentage of households renting their home

Every populated ZIP code in the United States is assigned a barrier score of 1, 2, 3, 4, or 5 depending upon the ZIP code national rank (quintile). A score of 1 represents the lowest rank nationally for the statistics listed, while a score of 5 indicates the highest rank nationally. For example, ZIP codes that score a 1 for the Education Barrier contain highly educated populations; ZIP codes with a score of 5 have a very small percentage of high school graduates.

For the two barriers with only one statistic each (education and housing), Truven Health used only the single statistic listed to calculate the barrier score. For the three barriers with more than one component statistic (income, cultural and insurance), Truven Health analyzed the variation and contribution of each statistics for its barrier; Truven Health then weighted each component statistic appropriately when calculating the barrier score.

Once each ZIP code is assigned its barrier scores from 1 to 5, all five barrier scores for each ZIP code are averaged together to yield the CNI score. Each of the five barrier scores receives equal weight (20% each) in the CNI score. Again, the lower score indicates a lower need, while higher scores indicate greater needs.

CNI scores for SH's primary Service area in 2018 vs 2016:



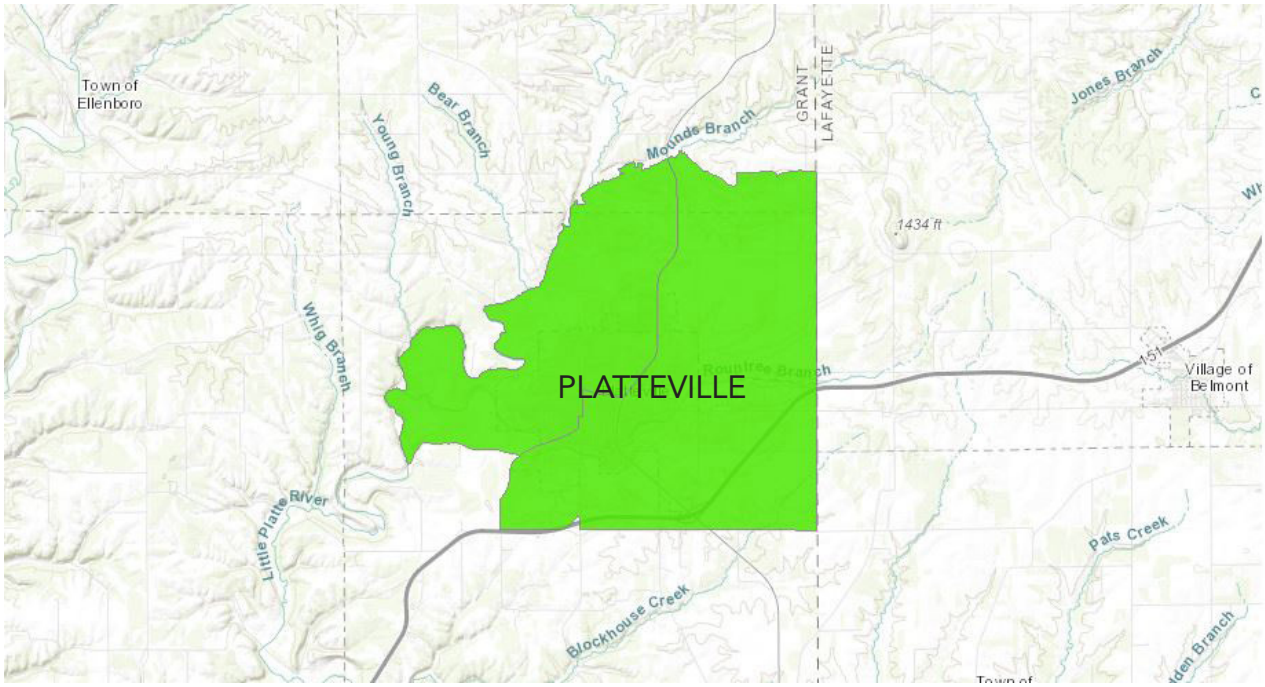
The ZIP code above showing the greatest health need is Platteville.

Without additional data, this report's authors are reluctant to ascribe causes to the relative differences in these CNI scores. The numbers don't necessarily align with minority population statistics or a senior population. They are to a degree, however, supported by the food desert designation and supporting data described below.

FOOD DESERT STATUS

The U.S. Department of Agriculture's Economic Research Service estimates the number of people in each census tract that live in a "food desert," defined as low-income areas more than one mile from a supermarket or large grocery store in urban areas and more than 10 miles from a supermarket or large grocery store in rural areas. Government-led initiatives aim to increase the availability of nutritious and affordable foods to people living in these food deserts.

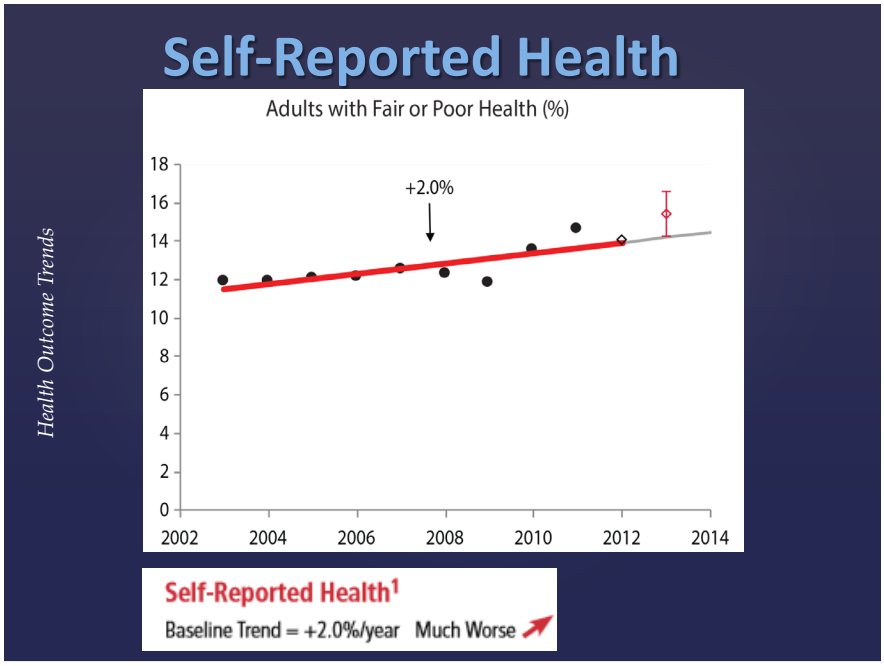
The USDA has labeled a large portion of the Platteville area as a Food Desert. A look into the data sets reveal that among a population in 4,407 in these two FDA identified food dessert tracts, there are 139 housing units without a vehicle and 335 units receiving Supplemental Nutrition Assistance Program (SNAP) benefits. These housing units, therefore, include economically disadvantaged families with significantly limited access to nutritious and affordable food.

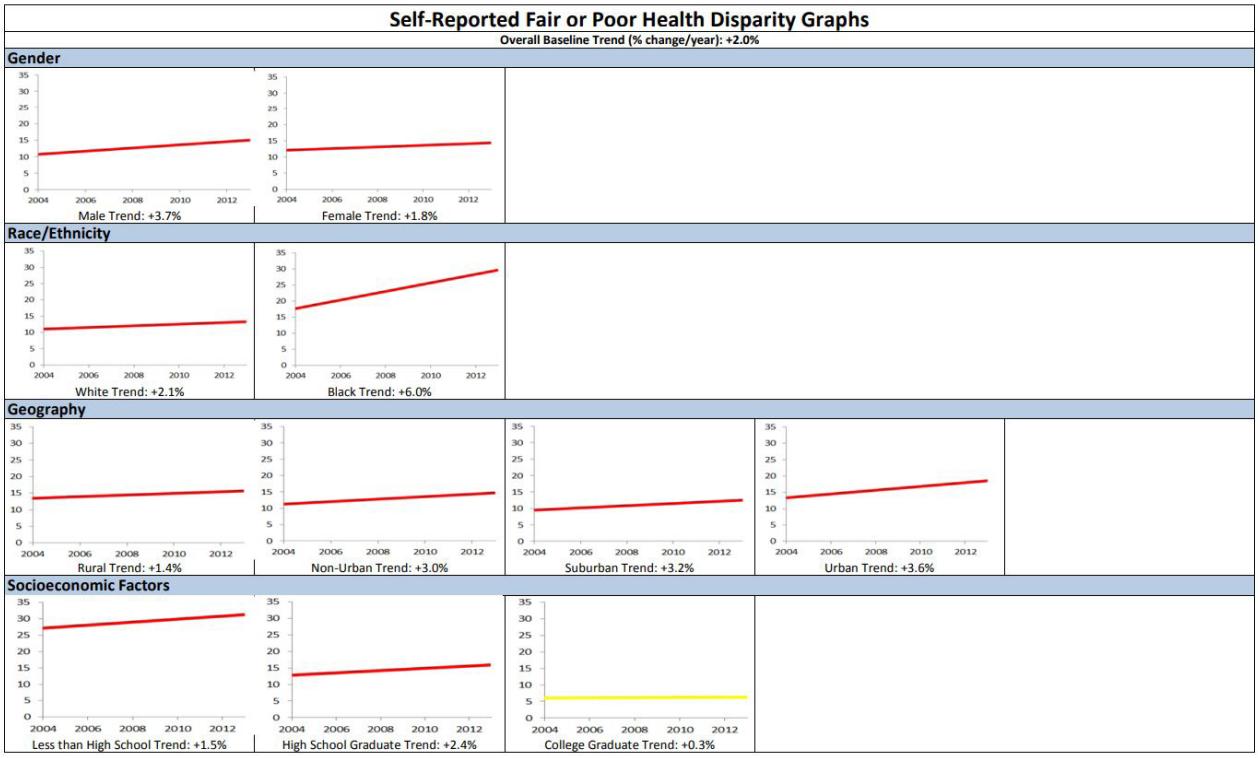


WISCONSIN HEALTH TRENDS REPORT 2015

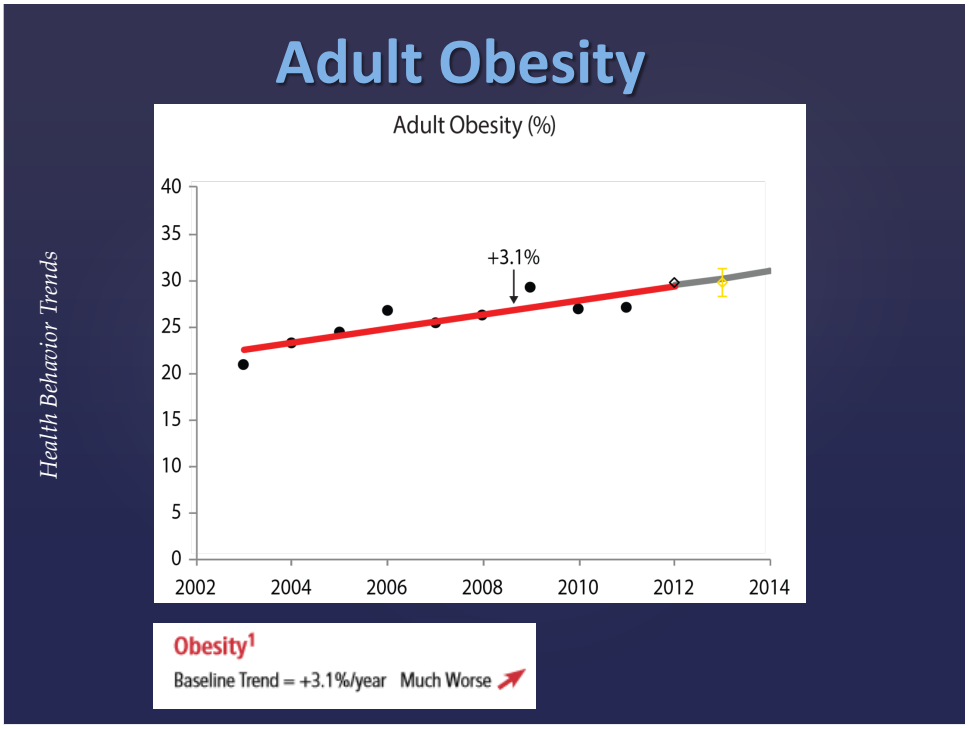
The University of Wisconsin Population Health Institute at the School of Medicine and Public Health provides an annual look at trends and disparities in various health categories for the State of Wisconsin.

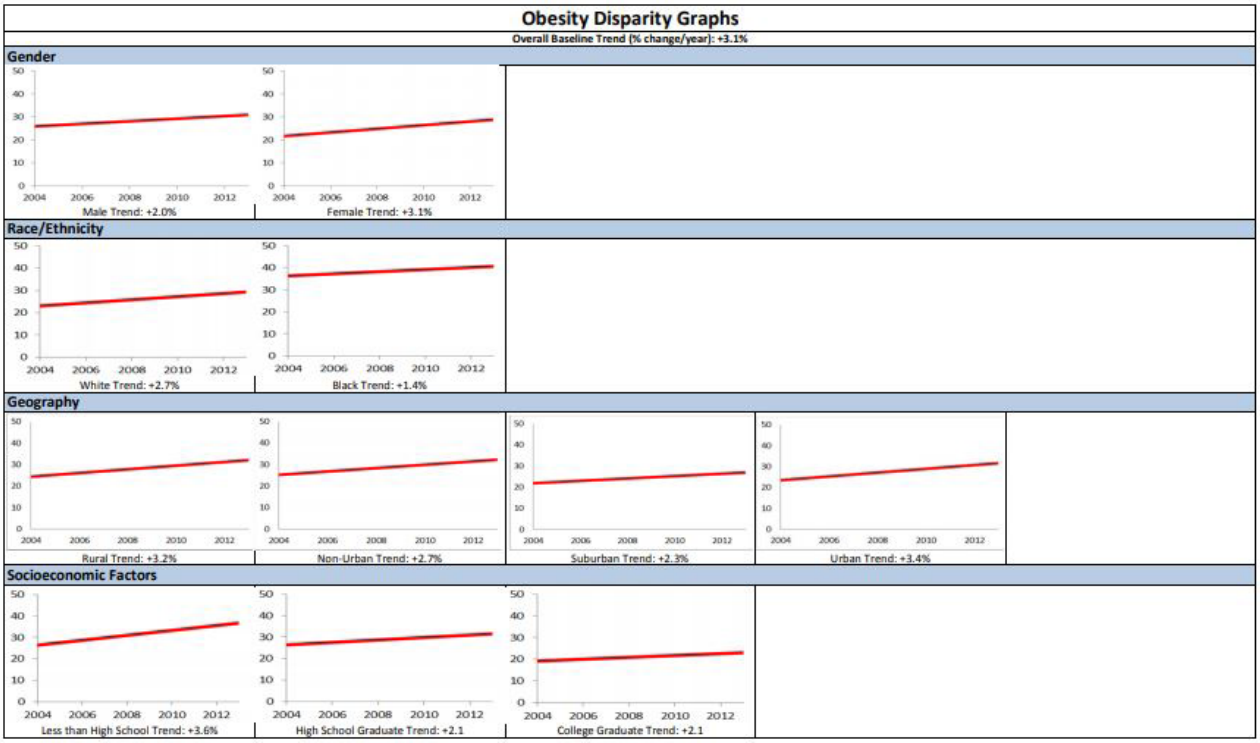
Alarmingly, the measure for self-reported fair or poor health among Wisconsin residents is increasing over time among virtually all demographic groups identified, though the trend is highly concerning in the African American population.



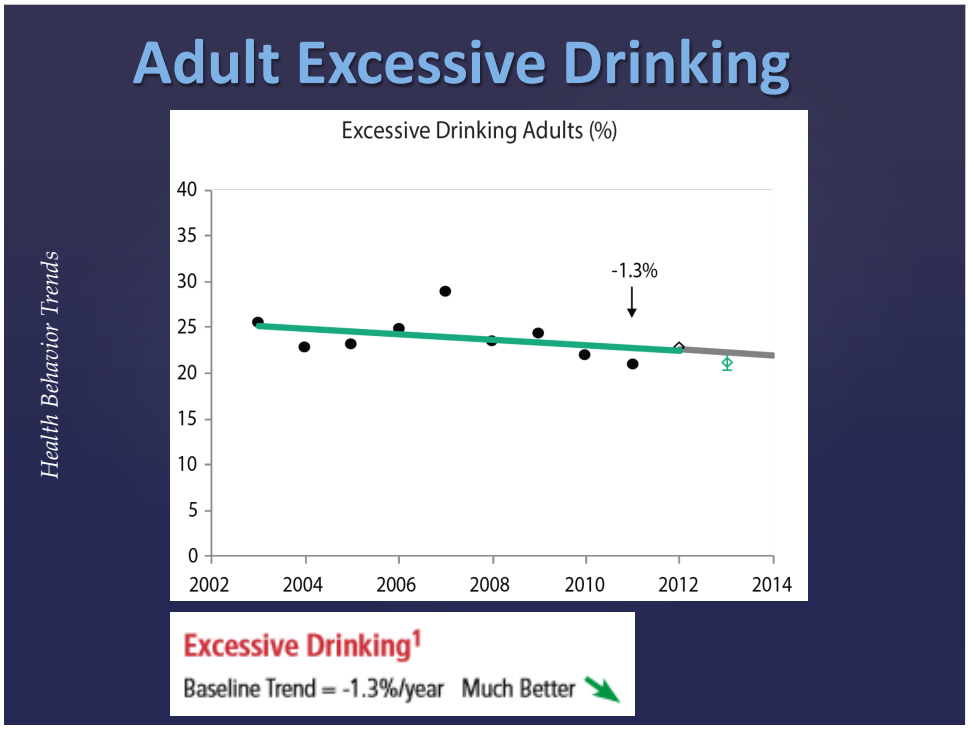


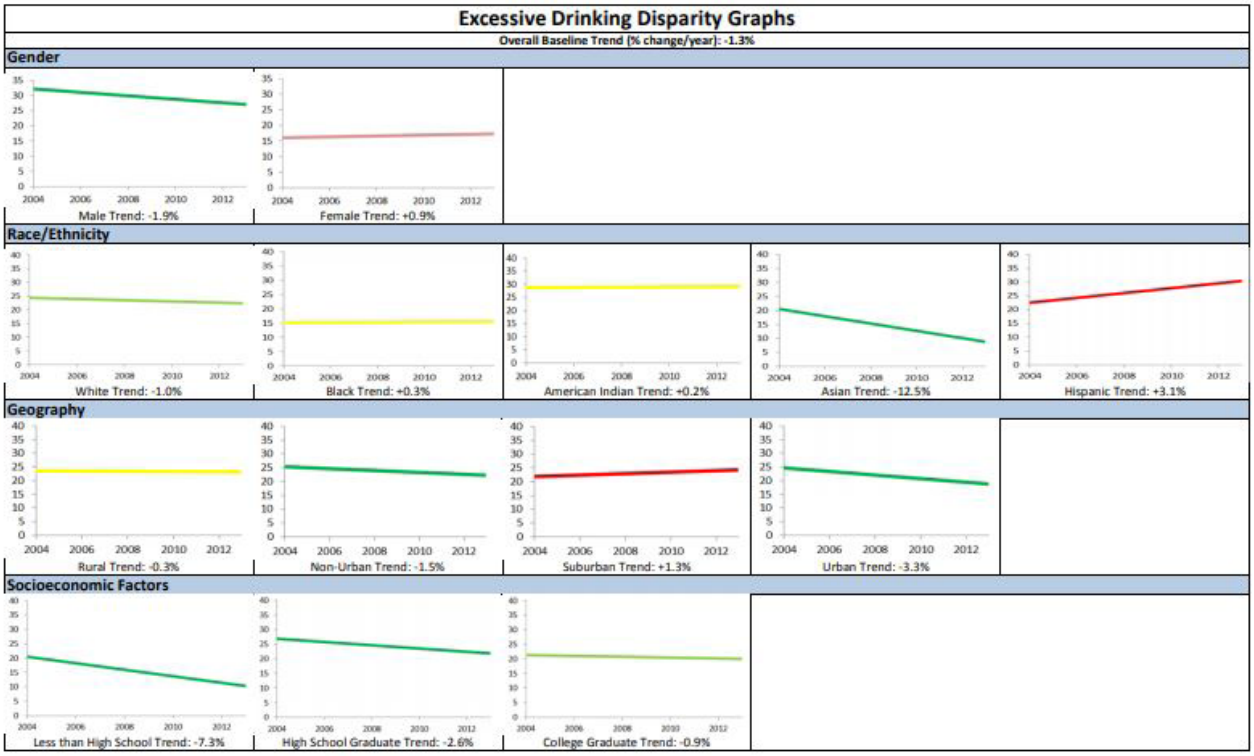
Adult obesity is also rising significantly in Wisconsin, mirroring the county data obtained. It is also rising significantly across demographic and socio-economic groups:



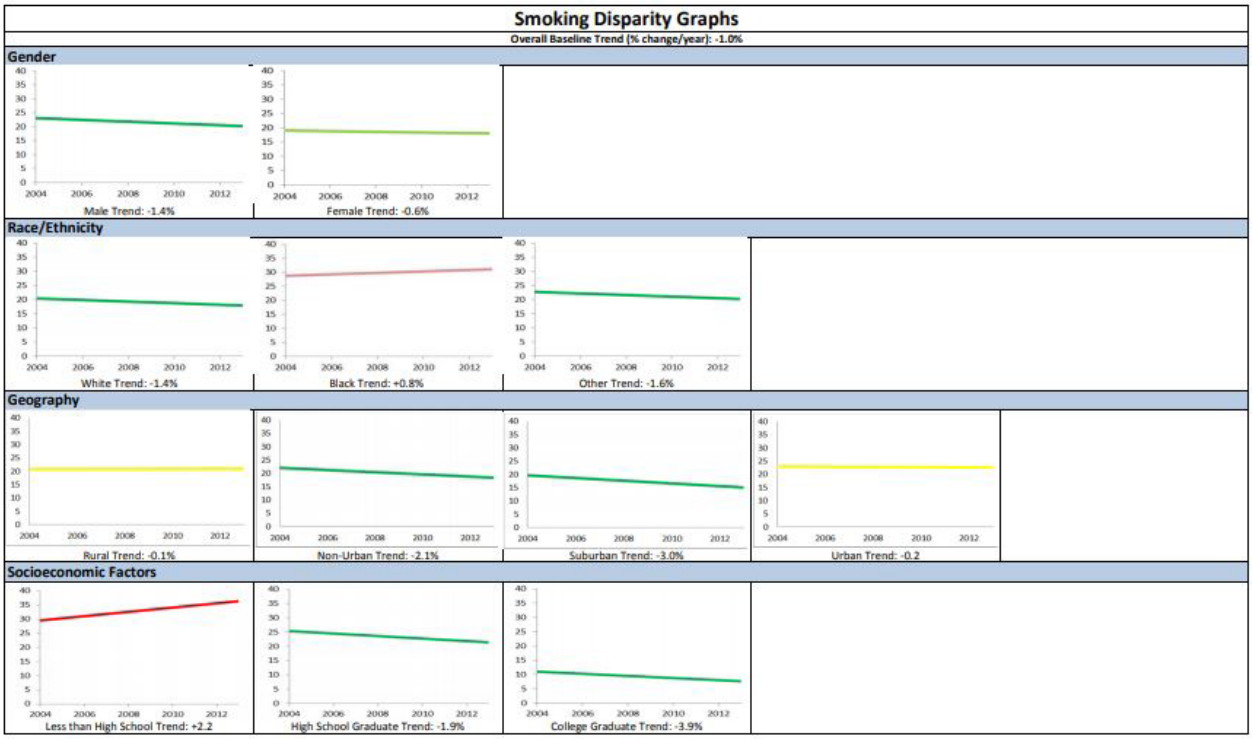


Excessive drinking in Wisconsin, though down, exceeds national averages and remains a problematic health concern in Wisconsin:

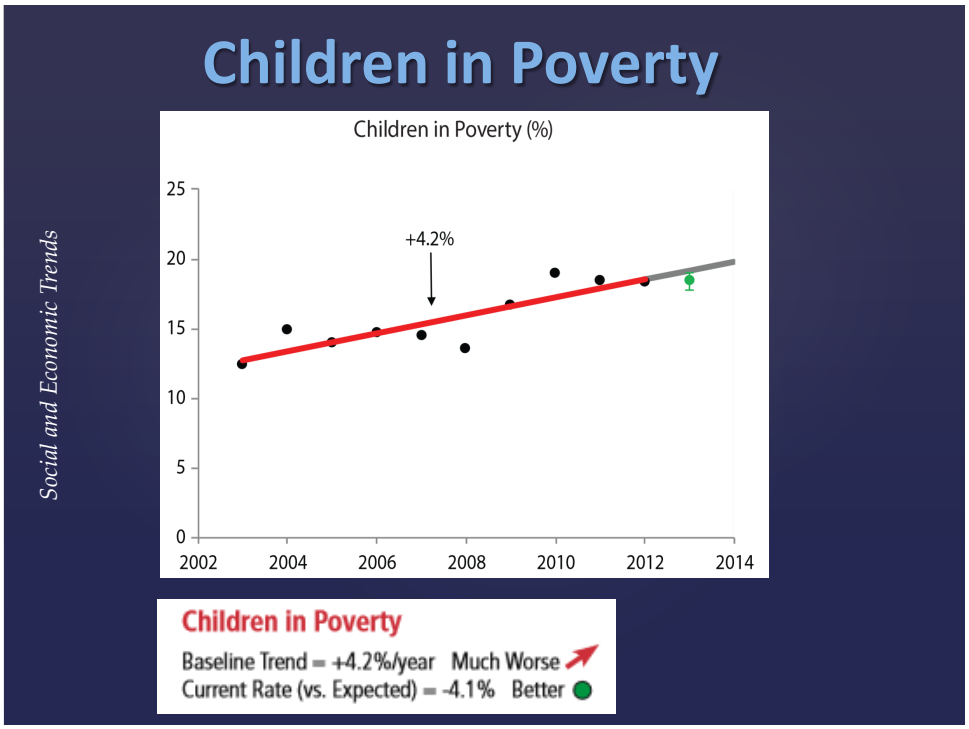


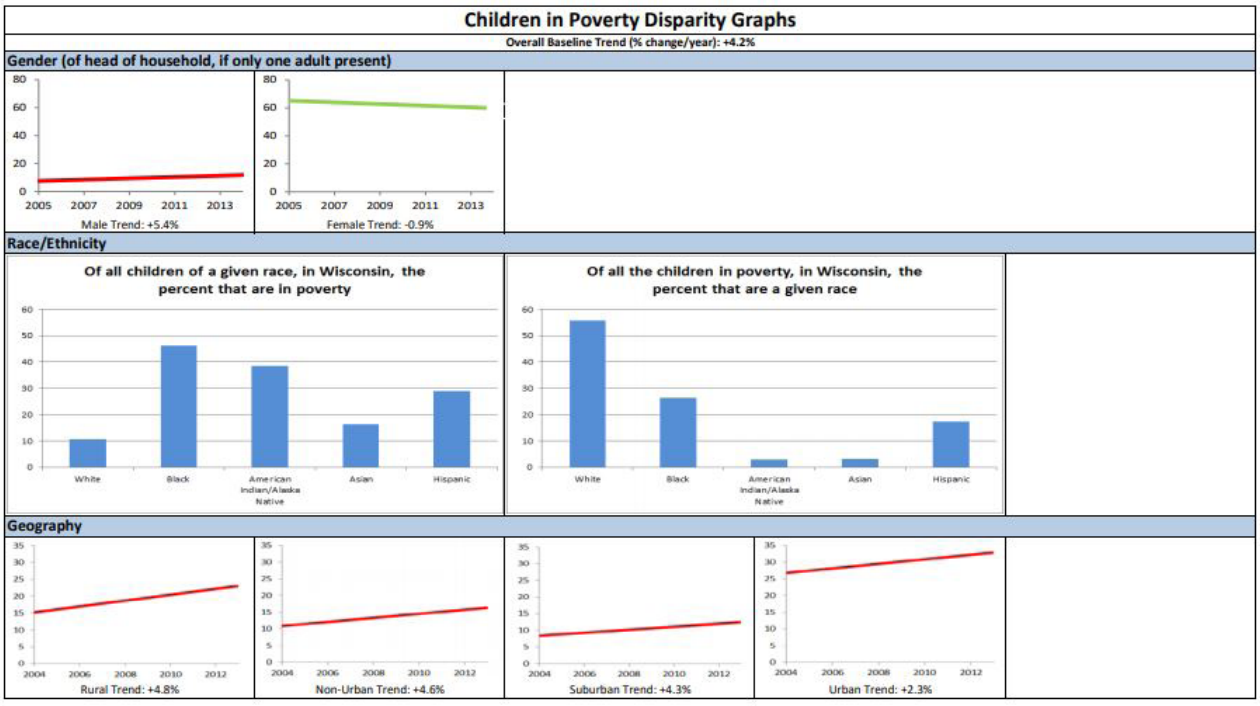


Smoking continues to decline in Wisconsin with the exception of a few key groups identified below. Nevertheless, a significant number of adults continue to smoke, creating chronic health problems and significant costs to the overall system.

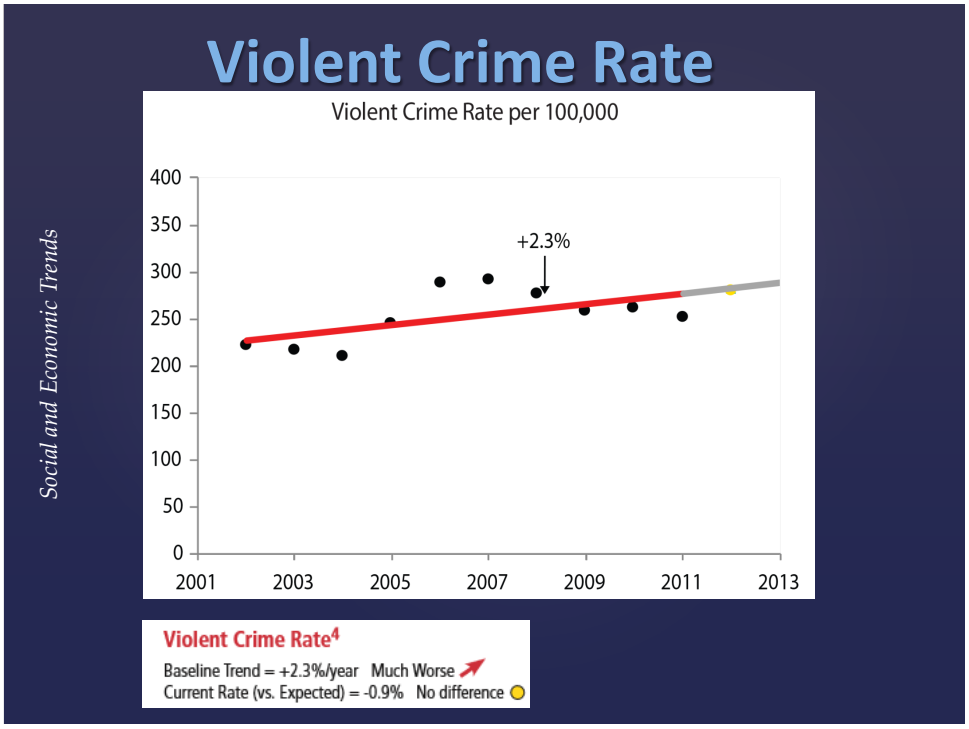


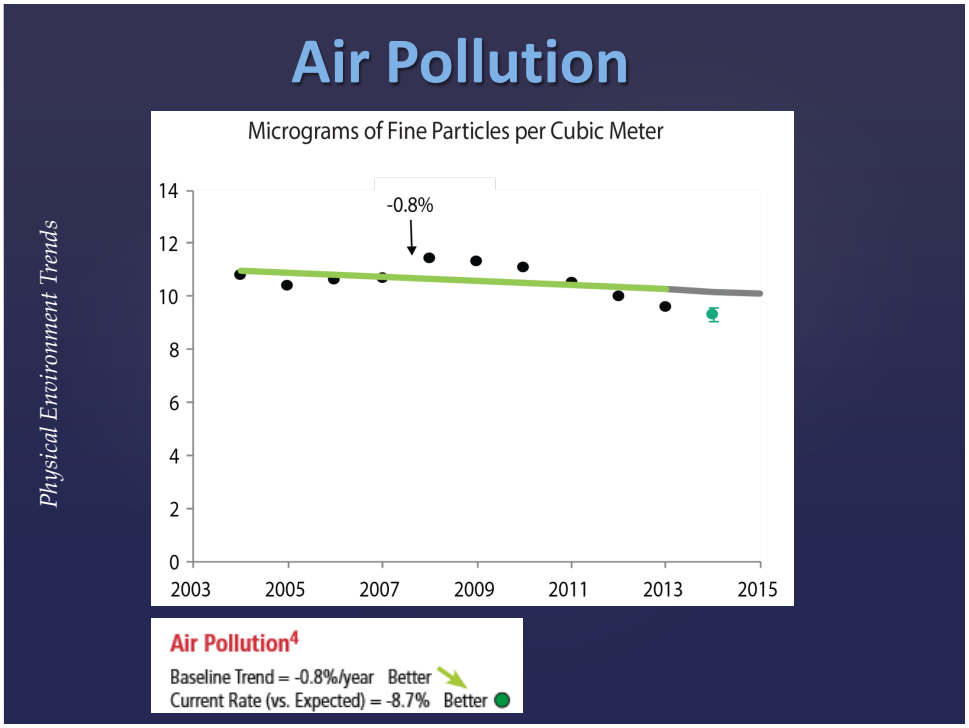
Child poverty shows a steep increase through 2012:



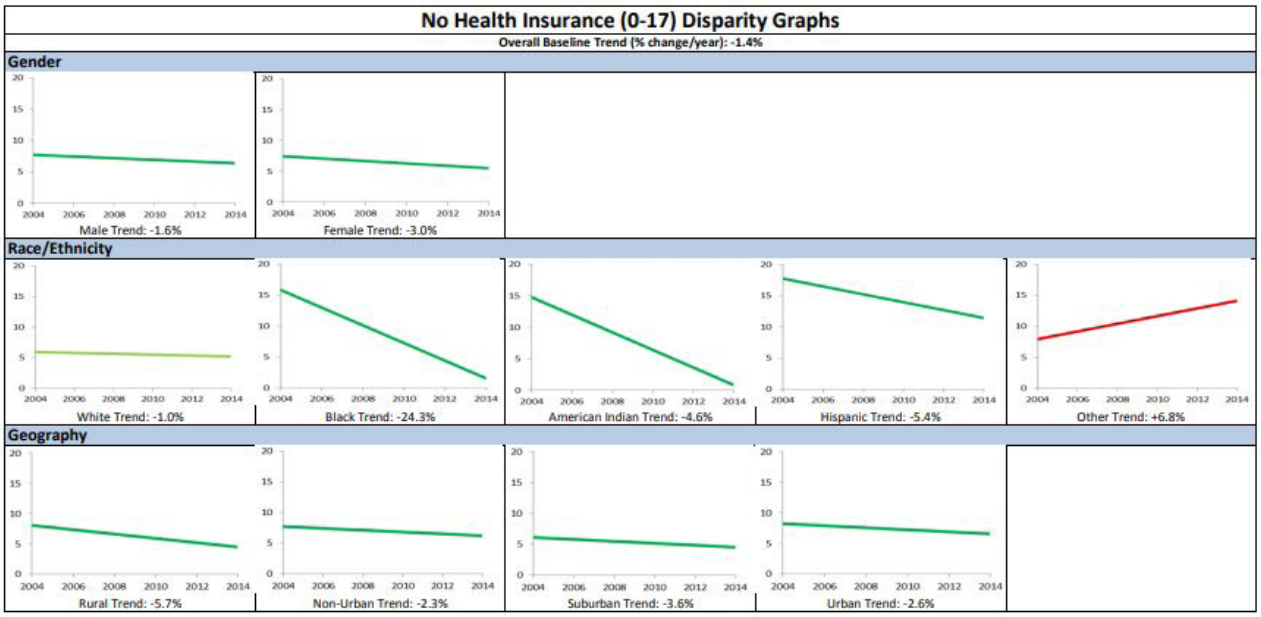


The violent crime rate is actually down slightly from a high a few years ago, but the trend over the range of years measured is up:

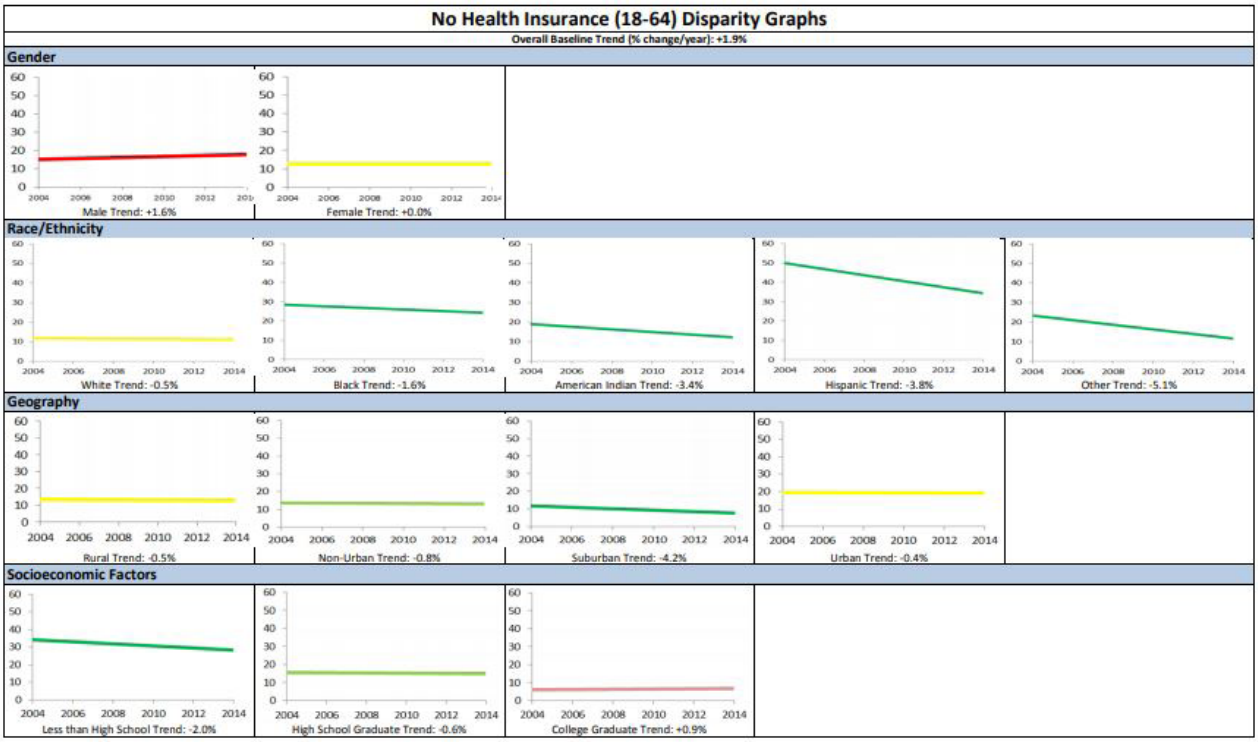




No health insurance rates for children are largely declining.



The no health insurance rates for some groups of adults remains stubborn or is even on the rise.



COUNTY LEVEL HEALTH INDICATORS

The data in the table below is taken from County Health Rankings, a program of the Robert Wood Johnson Foundation. For each category heading in the table (e.g. Length of Life, Health Behaviors, etc.), the 72 Wisconsin counties are ranked in order from healthiest to least healthy, and the first number in each category is the county rank. The remaining numbers in each category are raw numbers, percentages of the population and indexes establishing how counties compare with the State average. This and additional data can be found at http://www.countyhealthrankings.org/.

	Wisconsin	Grant (GR), WI X	Iowa (IO), WI X	Lafayette (LA), WI X
Health Outcomes		14	25	32
Length of Life		11	19	29
Premature death	6,300	5,100	5,700	6,100
Quality of Life		36	39	34
Poor or fair health	15%	15%	12%	14%
Poor physical health days	3.6	3.6	3.3	3.4
Poor mental health days	3.8	3.5	3.4	3.4
Low birthweight	7%	6%	7%	6%
Health Factors		46	20	37
Health Behaviors		43	15	54
Adult smoking	17%	16%	15%	16%
Adult obesity	31%	35%	33%	35%
Food environment index	8.8	8.3	8.6	8.7
Physical inactivity	20%	19%	20%	26%
Access to exercise opportunities	86%	68%	61%	53%
Excessive drinking	26%	28%	25%	25%
Alcohol-impaired driving deaths	36%	30%	28%	44%
Sexually transmitted infections	466.0	237.3	172.2	148.6
Teen births	18	8	10	16
Clinical Care		70	68	64
Uninsured	6%	7%	6%	9%
Primary care physicians	1,250:1	2,010:1	1,390:1	4,190:1
Dentists	1,470:1	2,480:1	2,370:1	4,190:1
Mental health providers	530:1	1,020:1	1,480:1	560:1
Preventable hospital stays	3,971	6,306	6,381	3,322
Mammography screening	50%	41%	37%	36%
Flu vaccinations	52%	41%	46%	46%
Social & Economic Factors		23	11	17
High school graduation	89%	94%	97%	95%
Some college	69%	66%	70%	63%
Unemployment	3.3%	3.2%	2.9%	2.5%

	Wisconsin	Grant (GR), WI X	Iowa (IO), WI X	Lafayette (LA), WI X
Children in poverty	15%	15%	11%	16%
Income inequality	4.3	4.1	4.0	3.8
Children in single-parent households	31%	24%	23%	26%
Social associations	11.6	12.1	12.7	11.3
Violent crime	298	147	124	90
Injury deaths	77	63	79	85
Physical Environment		24	41	21
Air pollution - particulate matter	8.6	9.5	9.3	9.9
Drinking water violations		No	No	No
Severe housing problems	15%	13%	13%	12%
Driving alone to work	81%	77%	80%	76%
Long commute - driving alone	27%	27%	40%	32%

CDC INDICATORS FOR STATE OF WISCONSIN - 2016

Wisconsin Birth Data 2016	State	Rank*	U.S.**
Percent of Births to Unmarried Mothers	37.2	30th	39.8
Cesarean Delivery Rate	26.0	43rd	31.9
Preterm Birth Rate	9.6	25th (tie)	9.9
Teen Birth Rate ǂ	15.0	41st	20.3
Low Birthweight Rate	7.4	34th	8.2

¹ Excludes data from U.S. territories

ǂNumber of live births per 1,000 females aged 15-19

Other Wisconsin Data	State	U.S.
Infant Mortality Rate (Deaths per 1,000 live births)	6.3	5.9
Percentage of Persons Without Health Insurance	6.5	9.0††
Marriage Rate	5.6	6.9
Divorce Rate	2.6	3.2†

WI Leading Causes of Death, 2016	Deaths	Rate***	State Rank*	U.S. Rate**
1. Heart Disease	11,526	154.9	29th	165.5
2. Cancer	11,498	158.0	25th (tie)	155.8
3. Accidents	3,575	55.6	17th	47.4
4. Chronic Lower Respiratory Disease	2,786	38.3	32nd (tie)	40.6
5. Stroke	2,481	33.3	36th	37.3
6. Alzheimer's disease	2,256	29.6	29th (tie)	30.3
7. Diabetes	1,440	19.9	32nd	21.0
8. Kidney Disease	960	13.0	24th	13.1
9. Flu/Pneumonia	888	11.9	34th	13.5
10. Suicide	866	14.7	27th (tie)	13.5

Wisconsin Mortality Data	Deaths	Rate**	U.S. Deaths	U.S. Rate***
Firearm Deaths	664	11.4	38,658	11.8
Homicide	256	4.8	19,362	6.2
Drug Overdose Deaths	1,074	19.3	63,632	19.8

* Rankings are from highest to lowest.
** Rates for the U.S. include the District of Columbia and (for births) U.S. territories. Refer to notes in publication tables for more detail.
*** Death rates are age-adjusted. Refer to source notes below for more detail.
† Excludes data for California, Georgia, Hawaii, Indiana, Minnesota, and New Mexico.
†† Estimates are presented for fewer than 50 states and the District of Columbia due to considerations of sample size and precision.
n/a – Data not available.

Sources: Centers for Disease Control and Prevention Website. Health Insurance data come from Health Insurance Coverage: Early Release of Estimates From the National Health Interview Survey, 2016; 2016 birth data come from National Vital Statistics Reports, Vol. 67, No. 1; leading cause of death data, including firearm, homicide, and drug poisoning mortality data, and infant mortality data come from CDC WONDER and rankings and rates are based on 2016 age-adjusted death rates. For more information on age-adjustment, refer to this report. States are categorized from highest rate to lowest rate. Although adjusted for variations in age-distribution and population size, differences by state do not take into account other state specific population characteristics that may affect the level of the birth characteristic or mortality. When the number of deaths or births events is small, differences by state may be unreliable due to instability in rates. When the number of deaths is small, rankings by state may be unreliable due to instability in death rates.

ALCOHOL CONSUMPTION / ABUSE

Wisconsin is labeled by many sources as the heaviest drinking state in the nation. The average number of drinks consumed by an individual per year in Wisconsin is 148 drinks higher than the national average.

Detox.net analyzed data from the CDC's Behavioral Risk Factor Surveillance System and determined that Wisconsin adults ranked either at the top or among the top three in three categories related to consuming alcohol.

Wisconsin ranked third for the highest percentage of heavy drinkers. According to the study, 8.9 percent of adults in the state participated in heavy drinking over the period of a month, defined by more than two daily drinks for men and one drink for women.

Wisconsin also ranked third when it comes to the highest percentage of binge drinkers, with 24.6 percent of adults consuming five or more drinks on one occasion for men, and four or more drinks for women.

Wisconsin women have the highest percentage adult drinkers of any state, and the second-highest percentage of binge drinkers. Wisconsin men who make more than $75,000 a year were the second-highest percentage of binge drinkers in the country and the third-highest percentage of heavy drinkers.

Young adults (18-24) in Wisconsin were also ranked second when it came to adult drinkers and third in the binge drinking category.

Here in southwest Wisconsin more specifically, county health data indicates Grant County is three percentage points higher in excessive drinking rates than Wisconsin overall, while Iowa and LaFayette Counties come in right at the state average.

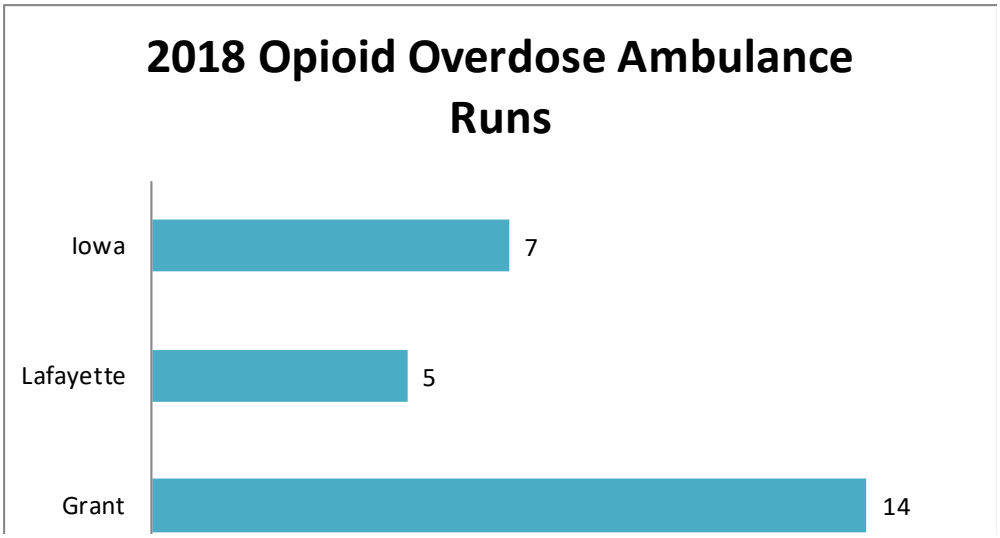
It's reasonable to conclude alcohols consumption in the Southwest Health service area contributes greatly to obesity rates, accident rates, familial abuse, hospitalizations, and other preventable health issues. It is additionally reasonable to conclude that even modest decreases in alcohol use would offer significant opportunities for improvement in the health of our population.

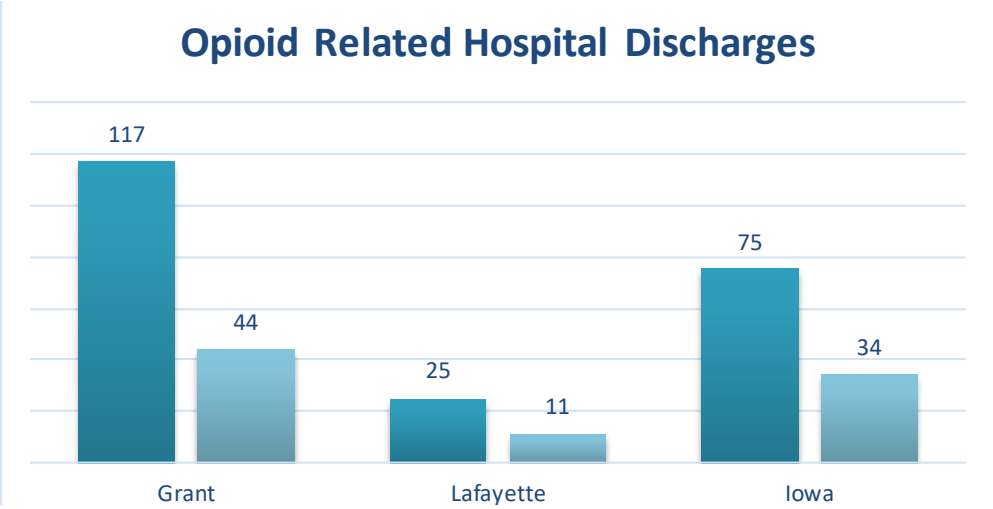
OPIOID MISUSE AND ABUSE

According to the 2016 Drug Overdose Deaths report published by the Wisconsin Department of Health Services, the number of prescription opioid overdose deaths has climbed from approximately 90 in 2011 to approximately 150 in 2017 for males and 75 in 2011 to 100 for females.

For both males and females, the total number of unintentional drug overdose deaths has increased dramatically, from 308 deaths in 2007 to 597 deaths in 2016 for males and from 154 in 2007 to 313 deaths in 2016 for females. Though those numbers have increased for males, the number of drug overdose suicide has decreased 43 percent from 2007 to 2016. The percentage of female suicide drug overdose rose 14 percent in that same time-frame. The top two types of drugs used in overdoses were listed as "multiple" followed by "prescription opioid only." As for demographics, an overwhelming majority of overdose deaths were Non-Hispanic White people with 862 deaths followed by 100 Non-Hispanic African Americans.

Many prescription medications carry the potential for abuse. However, prescription opioids are especially dangerous due to their highly addictive nature. The upward trend of drug deaths due to heroine, the upward trend of abuse of prescription opioids, and the increasing use of prescription pain killers in Wisconsin are cause for alarm. Unlike many small Midwestern cities and towns, Platteville has seen only one death from overdose due to heroin in recent years. To prevent additional harm, collaborative community efforts to prevent opioid misuse and abuse are necessary to avoid or at least curb a major public health crisis.





WATER QUALITY

A clean and dependable supply of water is necessary to maintain a high quality of life. Quality drinking water is something that many of us commonly take for granted. Municipal and other public water supplies are subject to strict guidelines and water quality testing to ensure that the water meets current drinking water standards and is safe to drink. However, there are also over 800,000 private wells which serve as the primary water supply for a large number of people throughout Wisconsin, which are not required to be tested or treated. Determining the safety of private water supplies is the responsibility of the individual homeowner.

Groundwater is vulnerable and if it is not carefully monitored, managed, and protected has the potential to be depleted or degraded. While much has been done to protect groundwater supplies, this region increasingly faces the question of how to improve groundwater quality. Wide-spread land-use activities have resulted in elevated concentrations of contaminants such as nitrate and pesticides throughout the state, including Grant, Iowa, and LaFayette Counties. Cleaning up groundwater after it is contaminated has proven difficult and expensive; therefore it is beneficial to prevent groundwater from becoming contaminated in the first place. (source: Wisconsin Department of Natural Resources)

According to a Wisconsin State Journal report and other news reports around the State, the first systematic study of well water in southwest Wisconsin (performed in November,

2018) found bacterial and chemical contamination at rates as bad as — and possibly worse than — areas targeted by new state water protection rules.

42% of 301 randomly selected wells sampled in Grant, Iowa and Lafayette counties were shown to exceed federal health standards for bacteria that can come from animal or human waste, or for a toxic fertilizer residue. Area wells were found to be contaminated with bacteria and nitrate when tested. Forty-four percent of residents in southwest Wisconsin use private wells for their drinking water.

Well tests conducted in November looked for E. coli and coliform, bacteria that signal the possible presence of other bacteria, viruses and parasites that can cause flu-like symptoms such as nausea, vomiting, fever and diarrhea. Symptoms can be mild to severe to life-threatening. Testing was also done for nitrate, which causes potentially deadly methemoglobinemia, or blue-baby syndrome. Research also links high nitrate consumption to health risks in adults, including thyroid disease and cancer. Diabetes may also be among the risks of contaminated water, but that link is not proven.

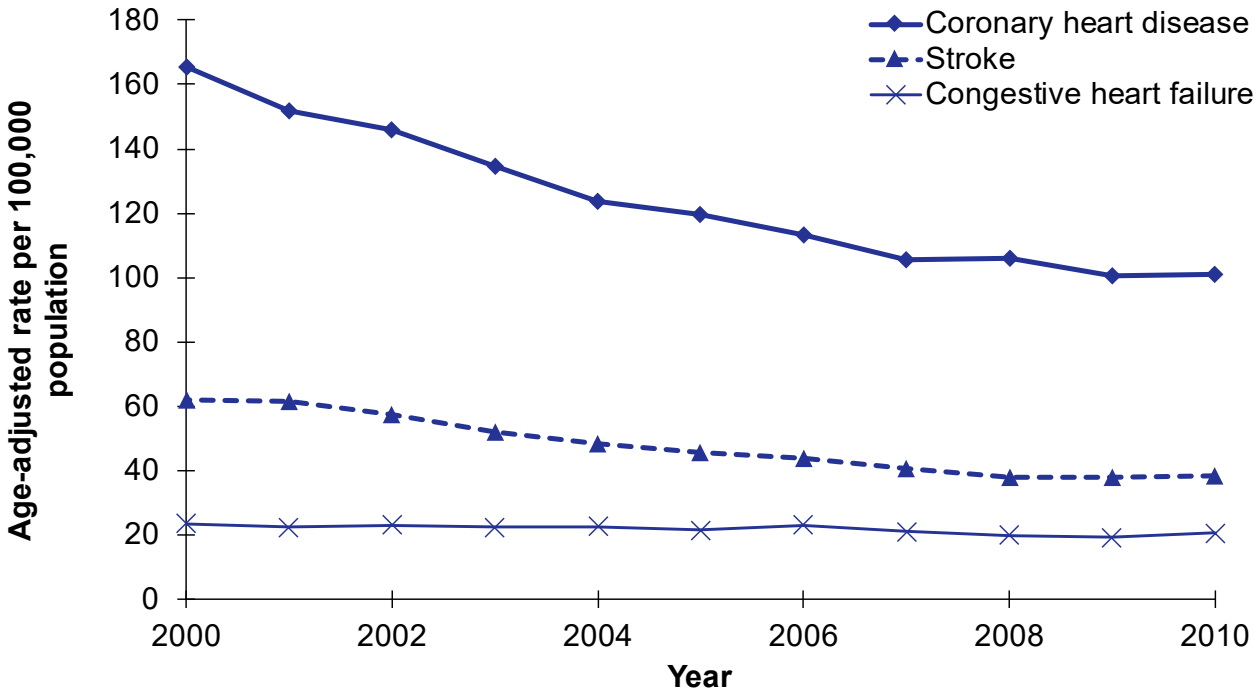
A second round of testing involving more wells is planned for the spring, followed by a close evaluation of pathogens in the water to determine if they are the type that probably originated in dairy or swine manure, or from faulty septic systems.

CARDIOVASCULAR DISEASE

Cardiovascular disease (CVD) is the leading cause of death and one of the leading causes of disability in the United States and in Wisconsin. Cardiovascular disease is defined as all diseases of the heart and blood vessels and includes coronary (ischemic) heart disease (CHD), stroke (cerebrovascular disease), congestive heart failure (CHF), hypertensive disease, atherosclerosis, and others.7 Coronary heart disease, stroke, and congestive heart failure in the majority of CVD deaths.

The decline in the CVD mortality rate per 100,000 population can largely be attributed to declines in CHD and stroke deaths. From 2000 to 2010, age-adjusted mortality rates in Wisconsin for CHD and stroke declined by 34% and 36%, respectively. The mortality rate from congestive heart failure has been relatively stable since 2001. In 2010, the age-

Cardiovascular disease mortality (leading causes), age-adjusted rates per 100,000, Wisconsin, 2000-2010



Source: Wisconsin Interactive Statistics on Health (WISH), Wisconsin resident death certificates.

adjusted mortality rate was highest for CHD (101 per 100,000), followed by stroke (39 per 100,000), and CHF (20 per 100,000).

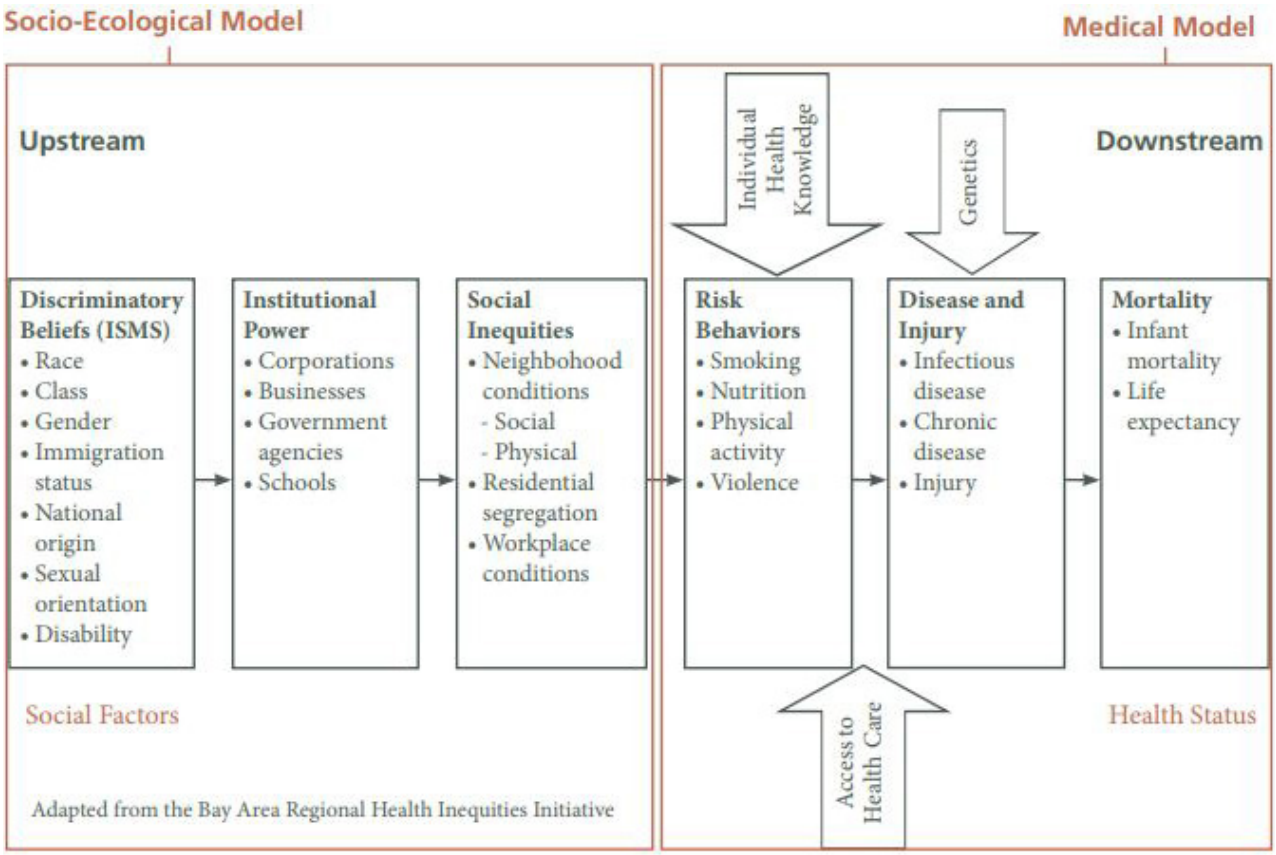
According to the Centers for Disease Control and Prevention (CDC), several factors have contributed to the decrease in CHD and stroke mortality, including early detection, enhanced treatment, and a decline in modifiable risk factors and behaviors (such as smoking). Congestive heart failure is a growing concern as the population ages and the prevalence of contributing diseases and conditions, such as diabetes, obesity, and CHD, increases. (Source: Wisconsin Interactive Statistics on Health).

DISPARITIES / INEQUITIES

Disparities in health and health care occur in many ways and in many forms in both the provision of healthcare and access to healthcare across different racial, ethnic and socioeconomic groups as well as in afflictions or propensities to various conditions. Identifying disparities is the first step to interventions that can reduce the burden of disease or risk factors for a specific health problem or help improve access to care.

This is by no means a comprehensive analysis. Though we know there exists important and highly impactful disparities, the data often does not revel them or cannot be found on the local or regional levels. Some of the previous Wisconsin health trends data offered a glimpse into disparities, and this report will endeavor to clarify additional areas of concern.

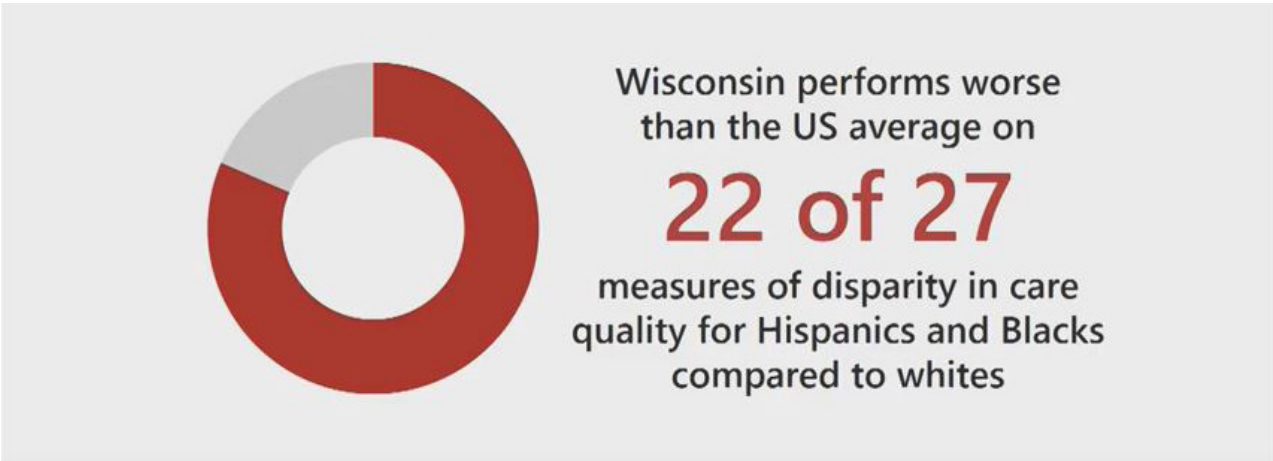
To give disparities some context the following is offered:



- Approximately 33%, or more than 100 million Americans, belong to a racial or ethnic minority population.
- Across the U.S. 51%, or 154 million people, are women.
- Approximately 12%, or 36 million people not living in nursing homes or other residential care facilities, have a disability.
- An estimated 70.5 million people live in rural areas (23% of the population), while roughly 233.5 million people live in urban areas (77%).

Social inequities are disparities in influence and wealth, often accompanied by discrimination, social exclusion, poverty and low wages, lack of affordable housing, exposure to hazards, and the relative absence of social support systems. In the above illustrated framework developed by the Bay Area Regional Health Inequities Initiative, social inequities are represented in a broad sense on the left, 'upstream' side and labeled Social Factors. The right side shows the more immediate medical causes of death, diseases, and risk behaviors, described as 'downstream (Source: Social Inequities, Alameda County Health Department).

The resources we gain through education, income, and the type of jobs we hold determine our health, our children's health, and the likelihood of being healthy in the future. Historical factors must be accounted for when considering inequity. And community-level leadership is required for structural and social change.



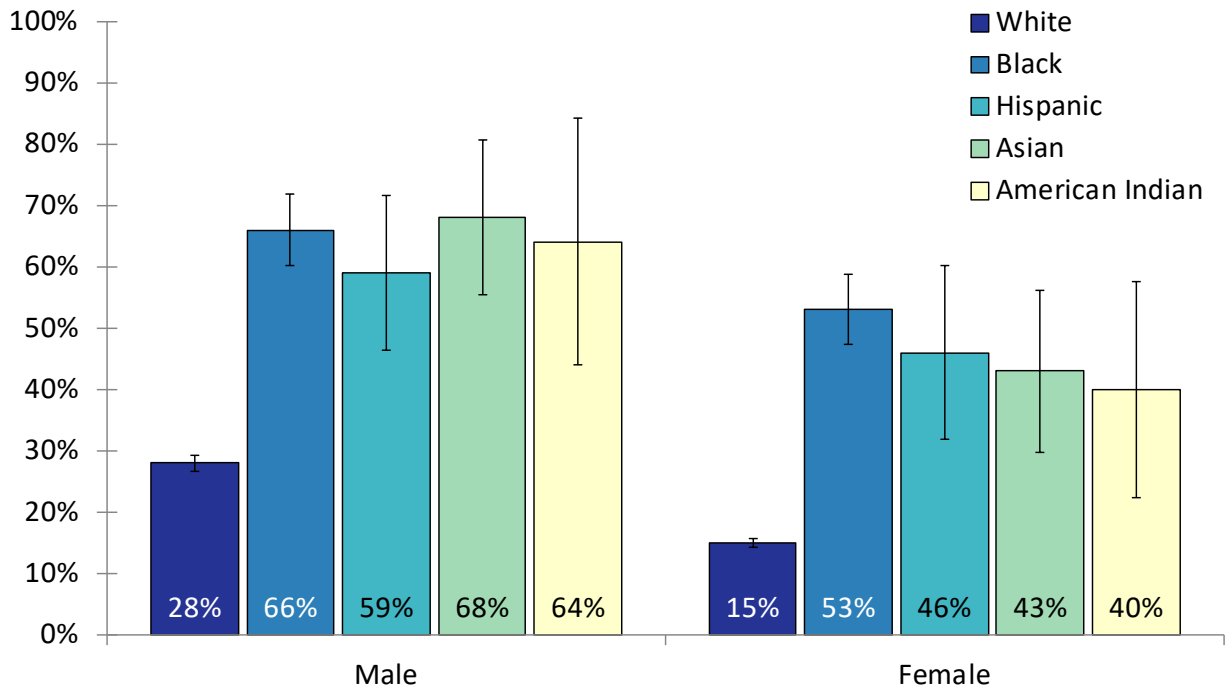
Sources: Wisconsin Health Innovation Program, Wisconsin Collaborative for Healthcare Quality, and the Collaborative Center for Health Equity.

DISPARITIES & CARDIOVASCULAR DISEASE

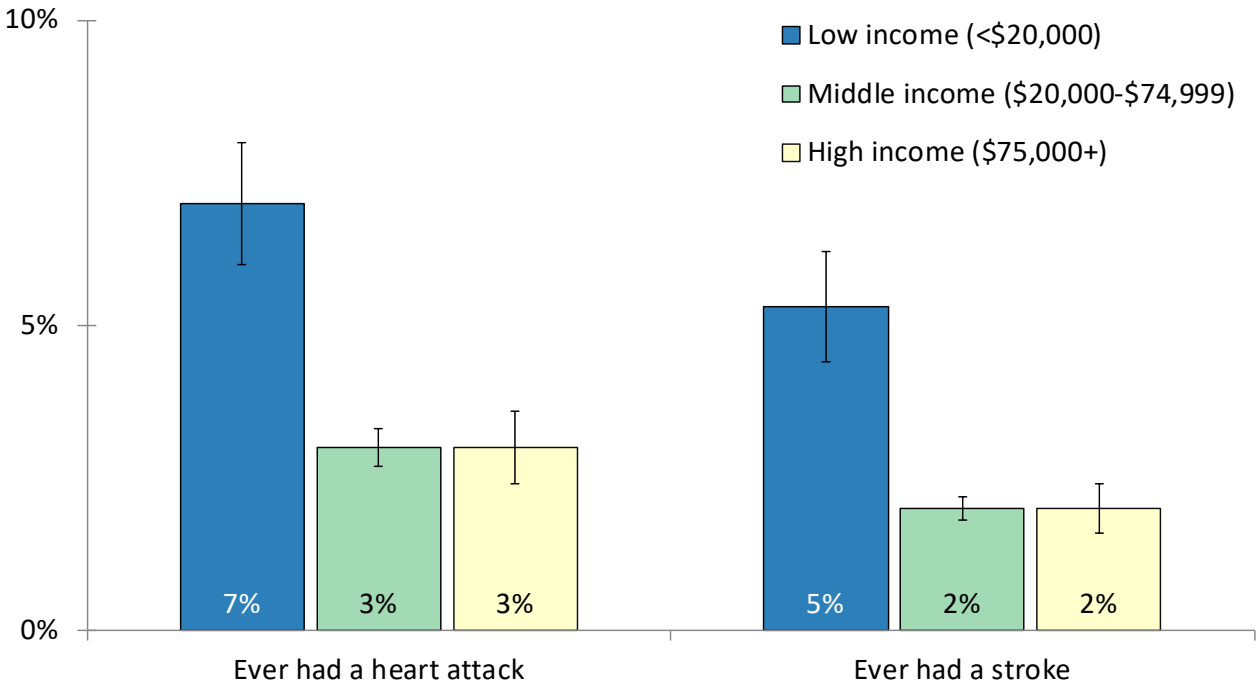
Despite the overall decline in coronary heart disease mortality in Wisconsin, disparities by race/ethnicity have persisted, particularly for premature deaths — those that occur before age 75. As with coronary heart disease, similar disparities were observed for premature stroke deaths in Wisconsin during 2006-2010. Black, Hispanic, Asian, and Native American males who died from stroke were more than twice as likely as were White males to die before the age of 75. Among decedents from stroke, Black females were more than three times as likely to die prematurely as were White females.

Adults with low household incomes were significantly more likely than those with higher household incomes to have had a heart attack, as well as to have had a stroke. Similar differences were observed by education level— there was a significantly higher percentage of adults who have not completed high school to report having had a heart attack (7%) and stroke (4%) compared to those with a high school education or more (data not shown).

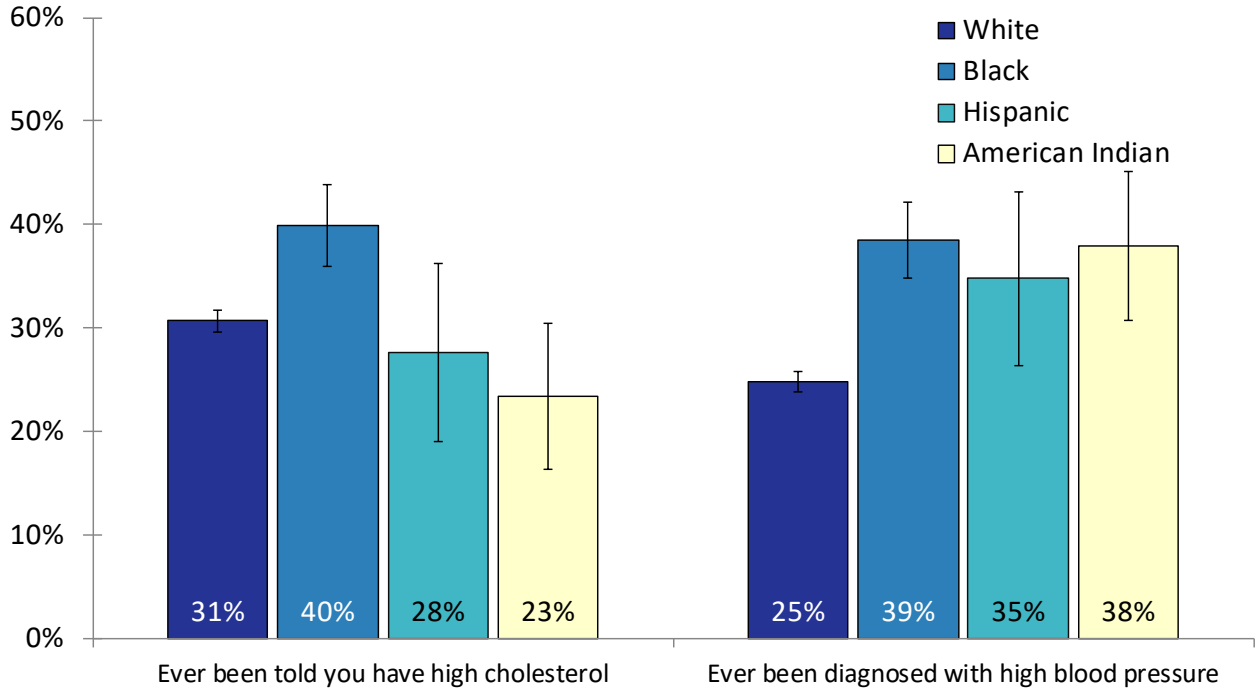
Percentage of stroke deaths under age 75, by race/ethnicity and sex, Wisconsin, 2006-2010



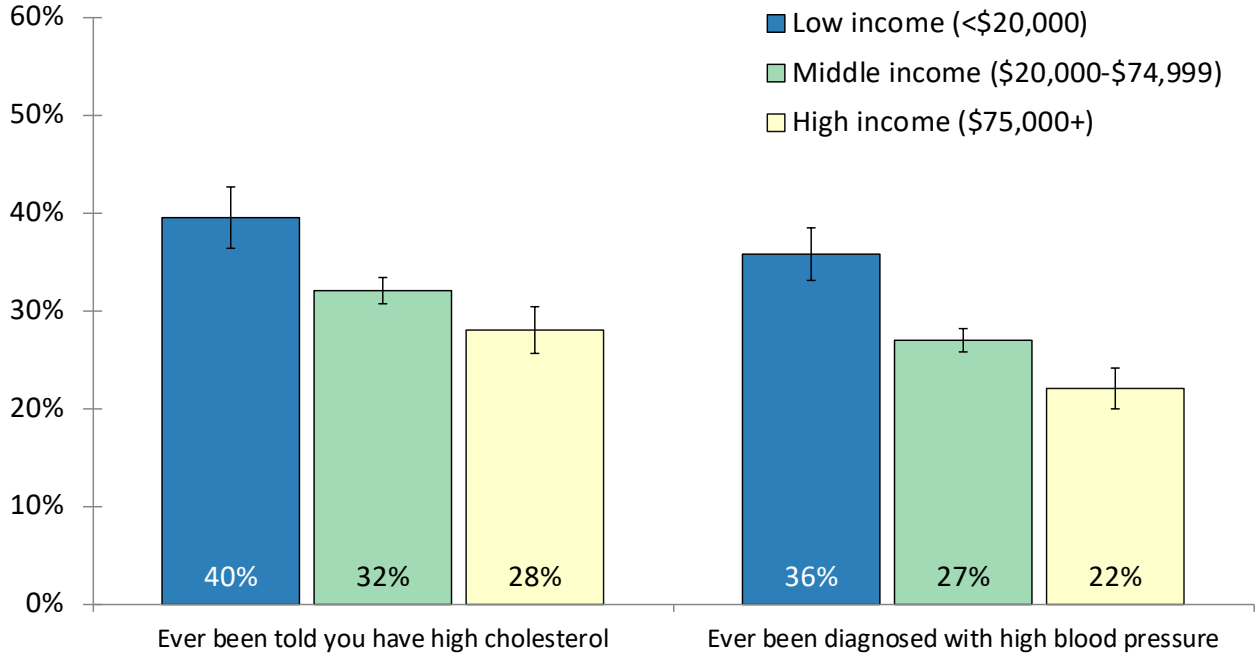
Age-adjusted rates of heart attack and stroke among Wisconsin adults, by household income, 2008-2011



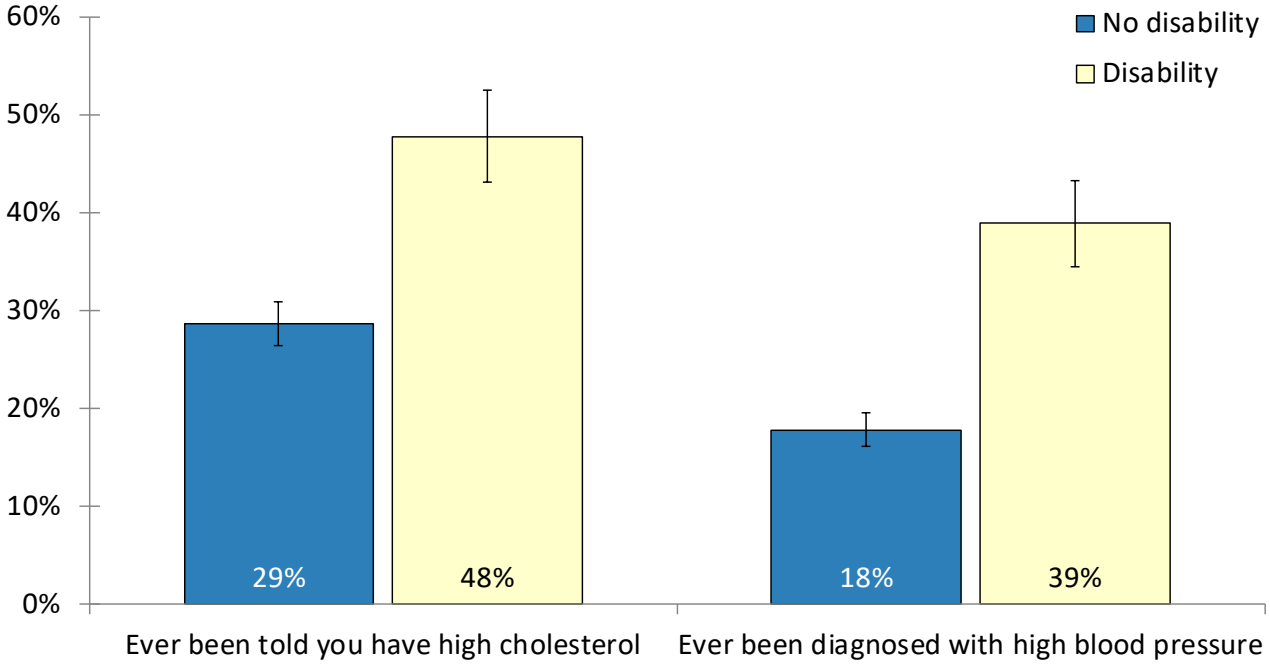
Age-adjusted rates of high cholesterol and high blood pressure among Wisconsin adults, by race/ethnicity, 2009 and 2011



Age-adjusted rates of high cholesterol and high blood pressure among Wisconsin adults, by household income, 2009 and 2011



Rates of high cholesterol and high blood pressure among Wisconsin adults ages 18-64, by disability status, 2009 and 2011



OTHER DISPARITIES – LGB AND TRANSGENDER HEALTH ISSUES

Transgender patients are especially vulnerable in healthcare settings and often face discrimination. Many are unable to find competent, knowledgeable, and culturally appropriate health care. Lack of provider knowledge is a significant barrier as is provider and health care worker attitudes toward transgender people.

In Wisconsin, 80.1% of **transgender and gender non-conforming (TGNC)** youth do not have a medical provider of any kind that is competent in their health needs as a transgender, nonbinary, or gender expansive/nonconforming person *(Source: UW School of Medicine and Public Health's Wisconsin Transgender Youth Community Needs Assessment 2017).* In addition, 27.6% of the aforementioned report's survey respondents avoided or were unable to access necessary healthcare within the last year. And, although 80.7% of respondents have health insurance, only 38.3% have coverage for even some kinds of TNG-specific or transition-related healthcare. In fact, only 2.3% — just 7 individuals — have insurance that includes coverage for mental health care, puberty blockers, gender-affirming hormones, and gender confirmation surgeries.

Among respondents disclosed their gender identity to medical and mental health providers: 78.7% experienced harm from a medical provider, and 64.1% experienced harm from a mental health provider. These instances of harm included: 1) negative language from providers that belittled, insulted or ridiculed them as a TGNC person; 2) denial of care when providers refused to discuss their needs as TGNC youth, refused to examine them, refused to initiate care, or ended care; 3) denial of identity when providers directly or indirectly discouraged, questioned, or refused to acknowledge their TNG identity; and 4) incompetence from providers who said they could not provide care to TNG people due to a lack of knowledge or experience. *(Source: Human Rights Campaign's 2018 Health Equality Index Report).*

A full third of respondents to the U.S. National Transgender Discrimination Survey (NDTS), conducted in 2015 by the National Center for Transgender Equality, reported having had an experience, such as verbal harassment or refusal of care due to their gender identity or expression. Nearly a quarter of those surveyed said they had to teach their provider about appropriate treatment in order to get the care they needed.

The prevalence of suicide attempts among respondents to the 2015 National Transgender Discrimination Survey is 41 percent, which vastly exceeds the 4.6 percent

of the overall U.S. population who report a lifetime suicide attempt and is also higher than the 10-20 percent of lesbian, gay, and bisexual adults who report ever attempting suicide. Much remains to be learned about underlying factors and which groups within the diverse population of transgender and gender non-conforming people are most at risk.

Analysis of other demographic variables found prevalence of suicide attempts was highest among those who are younger (18 to 24: 45%), multiracial (54%) and American Indian or Alaska Native (56%), have lower levels of educational attainment (high school or less: 48-49%), and have lower annual household income (less than $10,000: 54%). Respondents who are HIV-positive (51%) and respondents with disabilities (55-65%) also have elevated prevalence of suicide attempts. In particular, 65 percent of those with a mental health condition that substantially affects a major life activity reported attempting suicide. Importantly, respondents who experienced rejection by family and friends or discrimination, victimization, or violence at the hands of various elements of society, including the medical community, had a greatly elevated prevalence of suicide attempts.

More specific to southwest Wisconsin, access to TGNC competent providers is sparse yet significant. At Southwest Health, two physicians now have capabilities and knowledge of the LGBTQ community and basic essential services for transgender patients, including prescribing hormone therapy. The Southwest Behavior Services outpatient clinic is also home to one mental health counselor skilled in treating LGBTQ and TGNC patients. These services are not currently listed in any prominent way, and awareness is a significant obstacle to accessing care. One Southwest Health provider also sees patients at the UW Platteville Student Health Services clinic and is, therefore, able to provide essential services to the TGNC student community on that campus. A support group operated by the Southwest Wisconsin Rainbow Alliance provides as of July 2018 vital assistance to the LBGTQ community, especially in Platteville as the group meets there at the Public Library monthly.

With the exception of one one-hour optional course, the health care workforce at Southwest Health has had no other training specific to LGBTQ or TGNC affirming care, something that would greatly improve quality, access, and patient experience. Anecdotal information from our community indicates the health care workforce at large is largely unaware of the complex issues related to providing LGBTQ affirming care.

OTHER DISPARITIES – HEARING IMPAIRED

According to the National Institute on Deafness and Other Communication Disorders (NIDCD), approximately 15 percent of American adults (37.5 million) aged 18 and over report some trouble hearing. According to the National Health Interview Survey, 15.7 percent of Wisconsinites have some significant form of hearing loss.

Furthermore, two to three out of every 1,000 children in the United States are born with a detectable level of hearing loss in one or both ears (NIDCD statistics), and more than 90 percent of deaf children are born to hearing parents.

Age is the strongest predictor of hearing loss among adults aged 20-69, with the greatest amount of hearing loss in the 60 to 69 age group. Men are almost twice as likely as women to have hearing loss among adults aged 20-69. Non-Hispanic white adults are more likely than adults in other racial/ethnic groups to have hearing loss; non-Hispanic black adults have the lowest prevalence of hearing loss among adults aged 20-69. About two percent of adults aged 45 to 54 have disabling hearing loss. The rate increases to 8.5 percent for adults aged 55 to 64. Nearly 25 percent of those aged 65 to 74 and 50 percent of those who are 75 and older have disabling hearing loss.

About 28.8 million U.S. adults could benefit from using hearing aids. Among adults aged 70 and older with hearing loss who could benefit from hearing aids, fewer than one in three (30 percent) has ever used them. Even fewer adults aged 20 to 69 (approximately 16 percent) who could benefit from wearing hearing aids have ever used them.

Studies suggest those with hypertension have a greater incidence of hearing loss than those without. Hearing loss is also twice as common in individuals who have diabetes than in those without.

Those with less than 12 years of formal education are five percent more likely to have a hearing loss than those with more than 12 years education. Family income is also a source of disparity for those with hearing loss, and again about five percent more people in the under $10,000 per year income category experience hearing loss in comparison to those with annual incomes greater than $50,000.

Importantly, the prevalence of hearing impairment is also about five percent greater at all ages among populations living in rural areas. In fact, the Hearing Loss Association

of America (HLAA) estimates 20 percent of residents in southwest Wisconsin live with a hearing loss, a number nearly five percent greater than urban areas and national averages.

Regarding effects of hearing loss, mild to moderate hearing loss left untreated leads to cognitive decline in adults. People living with untreated hearing loss are twice as likely to be depressed than those who have normal hearing or those who wear hearing devices. According to the Better Hearing Institute, hearing loss negatively impacts household income by an average of $12,000 per year.

Hearing loss often has the impact of isolating those affected, and because the senior population (already often living with relative isolation from social interaction) is at greater risk of hearing loss, this has a corresponding impact on their health and quality of life. Exclusion from communication can have a significant impact on everyday life, causing feelings of loneliness, isolation, and frustration, especially among older people.

The World Health Organization estimates un-addressed hearing loss poses an annual global cost of US$ 750 billion. This includes health sector costs (excluding the cost of hearing devices), costs of educational support, loss of productivity, and societal costs.

New technology is currently available for public spaces (hearing loops) that can improve access to social, education, and health services. Hearing loops in medical offices and pharmacies, for example, can make differences for those with hearing loss in terms of the quality of health care and their ability to understand and follow through with care instructions. Additionally, raising awareness especially among employers about the needs of people with hearing loss, may serve to decrease negative family financial impacts of hearing loss.

OTHER DISPARITIES – HEALTH LITERACY

Only 12% of U.S. adults are proficient in their capability to obtain, process, and understand basic health information and services needed to make appropriate health decisions *(source: Kutner M, Greenberg E, Jin Y, and Paulsen C. The health literacy of America's adults: Results from the 2003 National Assessment of Adult Literacy, Washington, DC: U.S. Department of Education, National Center for Education Statistics).*

Our industry's common use of dense, sophisticated, and complex language creates frequent demands on patients they are unable to meet. In essence, that is our health literacy challenge.

The annual cost of low health literacy in the State of Wisconsin alone is estimated at $3.4 to $7.6 billion *(source: Vernon J, Health policy brief: The high economic cost of low health literacy in Wisconsin, February 2009).* While one might effectively challenge the specific numbers, the sheer magnitude of the problem demands action.

While some attempts are made in this organization and in others to evaluate and improve the readability of written health-related materials for patients, entirely insufficient attention is given to the myriad of documents, requests, teachings, and other patient-directed communications used in health care settings or to other factors of the overall literacy environment of health care organizations. A review of the literature *(Vernon J, Trujillo A, Rosenbaum, S, DeBuono B. Low health literacy: Implications for national health policy. October 2007)* suggests improving readability alone is insufficient to address the needs of patients with low health literacy and instead tends to mostly benefit those with higher skills and education levels. In moving beyond readability, hospitals can provide innovative opportunities for patients with low health literacy skills to communicate concerns about their health and health care.

In analyzing the economic cost of low health literacy, Vernon cites numerous studies demonstrating the influence of low health literacy on health care outcomes and resource use. Individuals with limited health literacy:

- Report poorer health status.
- Are less likely to use preventive care.
- Are more likely to be hospitalized and experience poor disease outcomes.

- Experience higher mortality rates.
- Are less likely to comply with treatment and self-care.
- Make more medication or treatment errors.
- Lack the skills needed to navigate the health care system.
- Are responsible for higher inpatient costs and overall health care spending by Medicare and Medicaid.

"Literacy skills are the strongest predictor of health status, more than age, income, employment status, education level, or racial/ethnic group." – *Partnership for Clear Health Communication*

Although health literacy is commonly defined as an individual trait—the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions *(Ratzan and Parker, 2000)*—there is a growing appreciation that health literacy does not depend on the skills of individuals alone. Health literacy is the product of individuals' capacities and the health literacy–related demands and complexities of the health care system *(Baker, 2006; Rudd 2003)*. System changes are needed to align health care demands better with the public's skills and abilities *(Parker, 2009; Rudd, 2007 and Ten Attributes of Health Literate Health Care Organizations, Brach, Keller, Hernandez, Baur, Parker, Dreyer, Schyve, Lemerise, and Schillinger, June 2012).*

From the perspective of patient experience, the perspective of just culture, and the perspective of high reliability, patients regularly encounter unreasonable barriers to comprehension in the health care system. These obstacles, while not related to the processes of care themselves, are nonetheless frequently harmful to patients. On the national front, the Joint Commission released its Roadmap for Hospitals to advance effective patient communication, cultural competence, and family/patient-centered care, and the U.S. Department of Health and Human Services issued a National Action Plan to Improve Health Literacy.

Health literate health care organizations recognize that miscommunication negatively affecting patient care and outcomes is common. Misunderstandings occur not only in clinical situations, such as when treatment options and medicine instructions are discussed, but also when receptionists ask for a signature on a form and billing staff discuss covered services and financial responsibilities. Health literate health care organizations also recognize that individuals who ordinarily have adequate health

literacy may have difficulty processing and using information when they are sick, frightened, or otherwise impaired. Systems must be redesigned to accommodate the unpredictability of limited health literacy skills (Rudd, 2010). Finally, health literate health care organizations recognize that literacy, language, and culture are intertwined, and their health literacy efforts augment efforts to reduce disparities and improve the organization's linguistic and cultural competence (Andrulis and Brach, 2007; Sudore et al., 2009). Everyone benefits from communication that is clear and easy to understand.

Ten attributes of health literate health care organizations *(Brach, Keller, Hernandez, Baur, Parker, Dreyer, Schyve, Lemerise, and Schillinger, June 2012):*

1. Leadership that makes health literacy integral to its mission, structure, and operations.

2. Integrates health literacy into planning, evaluation measures, patient safety, and quality improvement.

3. Prepares the workforce to be health literate and monitors progress.

4. Includes populations served in the design, implementation, and evaluation of health information and services.

5. Meets the needs of populations with a range of health literacy skills while avoiding stigmatization.

6. Uses health literacy strategies in interpersonal communications and confirms understanding at all points of contact.

7. Provides easy access to health information and services and navigation assistance.

8. Designs and distributes print, audiovisual, and social media content that is easy to understand and act on.

9. Addresses health literacy in high-risk situations, including care transitions and communications about medicines.

10. Communicates clearly what health plans cover and what individuals will have to pay for services.

OTHER DISPARITIES – PLAIN CLOTHES COMMUNITY

The Plain Clothes Community (Amish population) in southwest Wisconsin is significant. And at significant risk. Though they make up a small percentage of the population (12 to 26 residents per 1,000 population), they experience seven of the ten statewide pediatric Hib cases and 100% of the fatalities caused by this disease from 2001 to 2011.

Haemophilus influenzae is a bacterium that can cause a variety of serious diseases, including sepsis (bloodstream infection), meningitis (inflammation of the tissues covering the brain and spinal cord), pneumonia, and epiglottitis (inflammation and swelling of the cartilage that covers the windpipe). There are many different strains or types of haemophilus influenzae, including the vaccine-preventable type b (Hib). Other types or strains (non-type b) of haemophilus influenzae can cause infection similar to Hib but generally occur among the elderly or among people with weakened immune systems.

Prior to the vaccine, haemophilis influenzae type B (Hib) was the leading cause of sepsis and meningitis among children age two months to five years in the U.S. After wide-scale use of this vaccine in the mid-1980s, Hib cases have dropped by 99% in the U.S. Maternal antibodies and breastfeeding are protective against Hib during the first six months of life; however, unimmunized children who get a Hib infection under the age of two years may not develop immunity and are susceptible to repeat infections. Among communities in which the vaccine is not widely used, the rate of Hib infection remains high. Certain populations choose not to vaccinate their children for religious or philosophical reasons. In the Amish community, vaccination rates tend to be low even though vaccination is not prohibited by religious doctrine.

Source: Clifford Grammich, Kirk Hadaway, Richard Houseal, Dale E. Jones, Alexei Krindatch, Richie Stanley, and Richard H. Taylor. 2012. 2010 U.S. Religion Census: Religious Congregations & Membership Study. Association of Statisticians of American Religious Bodies.

ADDITIONAL CHARTS REGARDING DISPARITIES – APPENDIX 1

Additional health disparities exist in Wisconsin and are identified in data for a wide variety of health conditions, exposure to hazards, and health outcomes. It is important to recognize the impact that social determinants have on health outcomes of specific populations. As does the national Healthy People 2020 initiative, Southwest Health strives to improve the health of all groups.

Healthy People 2020 defines health equity as the "attainment of the highest level of health for all people. Achieving health equity requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and the elimination of health and health care disparities."

Though the mission and goals at Southwest Health have traditionally focused on services and improvements to services and access to those services, more focus is being shifted to health improvement.

In the accompanying implementation and in the coming years, Southwest Health will strive to unravel that complexity and reduce disparities, and improve health equity and the health of our population more generally across southwest Wisconsin. **To better understand disparities and their impacts, additional data is included in Appendix 1 on a range of issues, including:**

- Diabetes and pre-diabetes
- Diabetes complications
- Hospitalizations from diabetes
- Cancer incidence and mortality
- Breast cancer and cervical cancer
- Cancer screening rates
- Arthritis
- Influenza hospitalizations
- Asthma
- Blood lead levels in children
- Low birth-weight
- Motor vehicle risk behaviors
- Types of exposure to violence
- Mental health
- Smoking/tobacco use
- Attempts to quit smoking
- Sleep
- Suicide
- Suicide risks
- Depression
- Vegetable consumption
- Food security
- Obesity
- Dental care
- Physical inactivity

DISPARITIES - CONCLUSIONS

As seen in the above data and in numerous other reports, national and local health trends, health outcomes, and health factors are markedly different for various subgroups within our population. Efforts to improve health must consider these disparities, for it is, indeed, disparities where gaps in needs are concrete, discernible, and rectifiable.

Certainly, the social determinants of health identified earlier in this report weigh heavily on the health of any population. However, individual health and social needs and disadvantages, such as disabilities, age, gender and sexual identity, race, ethnicity, income, education levels, and more, each contribute in profound ways to the health of our communities. And when these disadvantages intersect (those who may, for example, live in poverty and identify as a member of a minority class), the impact of those disadvantages multiplies.

When an individual has life challenges in meeting basic needs represented on Maslow's hierarchy of needs (shelter, food, safety, etc), getting a flu shot or mammogram or making an appointment for a physical exam or getting out to exercise are not likely getting done. In other words, there simply is not room for health among the priorities of vulnerable populations.

Hidden within the discussion above on health literacy specifically and disparities more generally is that mass media messaging around health issues is only very rarely related to social, environmental, or cultural contributors this report begins to illuminate. The vast majority of media stories focus almost exclusively instead on individual choices, on unhealthy personal behaviors, or on genetics. The extent to which health outreach can communicate in ways that tap into other deeply held values and help our communities better understand the impact of our culture on health, the greater our opportunities to transform the health of our populations.

Here in southwest Wisconsin, any one individual minority population may be relatively small, yet they are nonetheless individually significant and represent real people with real barriers to accessing health care and leading healthy lives. Moreover, when combined these populations are both inter-sectional and large, presenting major challenges throughout our area to bringing more equitable care and more equitable health and wellness to southwest Wisconsin.

Health care organizations around the country are leveraging the principles of diversity, equity, and inclusion to drive excellence in the delivery of patient-centered care. By shining light on these principles with system-wide training on how to practice self-awareness, recognize and mitigate unconscious bias (also known as implicit bias and defined as prejudice or unsupported judgments in favor of or against a person or group as compared to another, in a way that is usually considered unfair), and provide more welcoming and affirming interactions with diverse people, organization's are also improving the patient experience, improving health, and advancing patient safety.

Diversity, equity, and inclusion are essential elements of a strong cultural alignment strategy because they demonstrate how an organization values the diversity of its workforce as well as the people they serve. Lacking specific training, health care workers are largely unaware of their unconscious biases and how those biases impact behavior toward others. In health care, unconscious biases can be especially harmful as they lead caregivers and clinicians to make poor decisions regarding the care of their patients. These decisions often negatively impact the patient experience and can compromise patient safety and result in poor outcomes.

PRIMARY RESEARCH

For this needs assessment, this study's authors created several opportunities to glean new primary information on health needs from our local population. They include: a stakeholder survey, an employer survey, and a community survey.

The Community Survey was an online series of 26 questions offered widely around the southwest Wisconsin area. It was a very popular and useful tool with 638 respondents (compared with 447 survey responses in 2016). Respondents included people from diverse zip codes around southwest Wisconsin, all adult age levels, including many young respondents, presumably students. Eighty-two percent of the total are female, 17 percent male, and 0.5 percent transgender or gender non-conforming. Importantly, all but seven respondents reported having health insurance.

Respondents largely claim to be in overall good health, nine percent in excellent health, and about 10 percent in fair or poor health. Ninety-one percent claim no issues in accessing the healthcare they need.

Thirty-eight percent report being concerned about their own health or the health of a family member, with diabetes, weight, aging, and insurance being foremost among their reported concerns. Thirty-three percent have been told by a doctor they have an issue with their weight, 26 percent with high blood pressure, 25 percent cholesterol, 25 percent depression, and 22 percent arthritis.

Just five percent report not having had a general health exam within the last five years, 56 percent no colonoscopy, 26 percent no mammogram (female only), 20 percent no diabetes test, and 20 percent no flu shot. Twenty-five percent report having seen a mental health provider for stress and/or depression in the previous 12 months. Twenty-seven percent of those report having had some difficulty obtaining mental health treatment.

Regarding physical activity, forty-five percent report having engaged for 30 minutes a day on just zero, one, or two days per week with the remainder exercising three or more. On fruit and vegetable consumption, 33 percent report eating them on just zero, one, or two days per week. The majority (54 percent) describe themselves as somewhat overweight with only 12 percent reporting they are obese (in comparison to county rankings that report a much higher obesity rate of 35 percent). Nevertheless, 63

percent indicated they are attempting to lose weight. A full 91 percent claim to know how to prevent long-term health issues like obesity, heart disease, diabetes, high blood pressure, smoking, etc, while 47 percent report "My family would be better off if I knew more about healthy cooking."

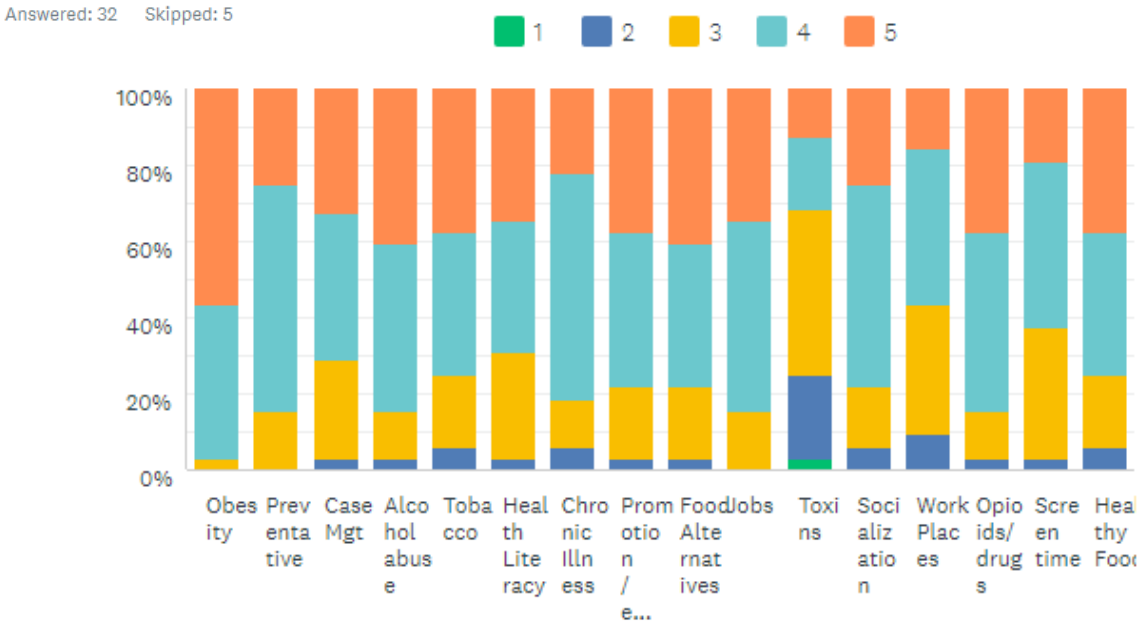
Ninety-eight percent report feeling their household is safe. Ninety percent indicate theirs is a healthy household. When asked what they believe is healthy about their community, the top answers are walking trails, parks, gyms, farmers' markets, and grocery stores. When asked what they believe is unhealthy about their communities, fast food, restaurants, drinking/alcohol top the list. When asked to identify their most pressing concern for their families and communities, the most cited responses are weight loss, eating healthy, affordable care, insurance, and mental health. Regarding what they believe Southwest Health can do to improve community health, often cited responses include more education and healthy living classes (especially with regard to cooking and healthy eating), mental health, and providing more practitioners and services locally.

The Stakeholder survey was an online series of 14 focused questions offered to health care leaders and providers around southwest Wisconsin. There were 37 respondents (compared with 26 respondents to a similar 2016 survey). The preponderance of this year's respondents indicated they work in Platteville.

Mental health, obesity, and insurance/costs (in that order) are the three top concerns among respondents. With regard to mental health, 81 percent of respondents indicated they believe there is relatively little access to providers, especially in comparison to primary care practitioners. As for other healthcare services and medical specialties, respondents recorded widely differing perspectives on access and availability in southwest Wisconsin. Respondents also offered a diverse range of specific suggestions with regard to improving access to this long list of services and specialties. The healthiest thing about southwest Wisconsin communities respondents cited nearly unanimously is the walking and cycling trails. The least healthy they cited as obesity, alcohol, food, and mental health, in that order. When asked what successful health improvement initiatives must include, respondents most frequently noted collaborating or engaging others around the community to sustain efforts.

And when prompted to rate a list of commonly accepted determinants of health, respondents offered the following:

Health Improvement Priorities: How important is it to the overall health and well being of southwest Wisconsin residents that each of the following issues be addressed (1 = not important, 5 = very important)?



The Employer Survey was an online series of 12 questions offered to leaders of the business of the Platteville, Cuba City, and Potosi Chambers of Commerce, and a total of just 15 responses were received (compared to 42 responses to the 2016 survey).

Fifty-nine percent of the survey's respondents agree or strongly agree with the statement, "Overall, the health needs of southwest Wisconsin's workforce are being met." One-hundred percent recognize their employees' health is important to the success of their workplace. And just eight percent disagree that providing a healthy work environment is a priority at their workplace. They are somewhat less convinced, however, that their own workplace promotes healthy living. Most indicated they had the educational knowledge-based resources that they need to create a healthy work environment. Eight percent do not offer a clean and sanitary location for expressing breast milk.

The vast majority (about 90%) believe workplaces should actively promote physical activity. Many fewer thought their workplace actually does promote activity. A three fourths majority also feels workplaces should encourage healthy eating and discourage unhealthy foods.

One-hundred percent of survey respondents say workplaces should provide support for employees in difficult times. Many fewer believe their workplace does offer this support.

In terms of various elements that help create a healthy workplace (access to clean water, refrigerator access, microwave access, tobacco free, a policy on not marketing unhealthy foods in the workplace, and employee insurance for preventive services), there was extensive agreement among respondents that the items are, indeed, important.

Most respondents also agreed on the importance of supporting community partnerships that reduce chronic disease incidence as well as the need for workplaces to provide education or other programs or on offering workplace incentives to improve health.

Businesses of all sizes were represented by the respondents, including workplaces with greater than 50 employees (38 percent).

OTHER NEEDS ASSESSMENTS

This study's authors reviewed health needs assessments from the county health departments of the three counties in our services area: Grant, Iowa, and Lafayette. GCHD's report was published in 2014 and those of ICHD and LCHD were published in 2016 and 2015 respectively. The basic findings and insights in these reports inform ours. As a not-for-profit health care system serving large portions of all three counties, however, our priorities, our staff, and our activities directed toward meeting community health needs naturally differ from the specifics of these county health departments.

OTHER FACILITIES AND RESOURCES

Southwest Health is one of two acute care hospitals in its identified primary service area. The other is a smaller county operated facility located in Darlington, Wisconsin, a 30 minute drive to the east/southeast. One other smaller private not-for-profit hospital (Grant Regional Health Center) located in Lancaster, Wisconsin is located in Southwest Health's identified secondary service area nearly 30 minutes to the northeast (driving from facility to facility). A third hospital (Upland Hills Health) in Dodgeville, Wisconsin lies outside our identified service area, yet there is significant overlap in our respective

service areas. There are also larger urban medical centers in Dubuque, Iowa (30 minutes from Platteville) and Madison, Wisconsin (more than 1 hour from Platteville).

There are five total primary care clinics in the primary service area (three in Platteville and two in Cuba City). Southwest Health operates two of those clinics, one each in Platteville and Cuba City. Southwest Health also operates an eye care clinic, a women's health clinic, an orthopedics and rehab clinic, outpatient specialist clinics, and a sport performance center.

Platteville is also home to five mental health clinics, four pharmacies, a Southwest Wisconsin Community Action Program clinic for reproductive health, five dental clinics, five chiropractic clinics, four vision clinics, a nursing home (Edenbrook), and four assisted living facilities, including a broader elderly care facility (Park Place) with apartments, assisted living, and memory care.

Cuba City is also home to Epione Pavilion with a large skilled nursing unit, outpatient rehabilitation services, and 12-bed memory unit. Additionally, there is a separate dental clinic and a pharmacy in Cuba City and two chiropractic clinics. There are chiropractic offices in Benton and Hazel Green as well.

SWOT

Southwest Health's area communities are affected by a wide array of strengths, weaknesses, opportunities and threats, all of which impact our ability to improve community health.

Strengths:

- Strong local health care system (financially viable with quality outcomes, strong leadership, ever-growing utilization, and high patient satisfaction)
- Excellent, growing staff (the area's largest) of primary care providers in several strong local clinics
- Excellent relationship with UW Platteville, enabling a partnership in serving our large student population in Platteville
- Strength of local economy and employment rate

- Quality ancillary health care providers (dentists, chiropractors, senior care, student health services, etc.)
- Infrastructure (in Platteville) for physical activity, including paved, lit trails
- Generally positive outlook of employers on contributing to workers' wellness

Weaknesses:

- Culture of poor eating
- Accessibility of wholesome foods for many, given isolation of poor rural residents without reliable transportation
- Culture of heavy and binge drinking
- Diabetes, obesity, and heart disease rates all higher than national levels
- Low health literacy and correspondingly low level of activity by area health care organizations to ameliorate its impact
- Little awareness of social determinants of health or impact of the food industry on consumer choices
- Smoking rates higher than national levels
- Rising opioid use
- Injury deaths in Iowa and Lafayette Counties
- Health, access, and income rankings in Lafayette County
- Uninsured rate in Lafayette County and poverty (especially in Grant County) combining to make health care relatively inaccessible for many
- Accessibility of mental health counselors
- Lack of occupational health initiatives

Opportunities:

- Relatively low public awareness of the far-reaching impacts of environmental and social determinants of health as well as potential changes in communication strategies in response to this low awareness in order to create for the first time significant culture shifts regarding food and physical activity
- Prevention and early intervention with a focus on Metabolic Syndrome, now a widely agreed upon condition in which someone has three of these five: obesity, diabetes, high cholesterol or other lipids, cardiovascular disease, hypertension

- Reduce stigma of mental health
- Proliferation of communication channels; ability to reach more people cheaper and faster with video and social media
- Community transportation alternatives available in Platteville
- New recreation trails around the City of Platteville
- Internet search engine marketing tactics and blogging
- Practitioner and other professional involvement in Southwest Health outreach
- Sole Mates walking club, Young at Heart, My Healthy Life
- Big M program at Southwest Health

Threats:

- Anticipated future declines in reimbursement for services
- Health plans with high deductibles, forcing insured people with limited means to avoid primary care, screenings, and other needed services
- Low awareness of health plan coverage (a health literacy issue)
- Limited access to mental health counseling
- Community apathy, status quo, inertia related to lifestyles and messages around lifestyles
- The food industry and the massive advertising dollars spent to ensure people continue making poor food choices
- Busy family schedules and decreased time for adults to plan and cook healthy meals
- Aging population (especially where combined with chronic medical conditions and relatively high poverty)
- Future healthcare workforce shortages

CHNA CONCLUSIONS / HEALTH NEEDS

1. Empowering people.

Providing education, screenings, early interventions, monitoring, and case management and health issue awareness/knowledge.

- Nutrition
- Cardiovascular disease
- Diabetes
- Depression
- Medication use
- Alcohol use/abuse
- Other drug abuse
- Smoking
- Health literacy

Reduce barriers to access.

- Mental health counseling services
- Insurance advocacy and cost transparency
- Specialty services

Increase recreation alternatives.

Alleviating the impacts of poverty.

- Jobs and economy
- Education and transportation
- Financial assistance
- Social inequities

2. Connecting people with services

Increasing awareness of existing services and resources.

- Mental health
- Primary and preventive care, including for chronic disease like diabetes
- Recreation alternatives
- Sources of healthy foods and methods of healthy food preparation

Augmenting or improving provision of needed community services.

- Mental health counseling
- Activity opportunities
- Education

- Occupational health (all aspects of health and safety in the workplace with a focus on prevention of hazards)
- Community health outreach

3. Creating healthy physical and social environments and promoting a culture of wellness.

Focusing additional education on underlying causes of Metabolic Syndrome and related illnesses by increasing awareness of environmental and social determinants of health among general population, with special focus on those in higher risk categories and those experiencing disparities.

Promoting and supporting healthy lifestyle changes.

Promoting safety and prevention (esp. farm, drug and alcohol related).

Assisting employers in creating healthy workplaces and in promoting wellness among workers.

Addressing opioid misuse and abuse and engaging communities on alcohol abuse.

IMPLEMENTATION ACTION PLAN

1. Empowering People.

Need: Providing education, screenings, early interventions, monitoring, and case management and health issue awareness / knowledge.

Problems: Nutrition, cardiovascular disease, diabetes, depression, medication use, alcohol use/abuse, other drug abuse, smoking, health literacy.

Strategy: Revamp Southwest Health's community outreach programs to more effectively target audiences and change behaviors. Apply continual improvement process to programs.

Actions:

1. Bolster strategic online and print published blog content that provides original, engaging resources with local interest designed to be both consumed directly as well as to enhance search engine optimization/ marketing efforts.
2. Create an annual calendar of local events, activities, and opportunities for two distinct audiences/purposes: a) Southwest Health employees with the purpose of initiating involvement/volunteerism and b) community members with the purpose of informing where, when, and what is being made available for them.
3. For instances of high prevalence (diabetes) and high health literacy capacity, bring screening opportunities to events. To improve follow through, boost health literacy at screenings with appropriate education.
4. Increase use of and promotions for online screening and self-tests, such as our depression screening. Other potential additions include BMI, sleep apnea, diabetes, memory, activity, and nutrition.
5. Promote smoking cessation leveraging existing resources.
6. Create keyword-specific search and re-targeting campaigns based on blog, practitioner, and service line web pages to address identified issues.
7. Research alternatives and create a mechanism prior to the next Community Health Needs Assessment to better understand and benchmark community health literacy.

8. Research the precise rate of haemophilus influenzae among the Amish community presenting at Southwest Health and, if appropriate, identify alternatives for generating awareness among the Amish community to address vaccine rates.

Need: Reduce barriers to access.

Problems: Mental health counseling services, insurance advocacy and cost transparency, specialty services.

Strategy: Bolster access to specific services with new practitioners.

Actions:

1. Evaluate potential of recruiting a cardiologist to serve the area.
2. Recruit an additional orthopedic surgeon.
3. Recruit a new pain management practitioner.

Strategy: Research and evaluate new methods of transparency.

Actions:

1. Review and evaluate the Press Ganey online practitioner ranking system.
2. Establish and promote better practices for providing price transparency.

Strategy: Begin a process to more fully address hearing loss and its impacts around our communities and in the health care system.

Actions:

1. Research potential and costs of hearing loops for key patient access points at Southwest Health.
2. Provide community outreach activities, including My Healthy Life programming, that raises awareness of hearing loss and increases consumer behavior toward correcting hearing loss.

Strategy: Generate increased awareness for those services with excess capacity.

Actions:

1. Initiate a primary care campaign targeting secondary service areas, especially communities with limited access.
2. Raise awareness of pain management services.
3. Bolster communications around outlying clinics (Cuba City primary care and Lancaster eye clinic).
4. Work with UW Extension staff to produce an updated "resource directory" and publish online.

Strategy: Positively impact the health care workforce, Southwest Health's high reliability culture, and the patient experience by formulating staff education opportunities on diversity, equity, and inclusion in the health care setting.

Actions:

1. Initiate a Patient and Family Advisory Council Discussion on diversity, equity, and inclusion education needs and research other organization's initiatives, successes, and shortcomings.
2. Lead a task force to design and initiate appropriate staff education within existing education opportunities.

Strategy: Provide leadership on building a more health literate organization to improve the way we communicate with patients and help people improve their own skills and knowledge.

Actions:

1. Create presentations around health literacy to increase the understanding its concepts among Southwest Health leaders.
2. Identify steps necessary to integrate health literacy into planning, evaluation, safety, and quality efforts.

Need: Increase recreation alternatives.

Problem: Recreation/physical activity infrastructure is lacking in many communities, especially throughout Lafayette County.

Strategy: Research existing alternatives, considering creative uses, locations, and activities in order to effectively promote them.

Actions:

1. Create "20 things to do in 20 miles" lists for select communities around the Southwest Health service area, list on web site with links to locations.
2. Ensure diversity of activities among My Healthy Life alternatives with some select options not simply being offered in Platteville but also outlying communities.

Need: Alleviating the impacts of poverty.

Problem: Jobs and economy, education and transportation, financial assistance, social inequities.

Strategy: Encourage opportunities and investment through community advocacy where possible.

Actions:

1. Review sponsorship of Platteville Senior Center transportation in spring of 2020 to determine volume of assistance and impact the service is making on community.
2. Maintain active representation on key boards, such as Chambers of Commerce and the Platteville Area Industrial Development Corporation.
3. Where possible, encourage community-level leadership to identify, consider, and address issues of equity.
4. Promote breast feeding among new mothers. Provide breast feeding education. And advocate for breast feeding spaces at area employers.

2. Connecting People with Services

Need: Increasing awareness of existing services and resources.

Problem: Mental health, primary and preventive care access, recreation alternatives, sources of healthy foods and methods of healthy food preparation.

Strategy: Leverage My Healthy Life programming to provide education and raise awareness.

Actions:

1. Create a major high profile community event to inspire habit change and educate a large audience. Provide follow up programming that instills mechanisms for individual accountability.
2. Include a several part series each year on healthy eating and food prep.
3. Initiate a series of programs (art contest, suicide prevention training, education, etc) on varied mental health topics to contribute to community awareness and knowledge and to dispel the stigma of mental illness. Ensure these programs are scheduled beyond the boundaries of Mental Health Month in May.
4. Produce new creative in order to continue the previously effective 2018 marketing campaign highlighting the need for primary care, targeting specific higher risk audiences.
5. Research and evaluate potential customer relationship management systems (CRM) including some automation and web forms to more effectively impact the patient journey for highly targeted select higher health risk audiences.
6. Improve email marketing systems around the My Healthy Life and other outreach programs (improved online forms, automated responses, personalization, etc) to enhance communication and the experience of participating in Southwest Health outreach.

Need: Augmenting or improving provision of needed community services.

Problem: Mental health counseling, activity opportunities, education and nutrition.

Strategy: Collaborate with community and engage target audiences with knowledge based enrichment and behavior change opportunities.

Actions:

1. Leverage My Healthy Life to offer activity outings in addition to the educational offerings each year.
2. Nurture the "Sole Mates" walking club and its 100 Miles in 100 Days Community Walking Challenge. Ensure high risk and marginalized communities have access and encouragement to join.

3. Engage audiences with fun activities/information at community outreach events.
4. Service Team to evaluate extending Southwest Health's internal Big M wellness program to employers and the greater community.

3. Creating healthy physical and social environments and promoting a culture of wellness.

Need: Increase awareness of environmental and social determinants of health among general population, with special focus on those in higher risk categories and those experiencing disparities.

Problem: Lack of awareness of determinants of health contributes to a culture of inactivity and poor food choices that leads to obesity and chronic illness. The education measures health organizations have taken in the past have all fallen short of significantly changing our culture and population behaviors.

Strategy: Focus some education efforts on underlying causes of Metabolic Syndrome and related illnesses by innovating communications to creatively leverage the power of selected community influencers within key demographic segments. Offer more personally and culturally relevant messages embedded with the values of the target audience in order to trigger an emotional response with the desired impact of behavior change.

Actions:

1. Identify the priority target audiences and create a community group of influencers to collaborate on solutions.
2. Leverage the above group to generate media programming from influencers to priority targets.
3. Include where possible a mechanism for measurement of progress.
4. In subsequent needs assessment research, ensure collection of relevant health literacy data and establish benchmarks for southwest Wisconsin communities.

Need: Promoting and supporting healthy lifestyle changes.

Problem: Community wellness resources remain under-utilized.

Strategy: Create and methodically improve a system of wellness education, motivation, and accountability for Southwest Health employees and roll out a successful program to the broader community.

Actions:

1. Evaluate successes of internal Big M programming and make indicated adjustments through a continual improvement process.
2. Plan for a targeted roll out to segments of our Big M program to communities at large.

Need: Promoting safety and accident prevention (esp. farm and childhood accidents).

Problem: Some activities (e.g. farming) inherently raise the risk of accidents. Drug and alcohol abuse contribute to community safety issues.

Strategy: Support existing programs and identify additional opportunities to measure and create behavior changes in target audiences.

Actions:

1. Support Grant County Health Department's Farm Safety Day.
2. Offer regular safety related trainings, including car seat checks, child CPR, running classes, etc.

Need: Assisting employers in creating healthy workplaces and in promoting wellness among workers.

Problem: Employers big and small face financial and operational challenges in helping their organizations live and perform better.

Strategy: Boost employer outreach with greater communication and product offerings.

Actions:

1. When appropriate, create sales and marketing tools to help employers choose implementation of Big M program initiatives.
2. Create communications specific to employers and their teams to extend invitations to other outreach programming (i.e. My Healthy Life, walking club, screenings, etc.).

Need: Addressing opioid misuse and abuse and engaging communities on alcohol abuse.

Problem: Opioid addiction presents a growing threat to our communities while alcohol abuse is a wide-spread and culturally rooted health hazard with insidious impacts.

Strategy: Address opioid addition on the prescriber side and alcohol abuse through collaborative community leadership initiatives.

Actions:

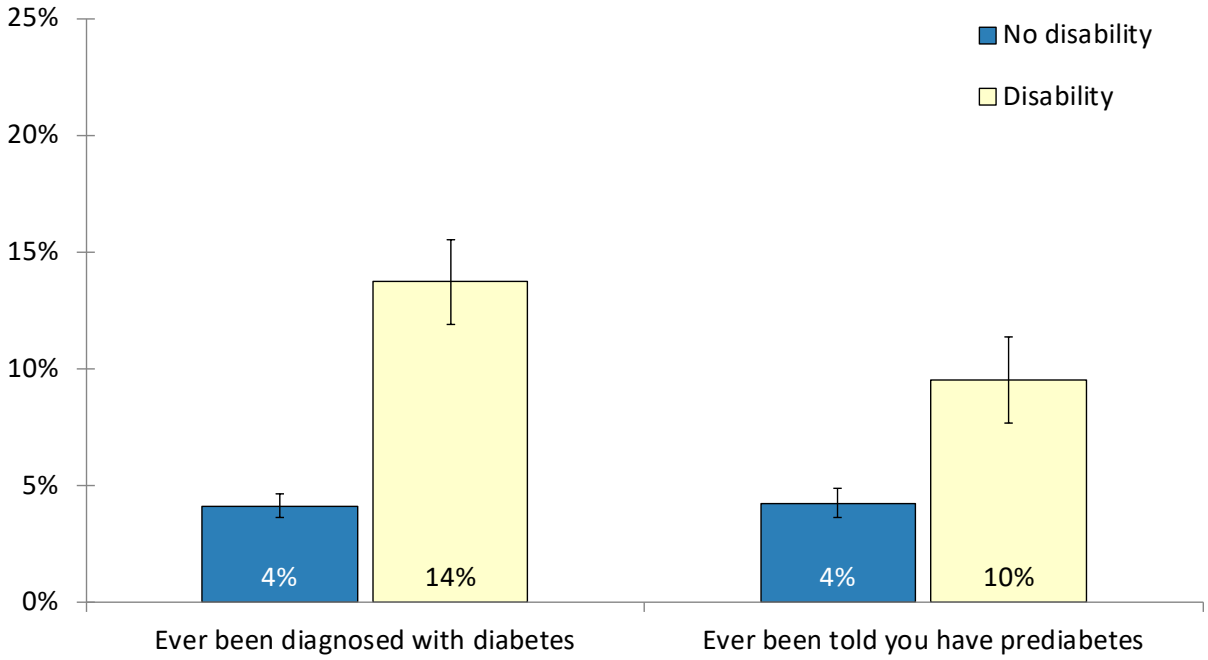
1. Review organizational opioid policies and provide education for Southwest Health practitioners.
2. Leverage the community group structure created by UNITE (Unified Neighbors Improving Their Environment) to provide community leadership on drug and alcohol issues.

APPENDIX 1

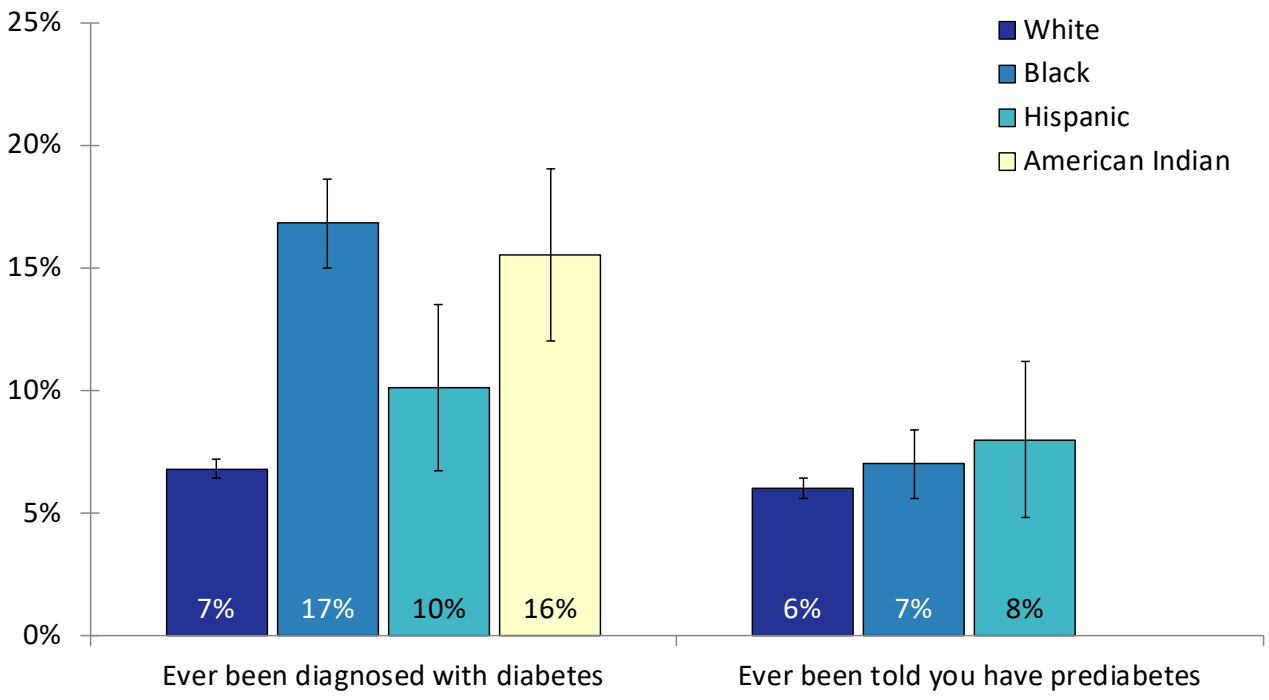
As noted on page 43 in the section on disparities, these charts are published here to better understand disparities and their impacts and includes information on these issues:

- Diabetes and pre-diabetes
- Diabetes complications
- Hospitalizations from diabetes
- Cancer incidence and mortality
- Breast cancer and cervical cancer
- Cancer screening rates
- Arthritis
- Influenza hospitalizations
- Asthma
- Blood lead levels in children
- Low birth-weight
- Motor vehicle risk behaviors
- Types of exposure to violence
- Mental health
- Smoking/tobacco use
- Attempts to quit smoking
- Sleep
- Suicide and suicide risks
- Depression
- Vegetable consumption
- Food security
- Obesity
- Dental care
- Physical inactivity

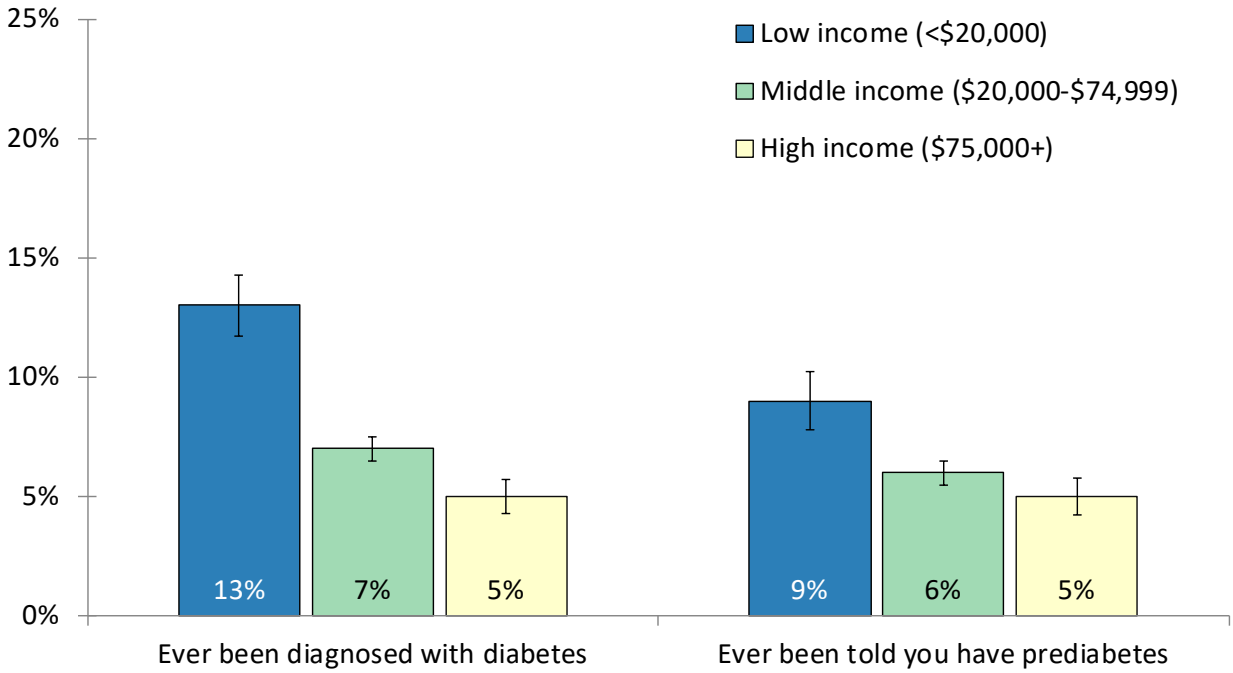
Rates of diabetes and prediabetes among Wisconsin adults ages 18-64, by disability status, 2008-2011



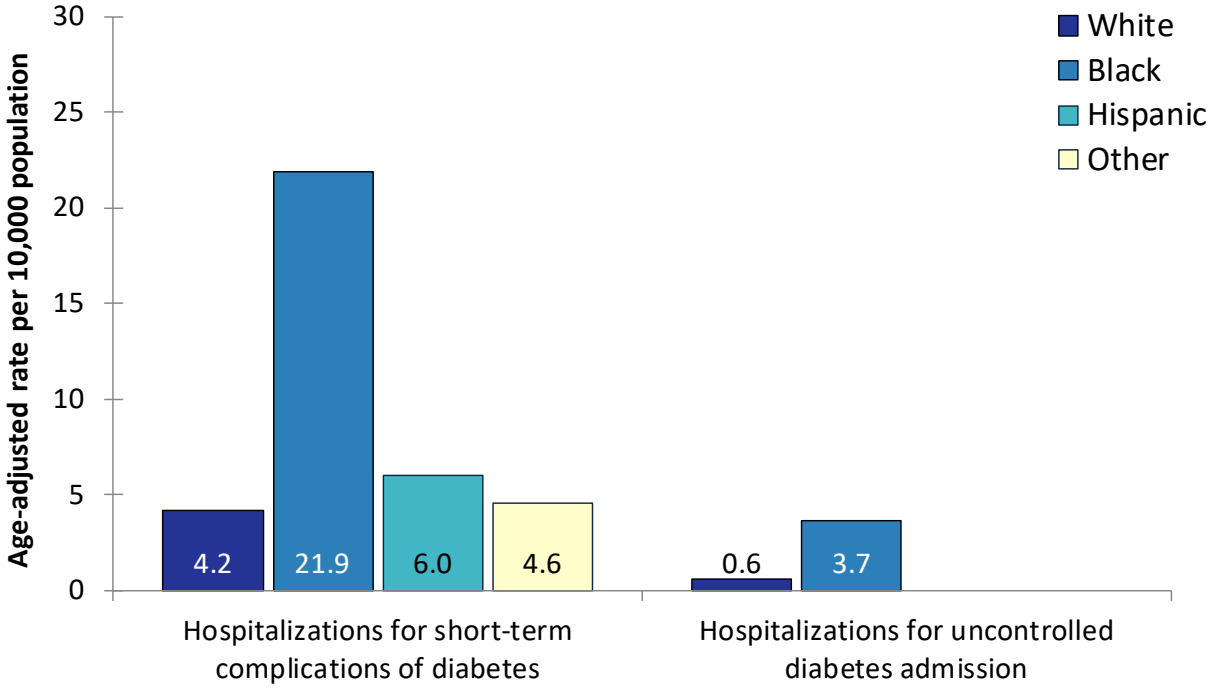
Age-adjusted rates of diabetes and prediabetes among Wisconsin adults, by race/ethnicity, 2008-2011



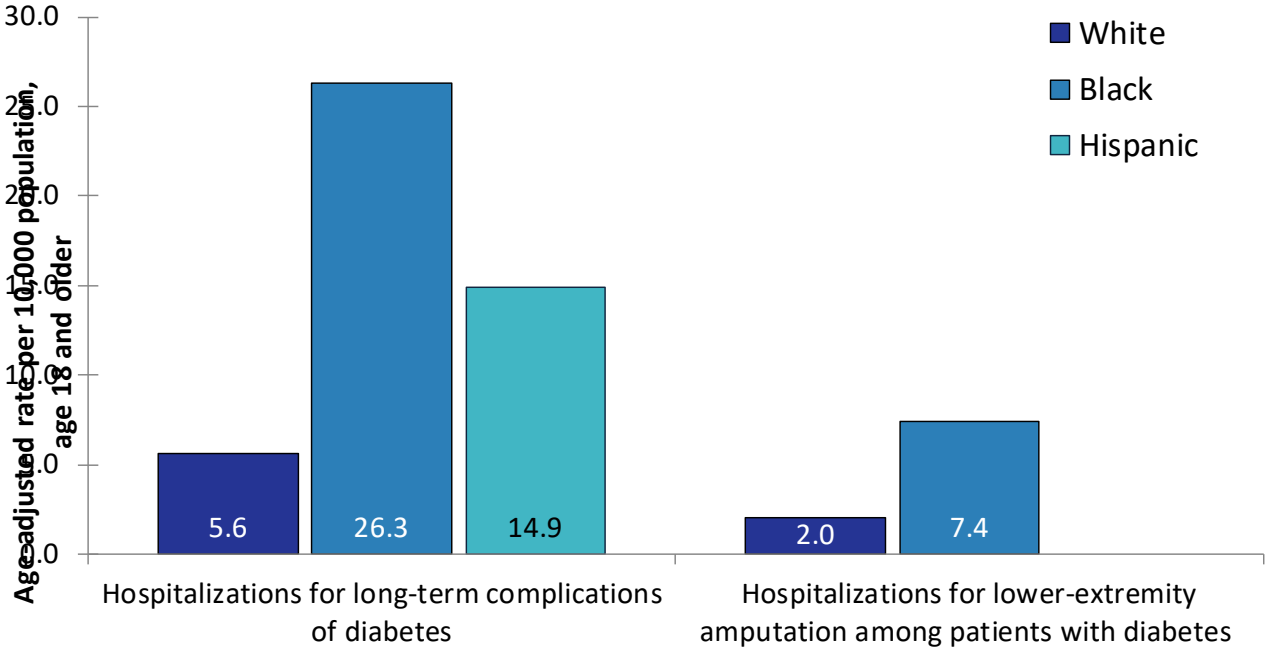
Age-adjusted rates of diabetes and prediabetes among Wisconsin adults, by household income, 2008-2011



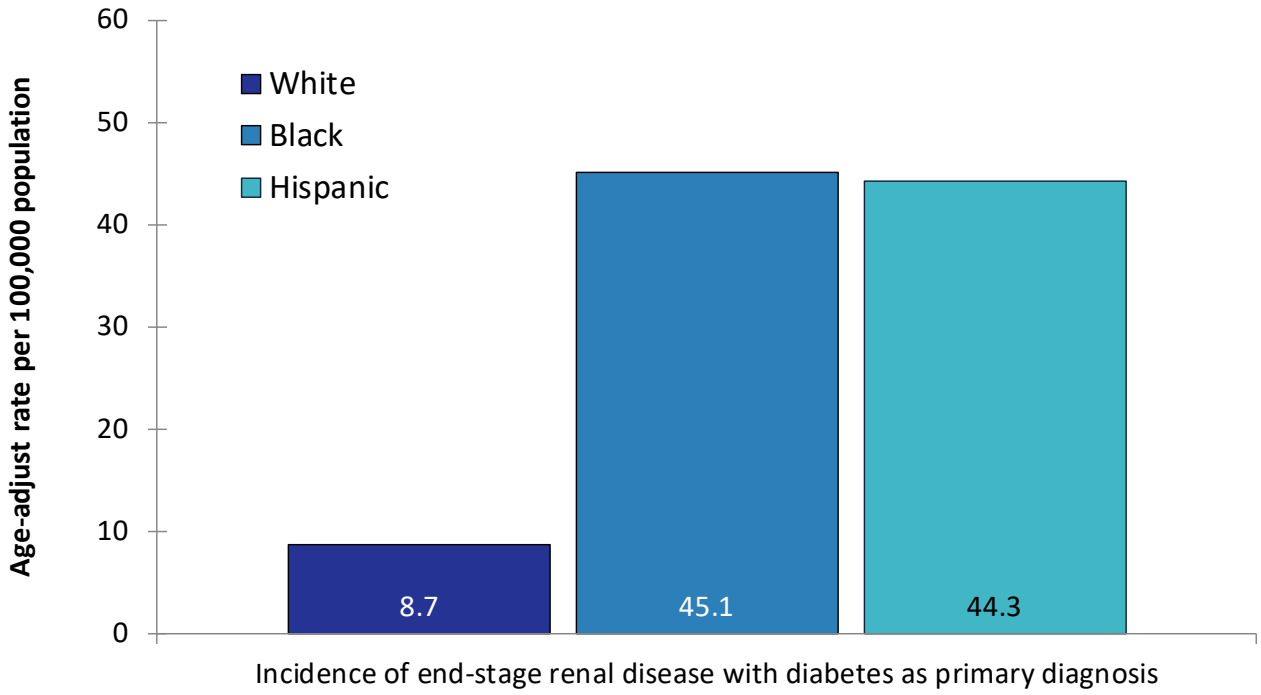
Hospitalizations due to short-term diabetes complications and uncontrolled diabetes among Wisconsin adults, age-adjusted rate per 10,000, by race/ethnicity, 2010



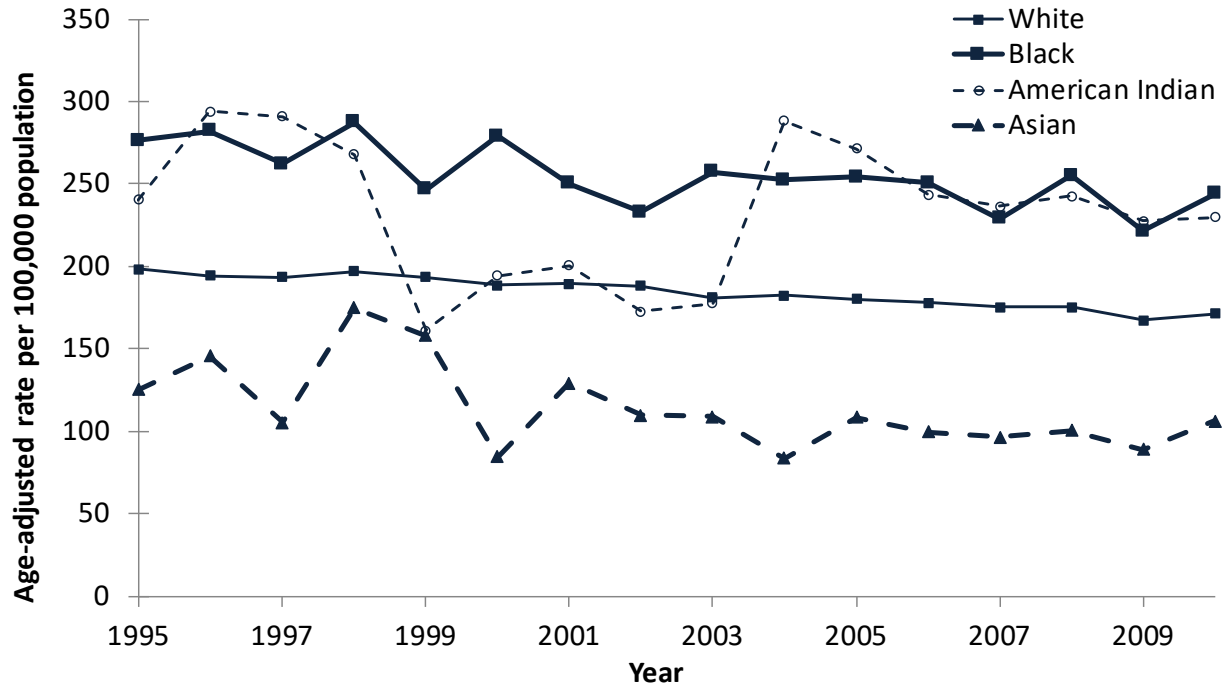
Hospitalizations due to long-term complications from diabetes among Wisconsin adults, age-adjusted rate per 10,000, by race/ethnicity, 2010



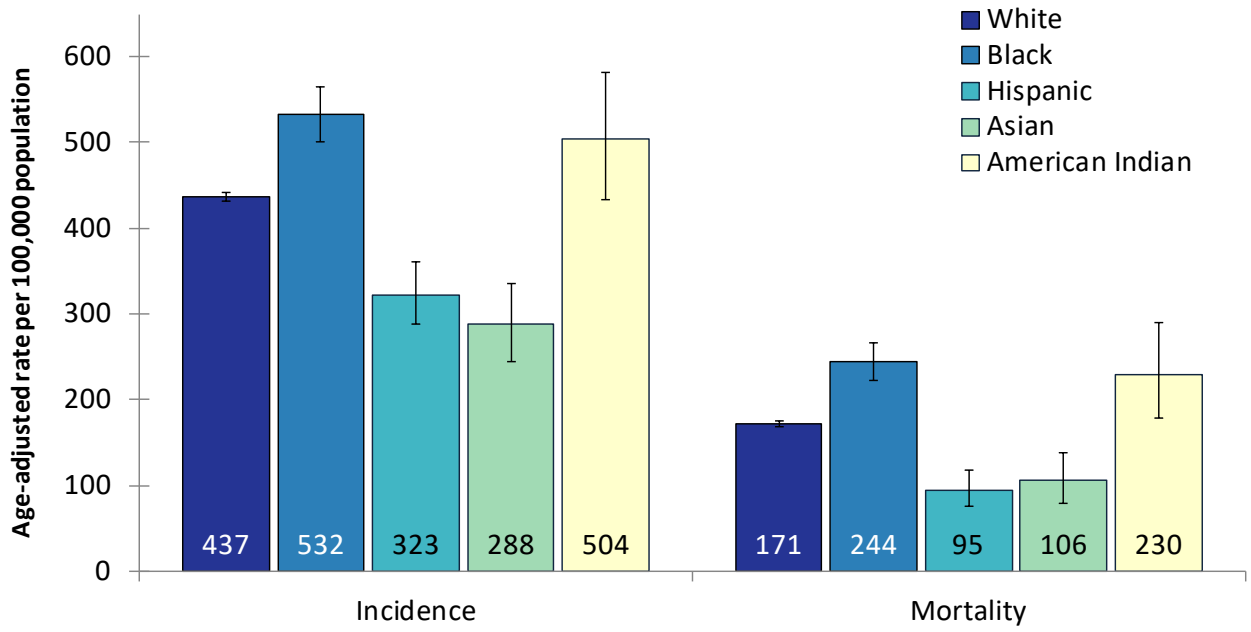
Incidence of end-stage renal disease incidence among Wisconsin adults, by race/ethnicity, age-adjusted rate per 100,000, 2009



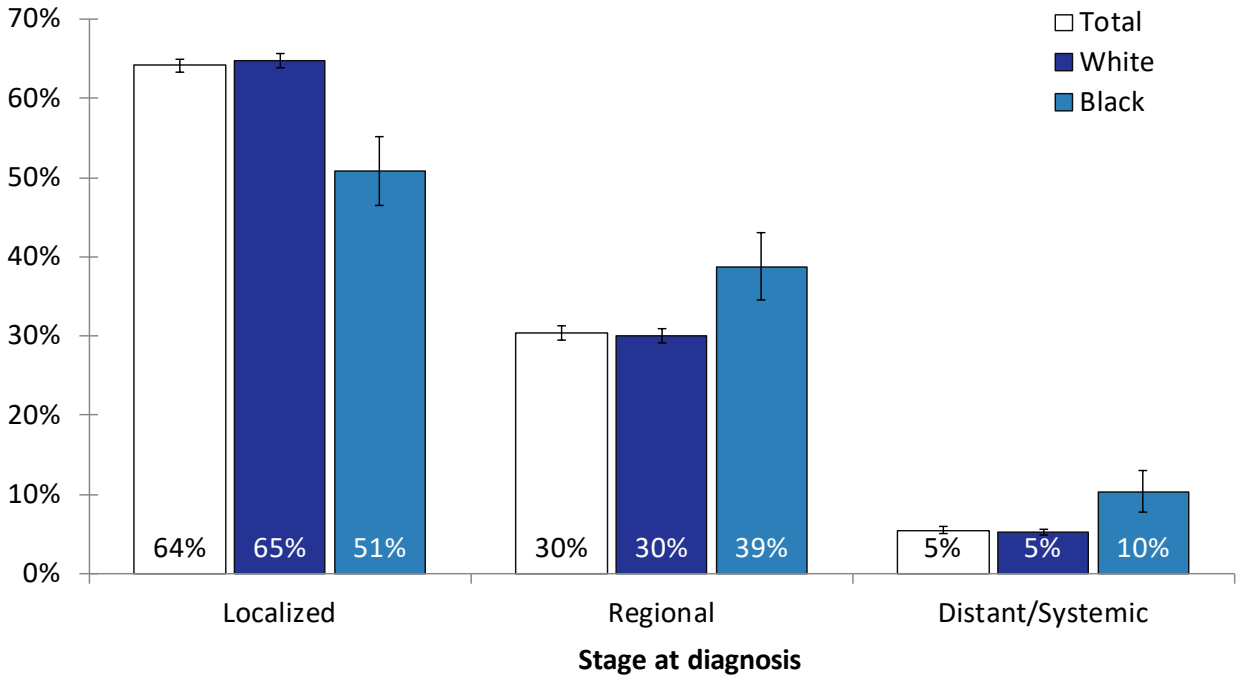
Age-adjusted cancer mortality (all sites) by race/ethnicity, rate per 100,000, Wisconsin, 1995-2010



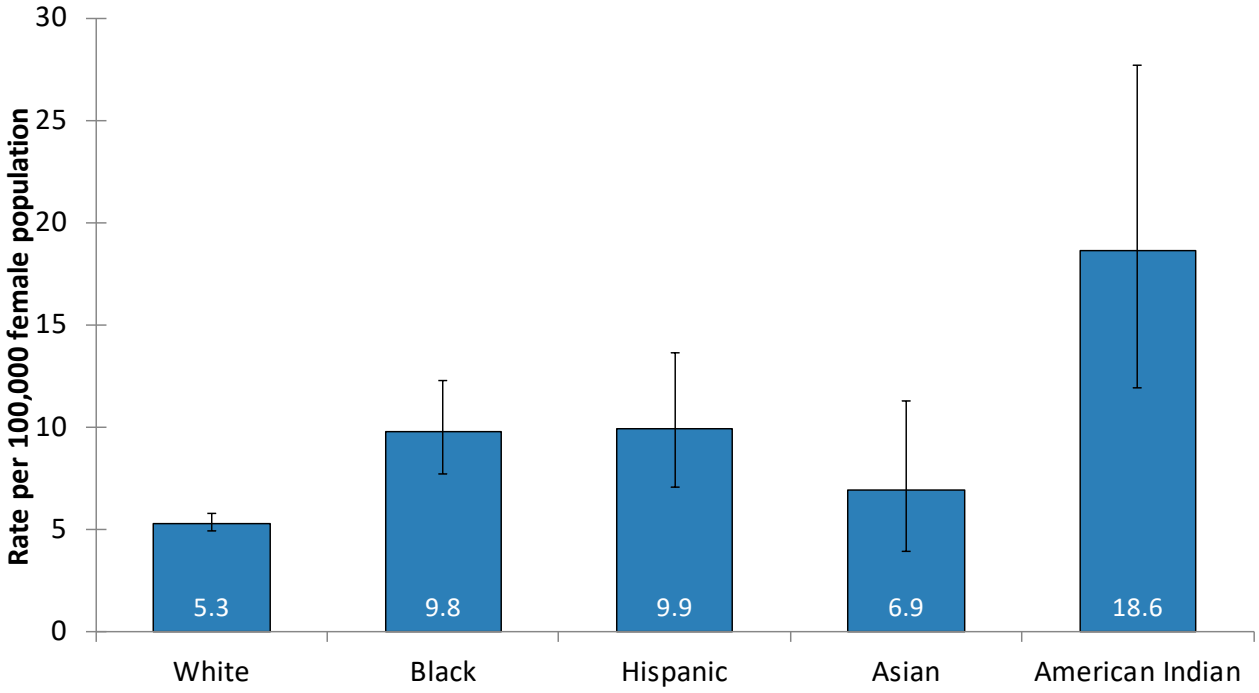
Cancer incidence and mortality (all sites) age-adjusted rate per 100,000, by race/ethnicity, Wisconsin, 2010



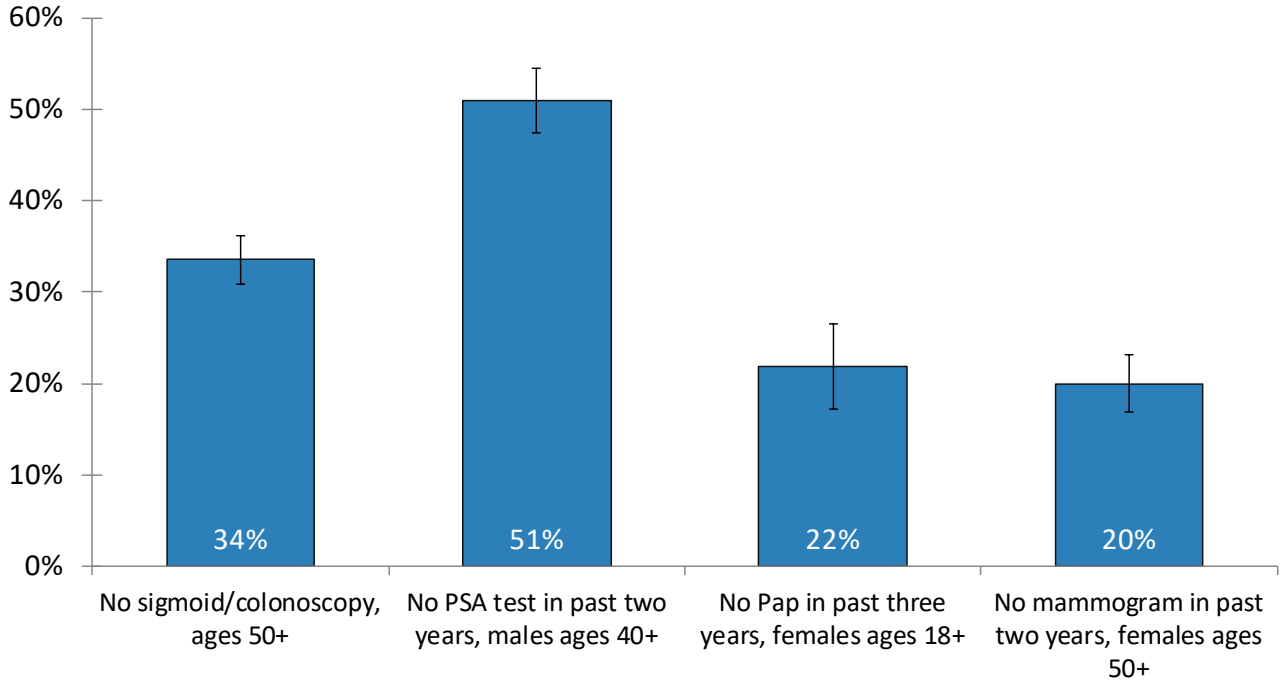
Stage of disease at diagnosis, female breast cancer, White and Black populations, Wisconsin, 2008-2010



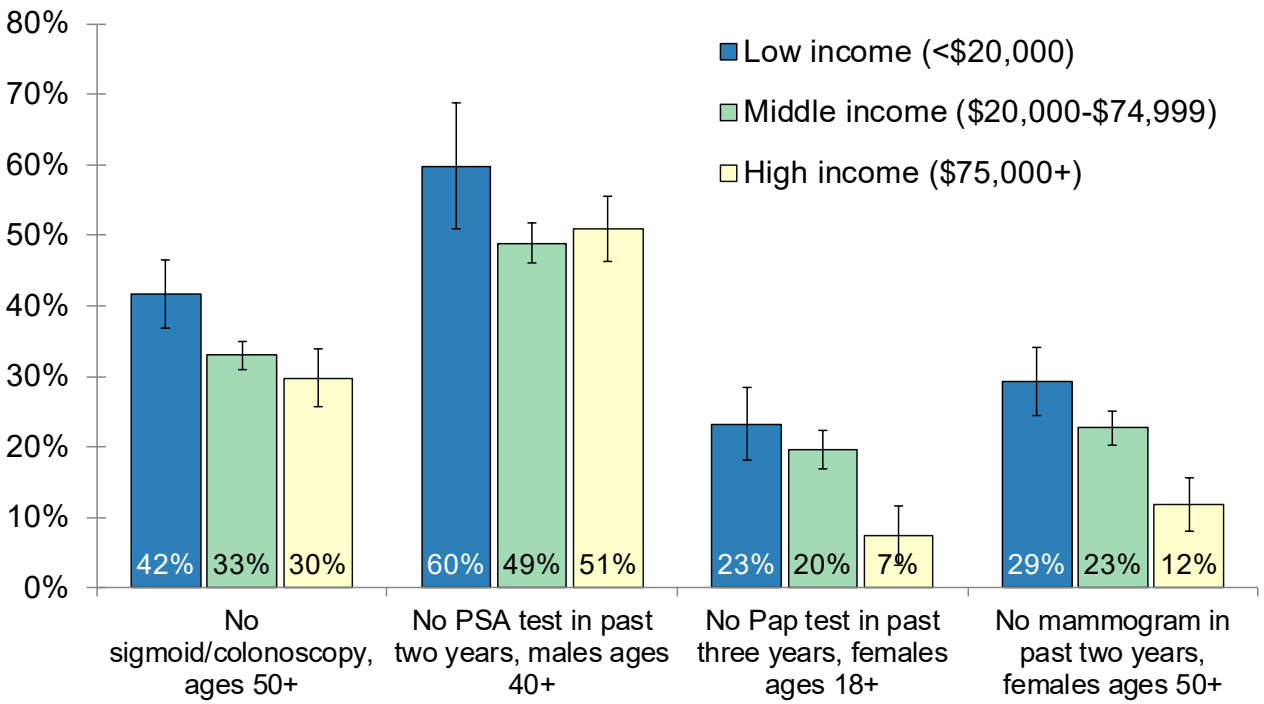
Cervical cancer incidence by race/ethnicity, age-adjusted rate per 100,000, Wisconsin, 2006-2010



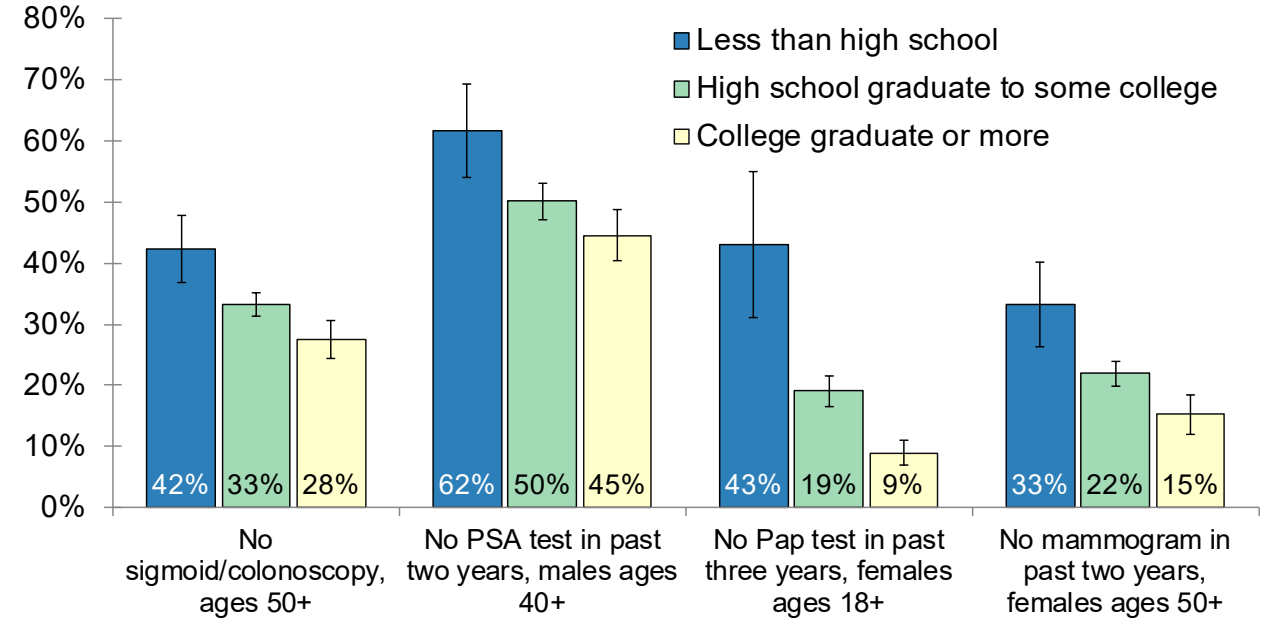
Cancer screening among Wisconsin adults, 2010



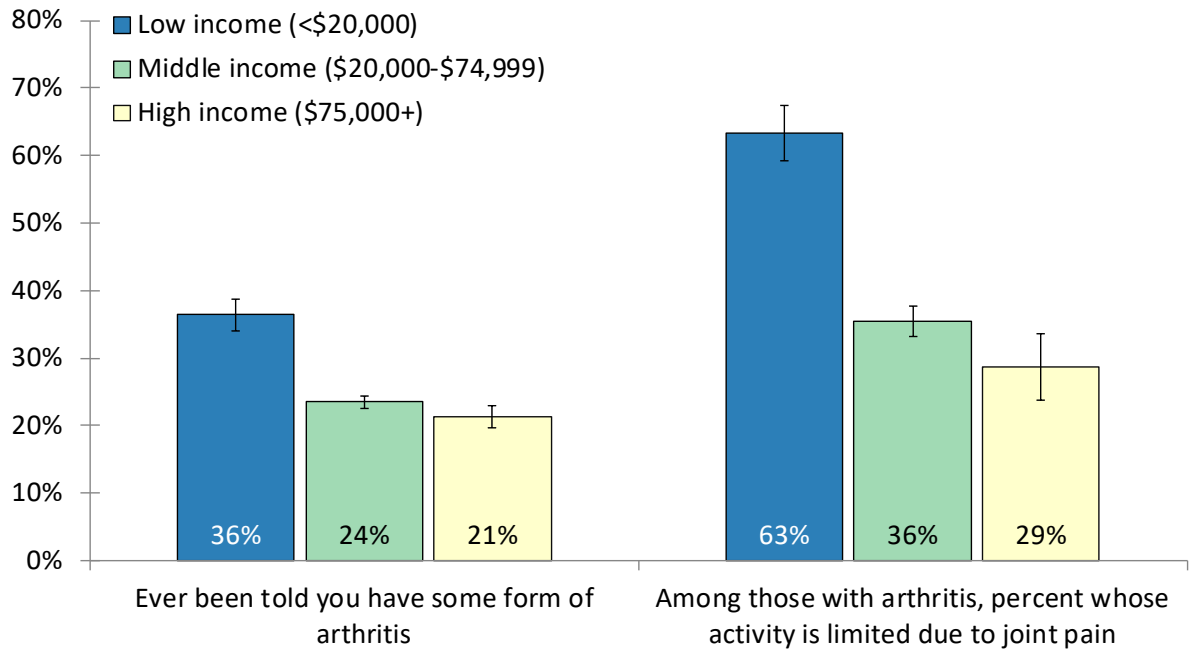
Cancer screening among Wisconsin adults, by household income, 2008 and 2010



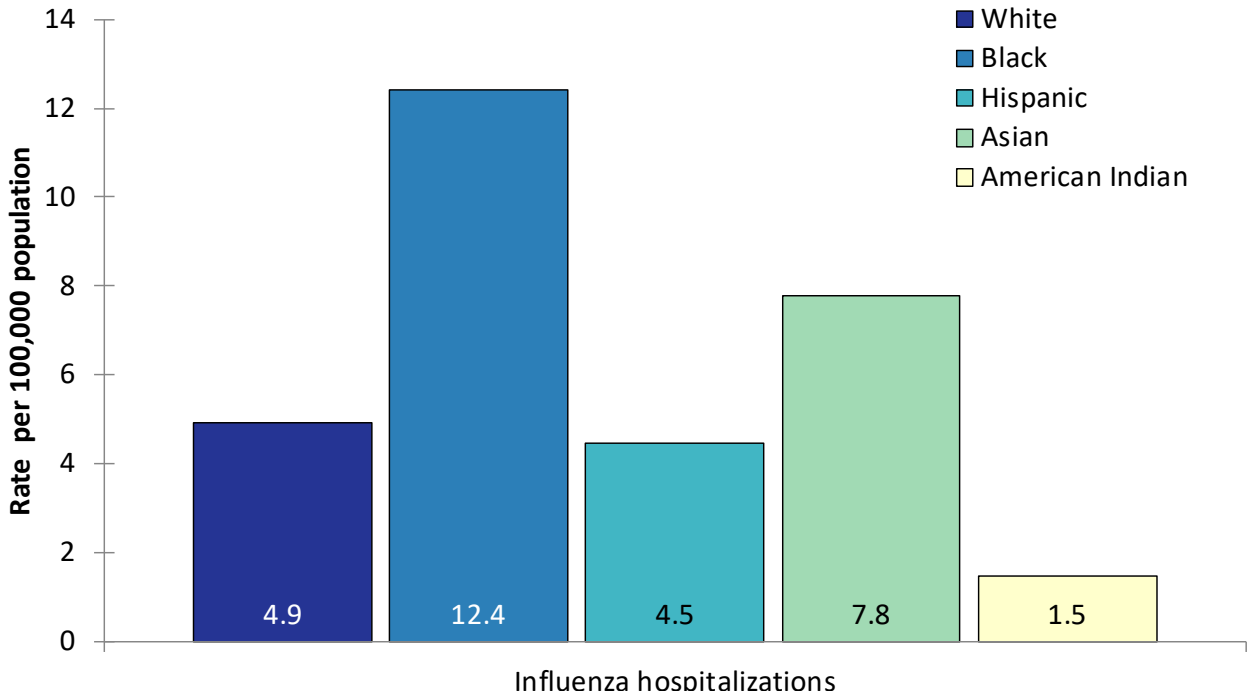
Cancer screening among Wisconsin adults, by education level, 2008 and 2010



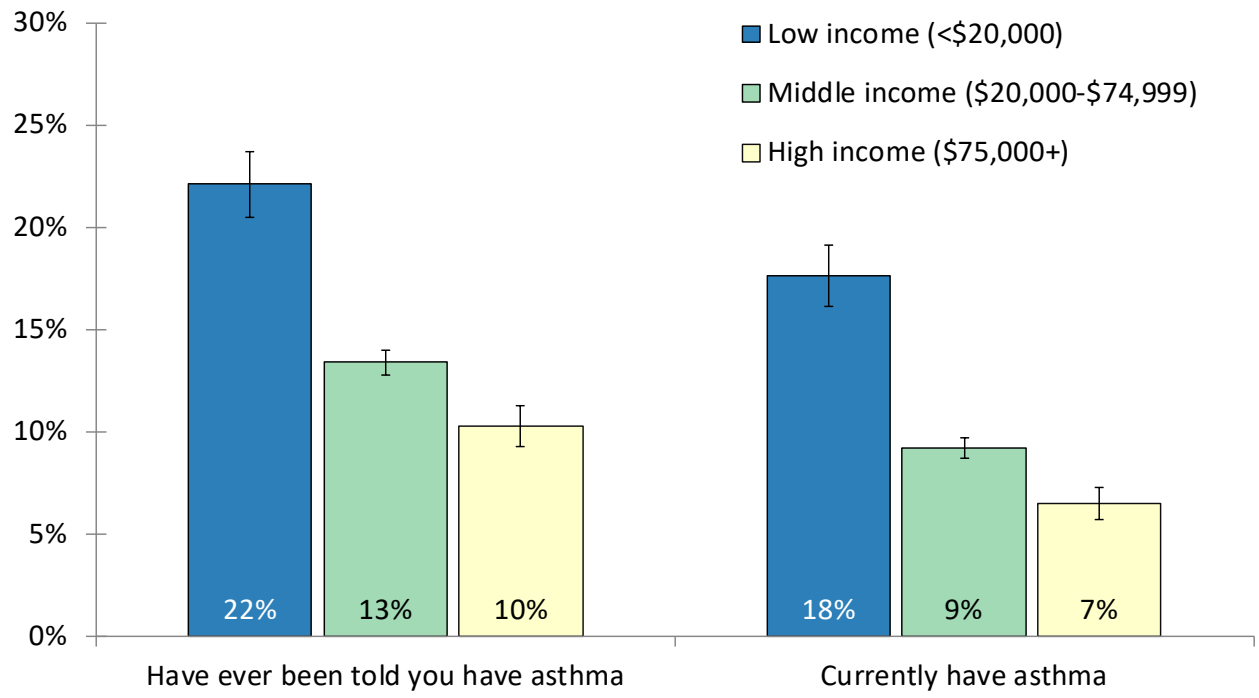
Age-adjusted rate of arthritis among adults, and percent of those with arthritis whose activity is limited due to joint pain, by household income, 2009-2011



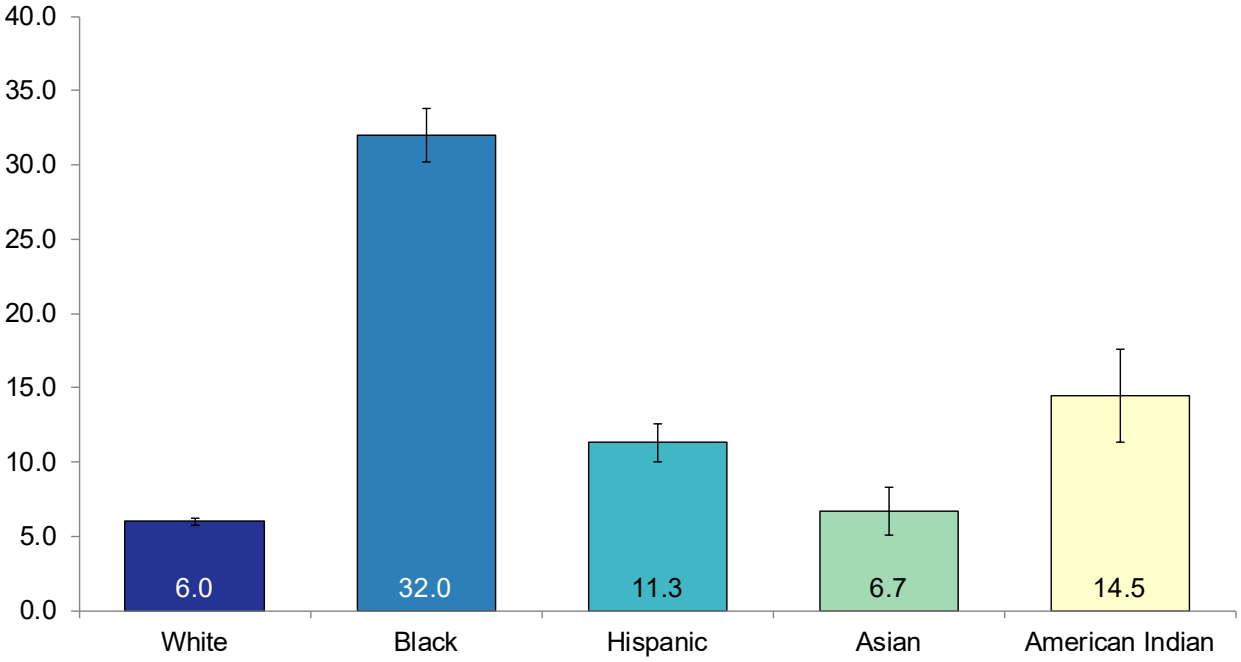
Influenza hospitalizations by race/ethnicity, rate per 100,000, Wisconsin, 2012



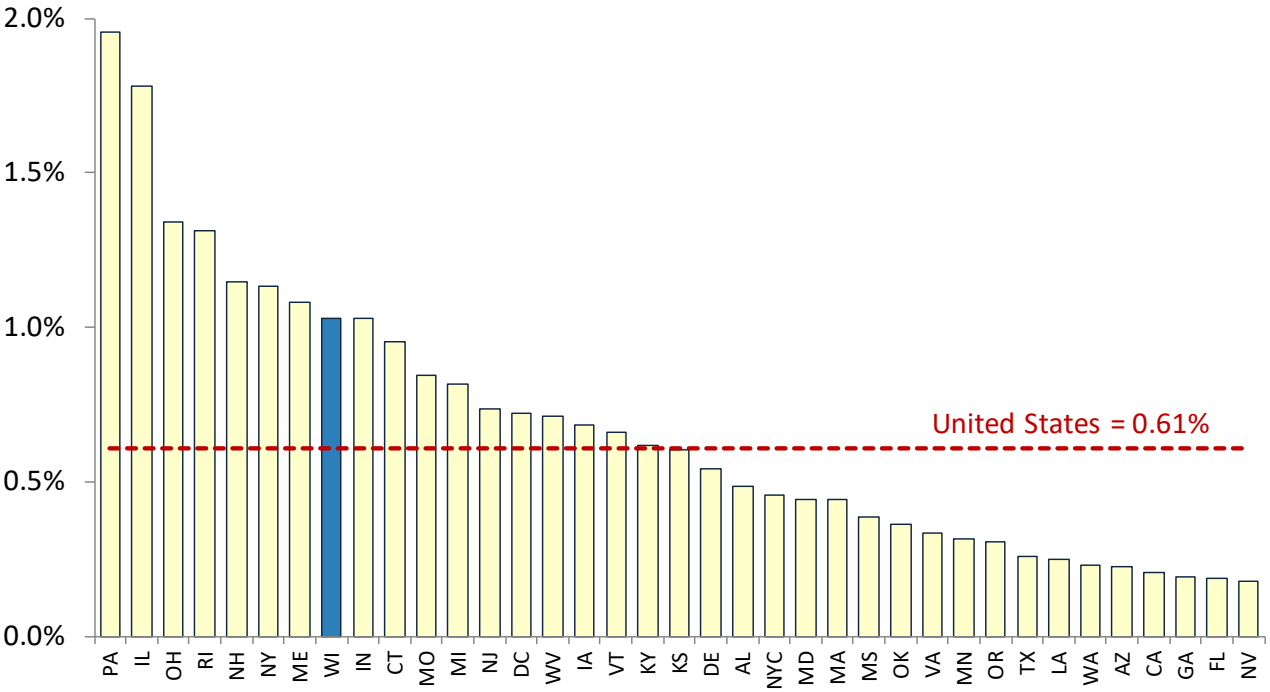
Age-adjusted rates of asthma among Wisconsin adults, by income level, 2008-2011



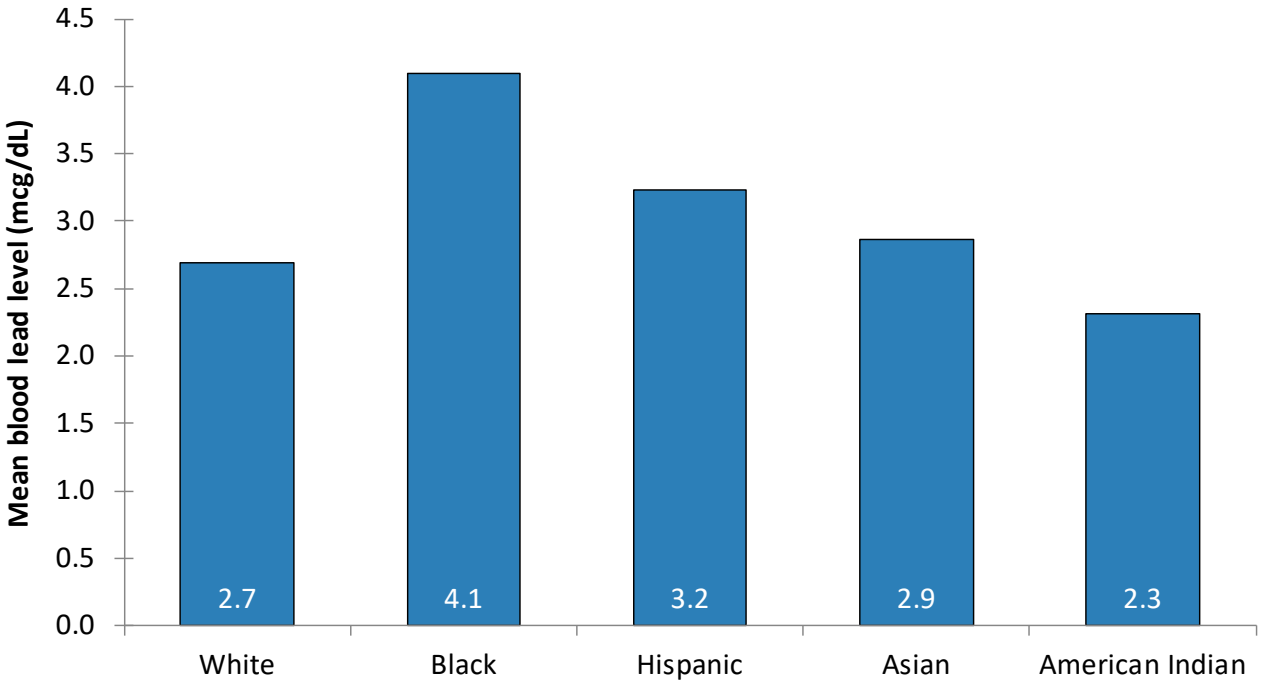
Asthma hospitalizations by race/ethnicity, age-adjusted rate per 10,000, Wisconsin, 2010



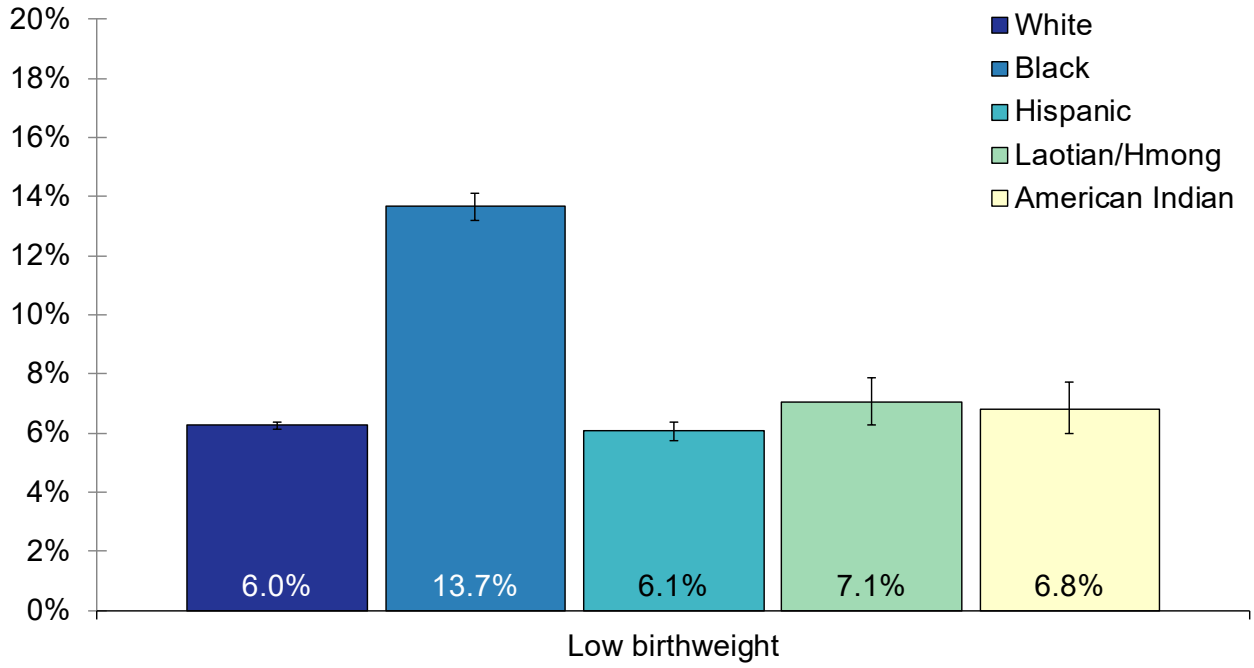
Percent of children under age six who were lead tested and had a confirmed elevated blood lead level, by state, 2010



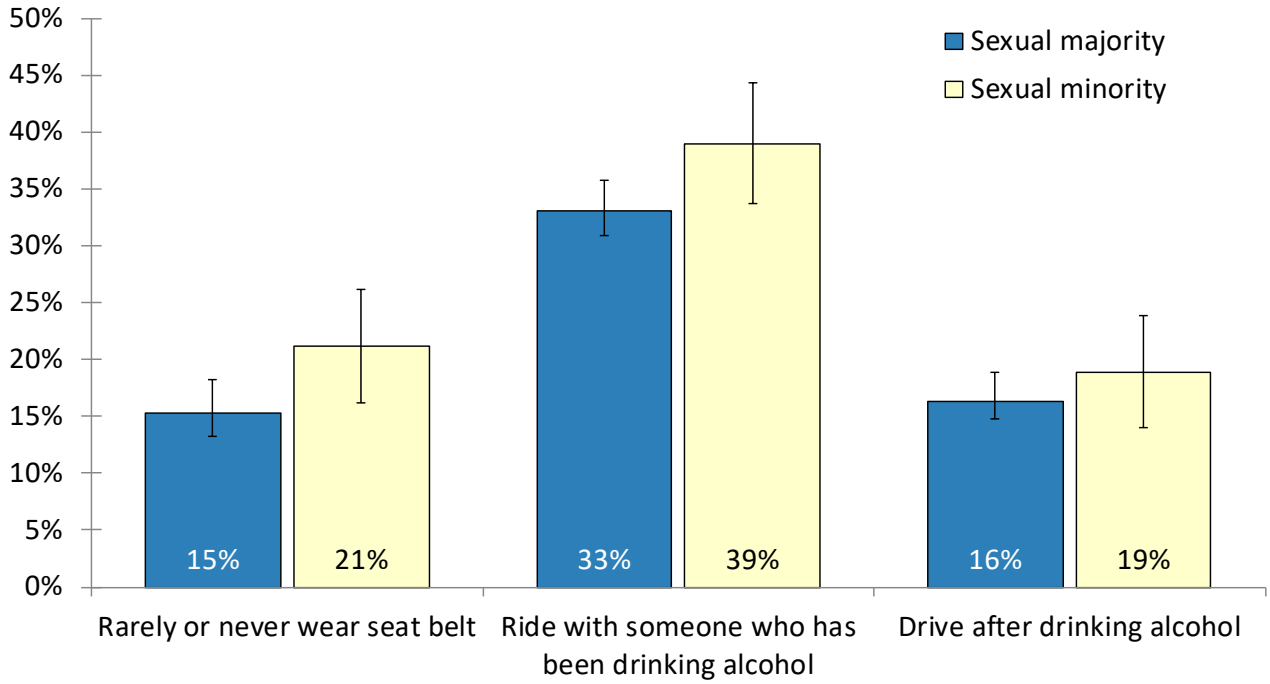
Annual mean blood lead level (mcg/dL) for tested children under age six, by race/ethnicity, Wisconsin, 2010



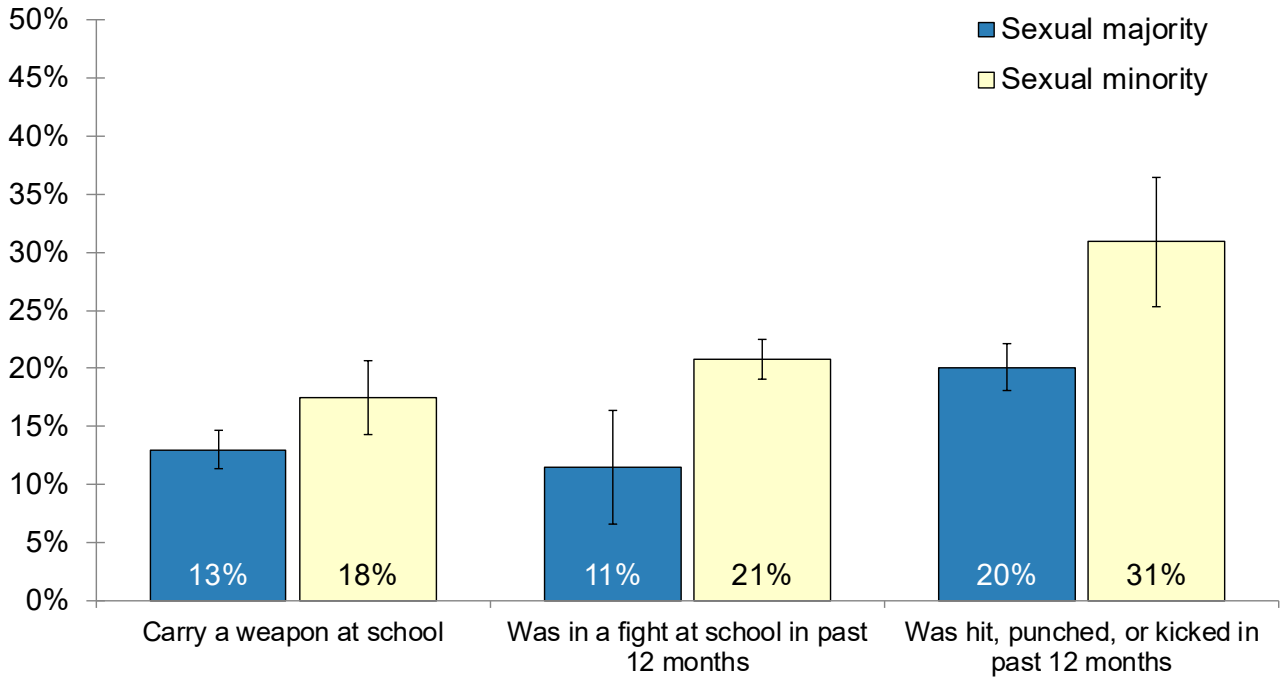
Percentage of low birthweight (<5.5 pounds) births, by maternal race/ethnicity, Wisconsin, 2008-2010



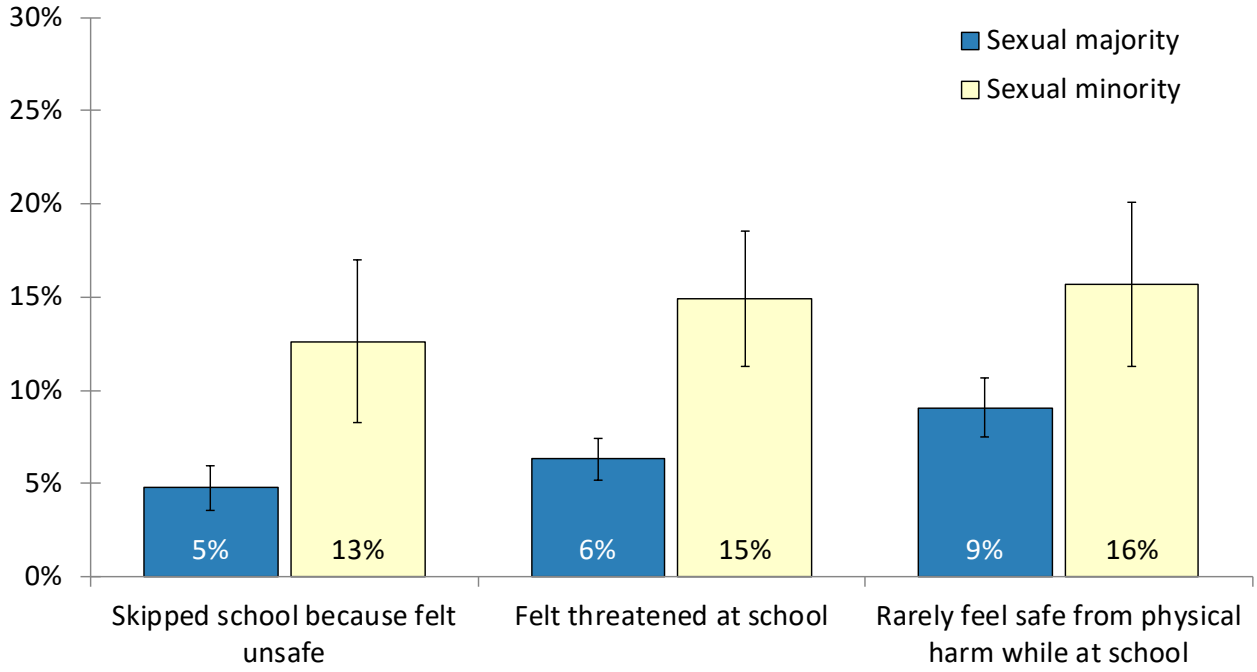
Motor vehicle risk behaviors among Wisconsin high school students by sexual minority status, 2007-2011



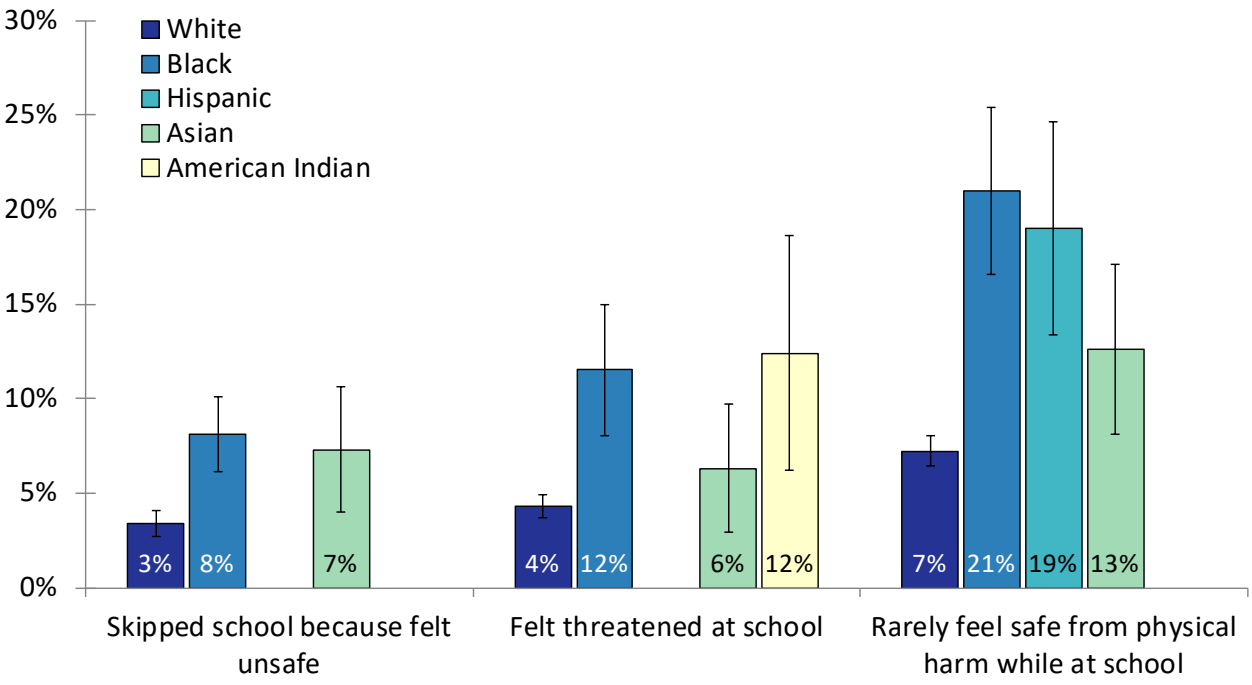
Exposure to school violence among Wisconsin high school students, by sexual minority status, 2007-2011



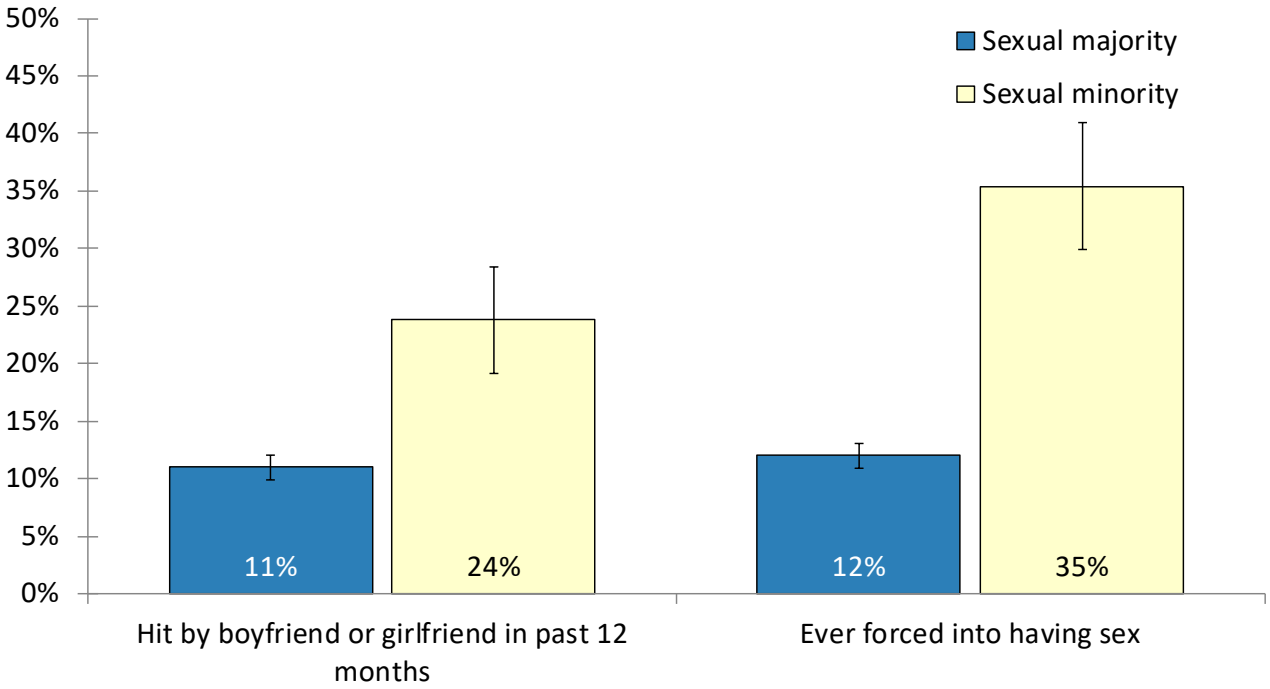
Perceptions of school safety among Wisconsin high school students, by sexual minority status, 2007-2011



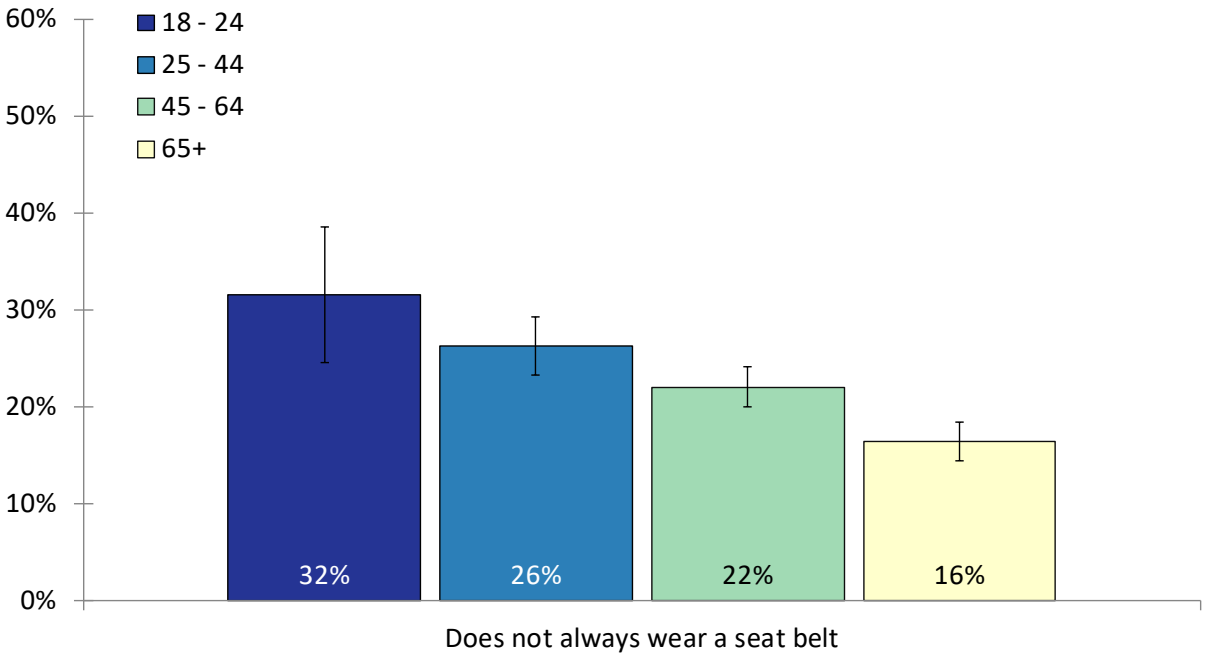
Perceptions of school safety among Wisconsin high school students, by race/ethnicity, 2007-2011



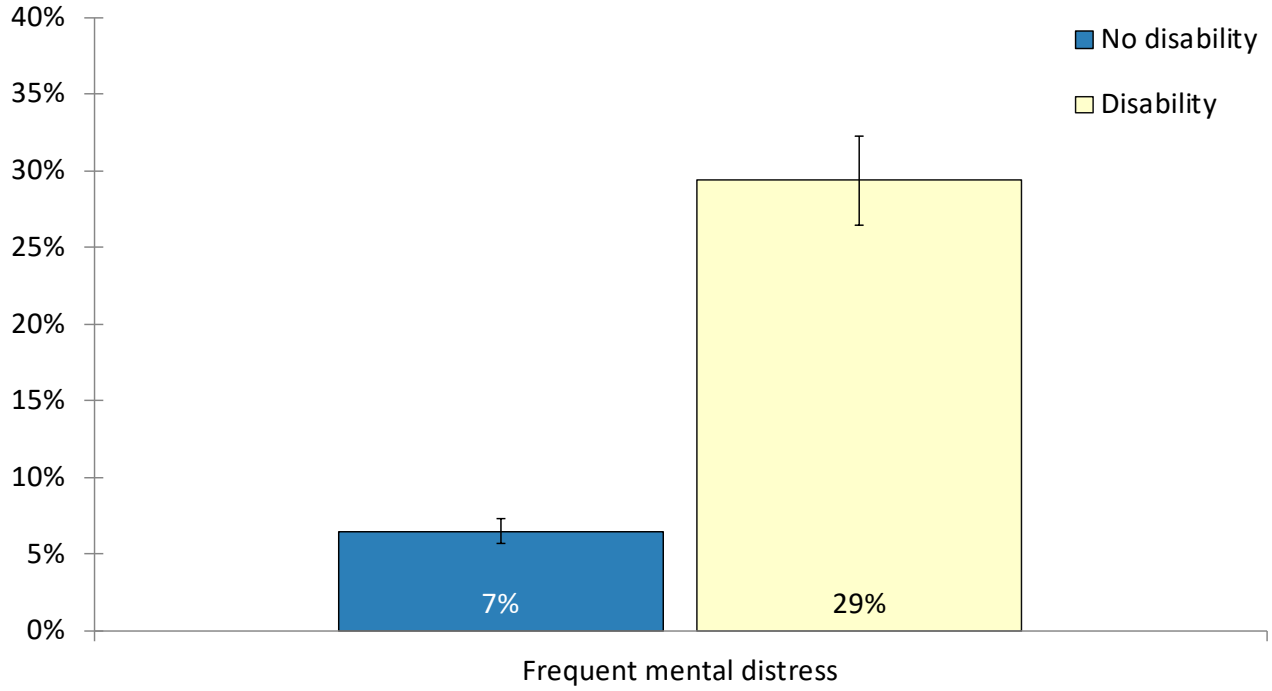
Partner violence among Wisconsin high school students, by sexual minority status, 2007-2011



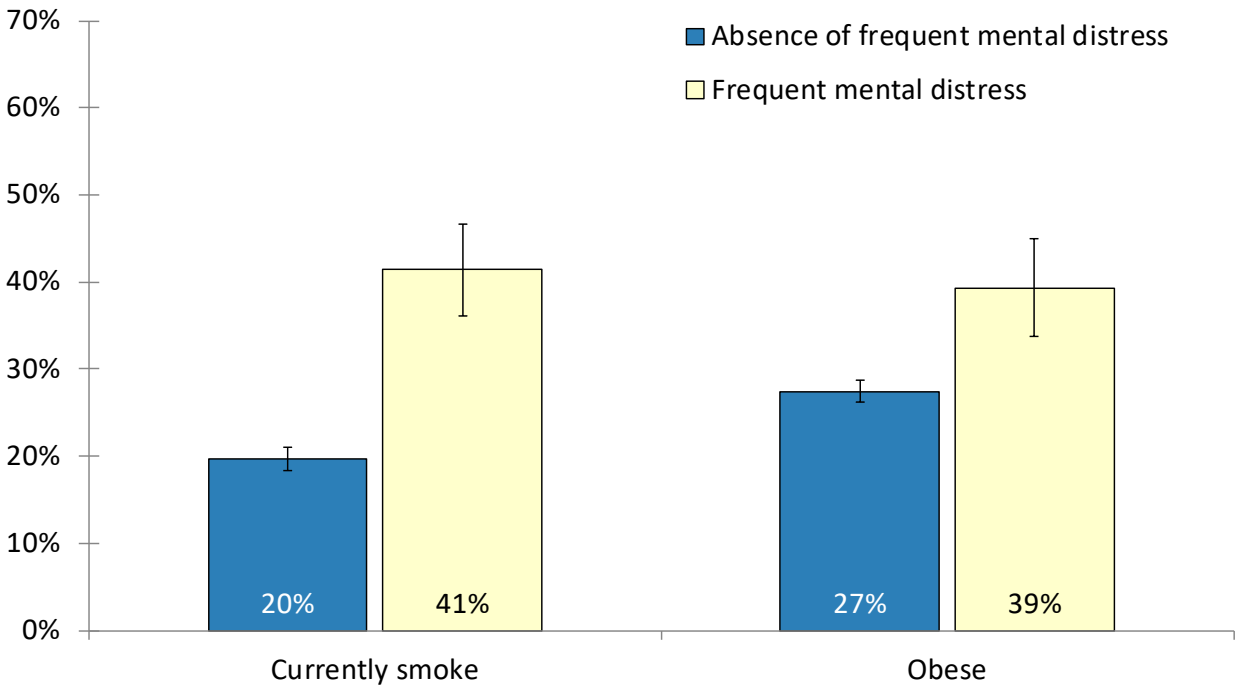
Non-use of seat belts among Wisconsin adults, by age, 2010 and 2011



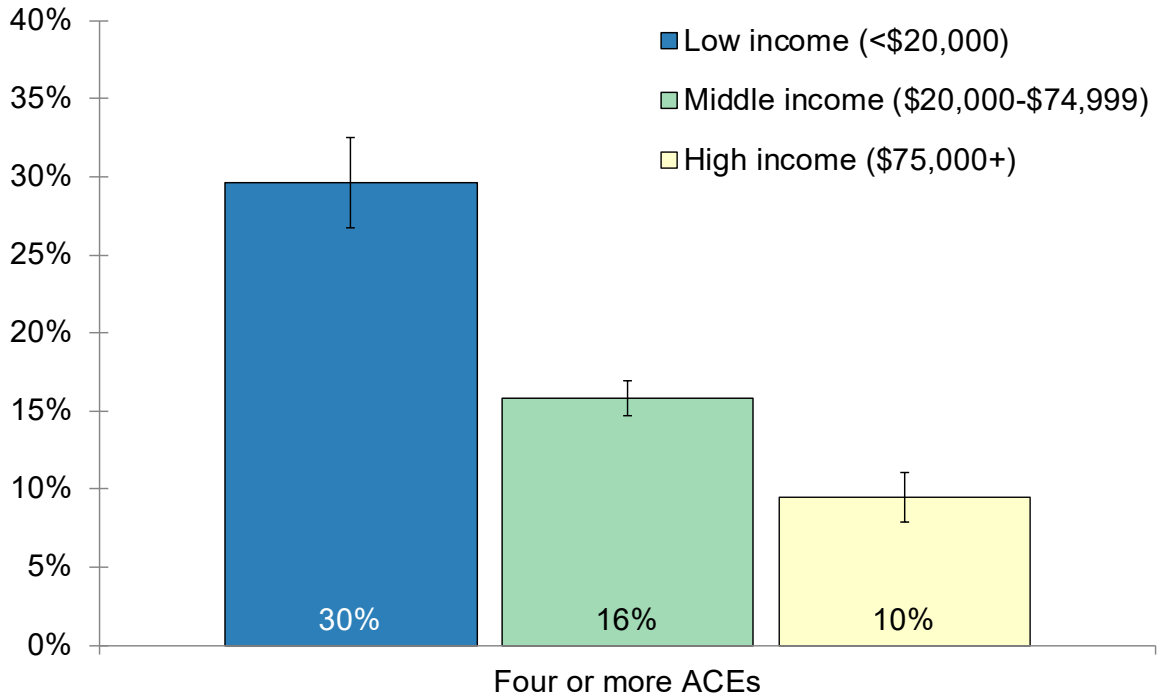
Frequent mental distress among Wisconsin adults ages 18-64, by disability status, 2009-2011



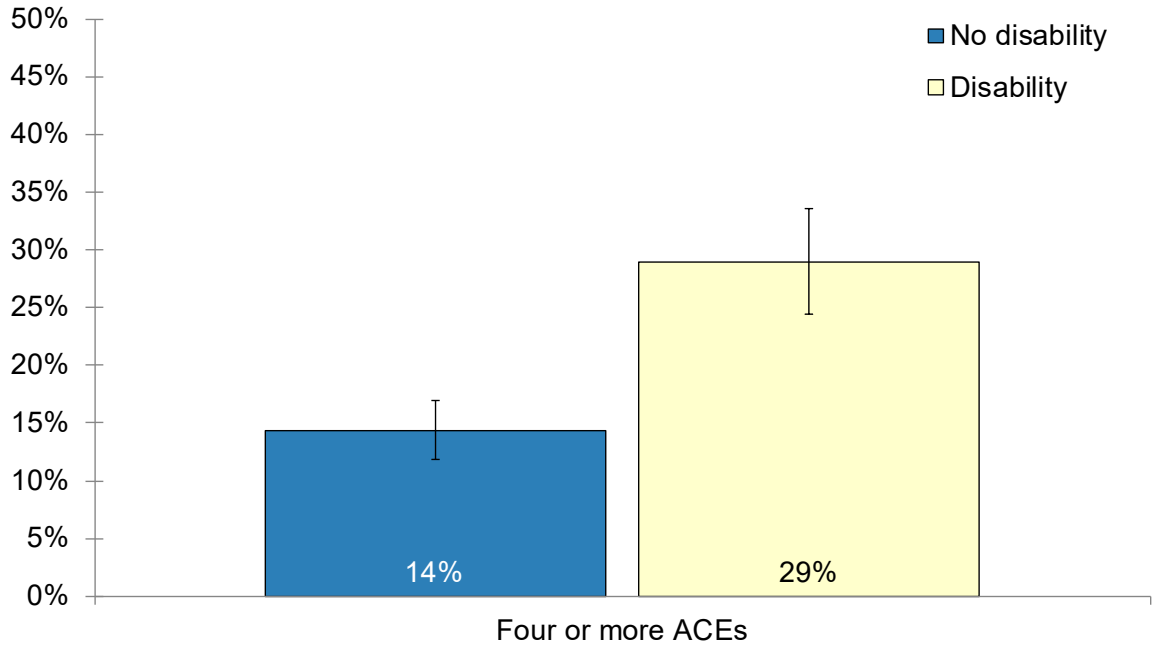
Smoking and obesity among Wisconsin adults with and without frequent mental distress, 2009-2011



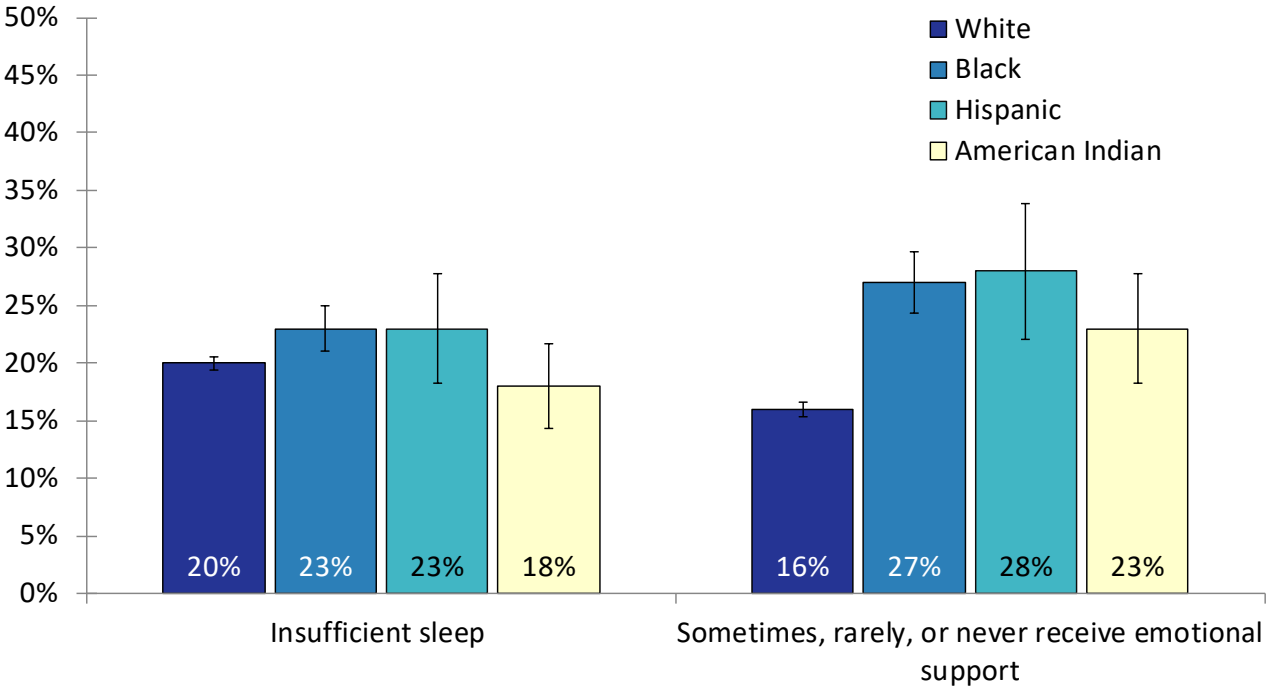
Age-adjusted rate of four or more Adverse Childhood Experiences (ACEs) among Wisconsin adults, by household income, 2010 and 2011



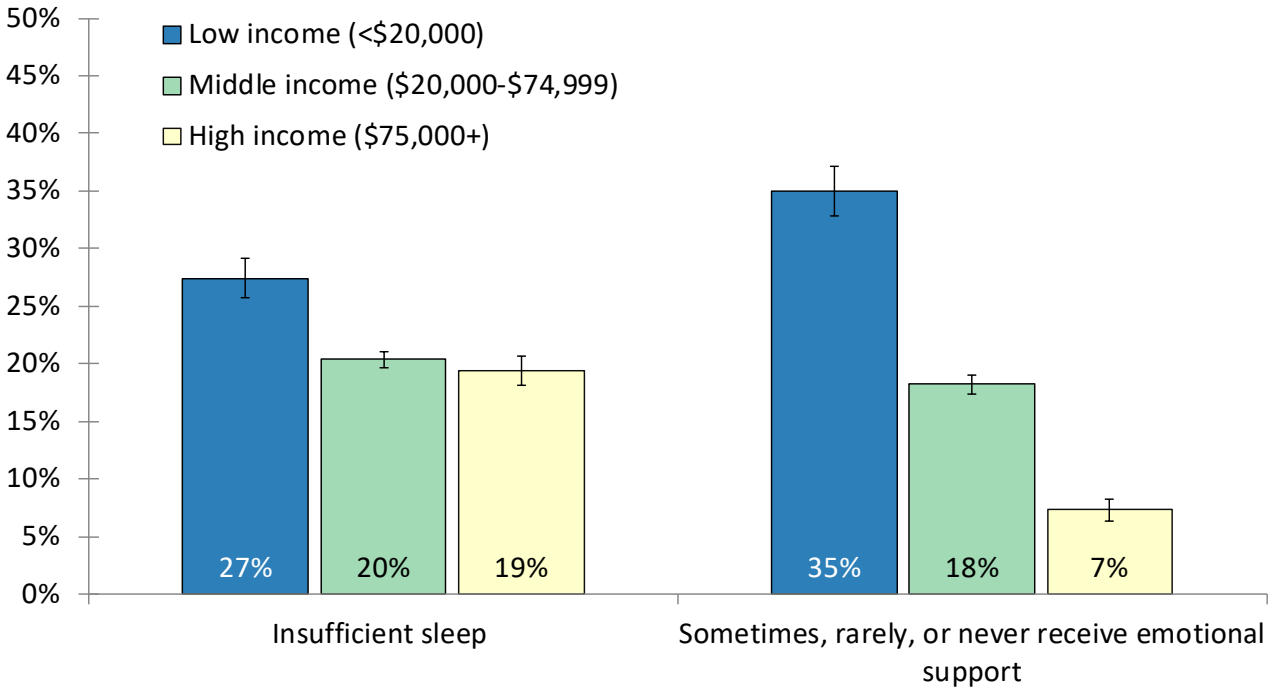
Four or more Adverse Childhood Experiences (ACEs) among Wisconsin adults, by disability status, 2010 and 2011



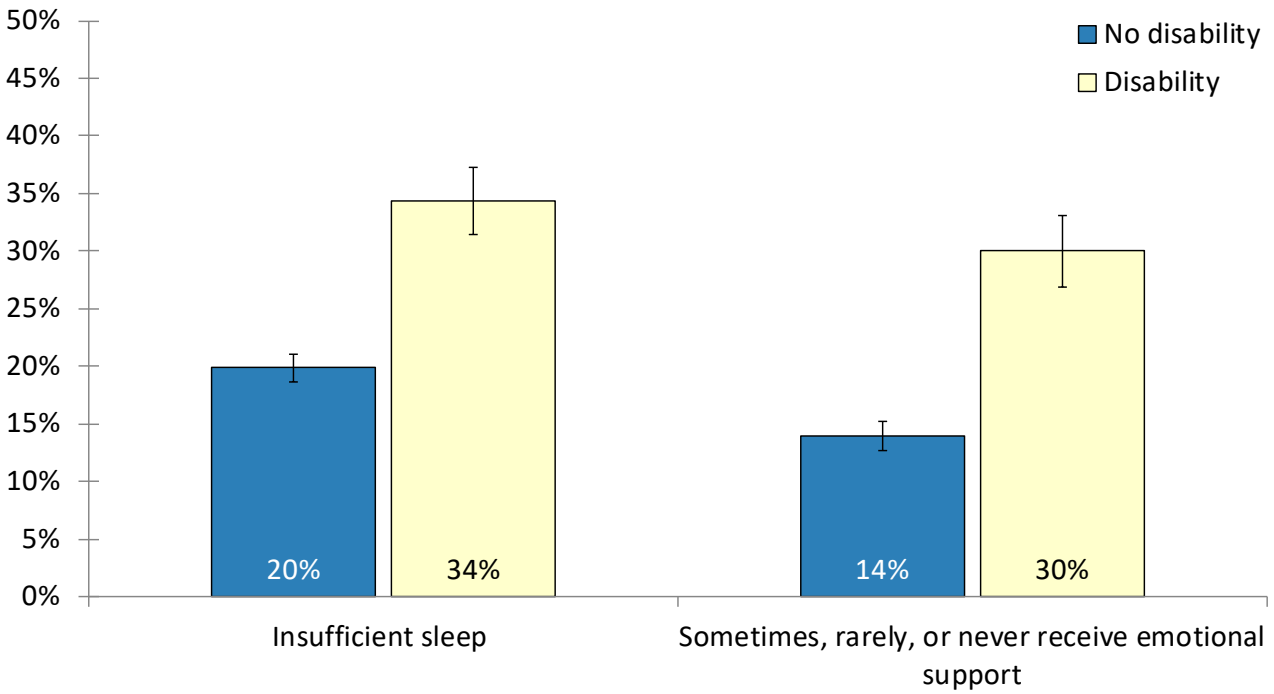
Age-adjusted rate of insufficient sleep and rate of poor emotional support among Wisconsin adults by race/ethnicity, 2008-2010



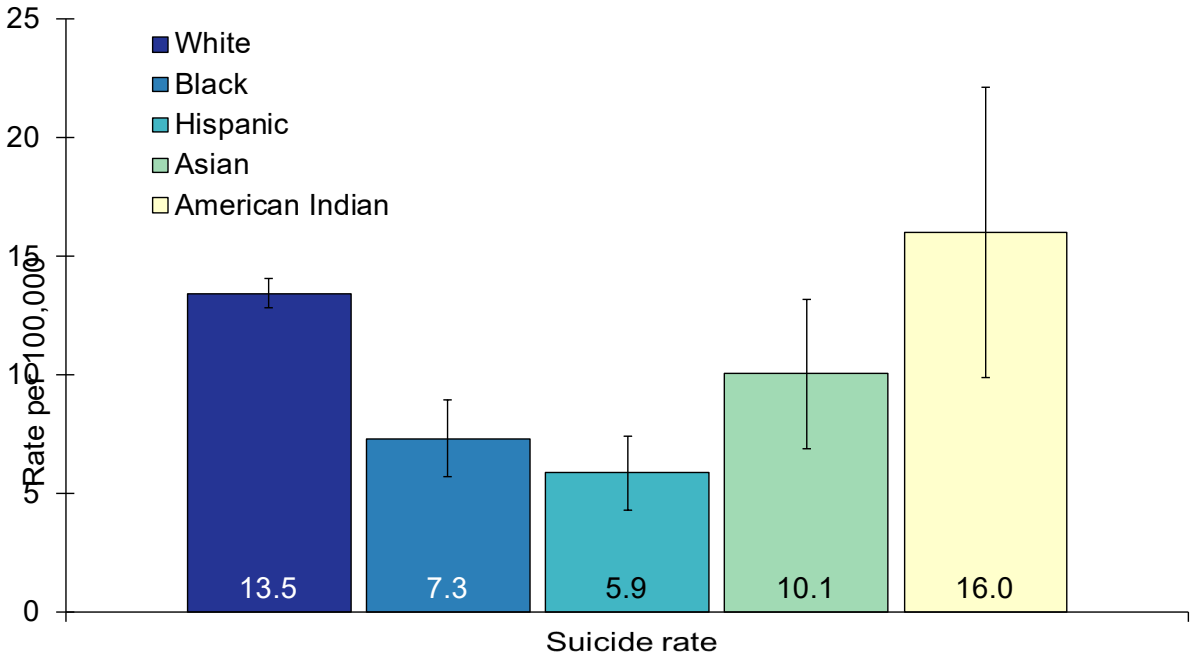
Age-adjusted rate of insufficient sleep and rate of poor emotional support among Wisconsin adults, by household income, 2008-2010



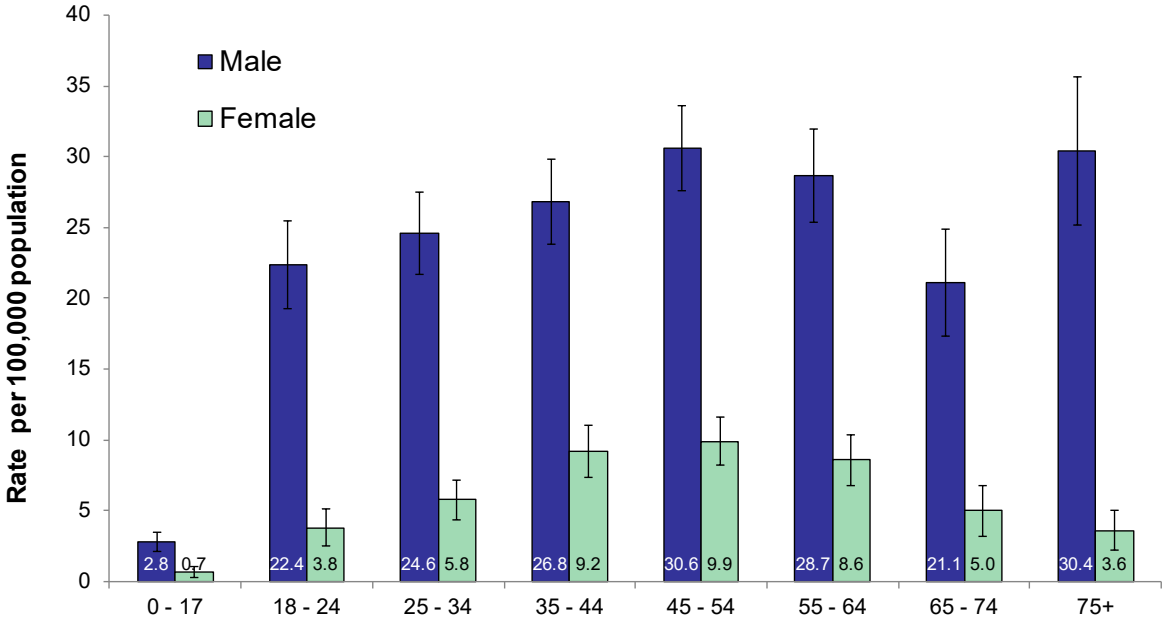
Insufficient sleep and poor emotional support among Wisconsin adults ages 18-64, by disability status, 2008-2010



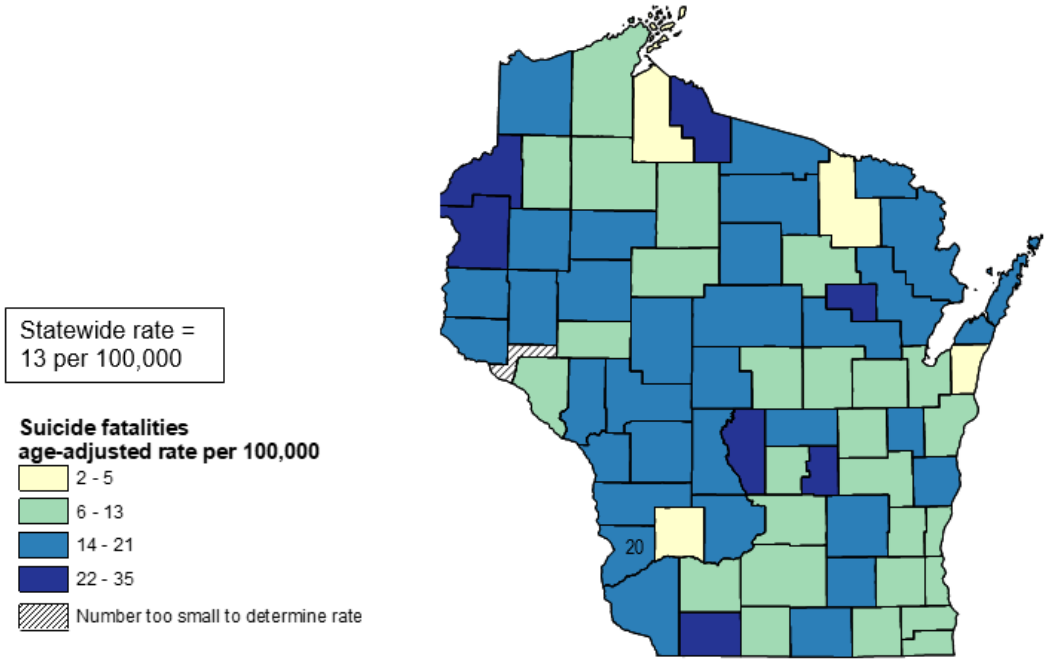
Suicide deaths, age-adjusted rate per 100,000, by race/ethnicity, Wisconsin, 2008-2010



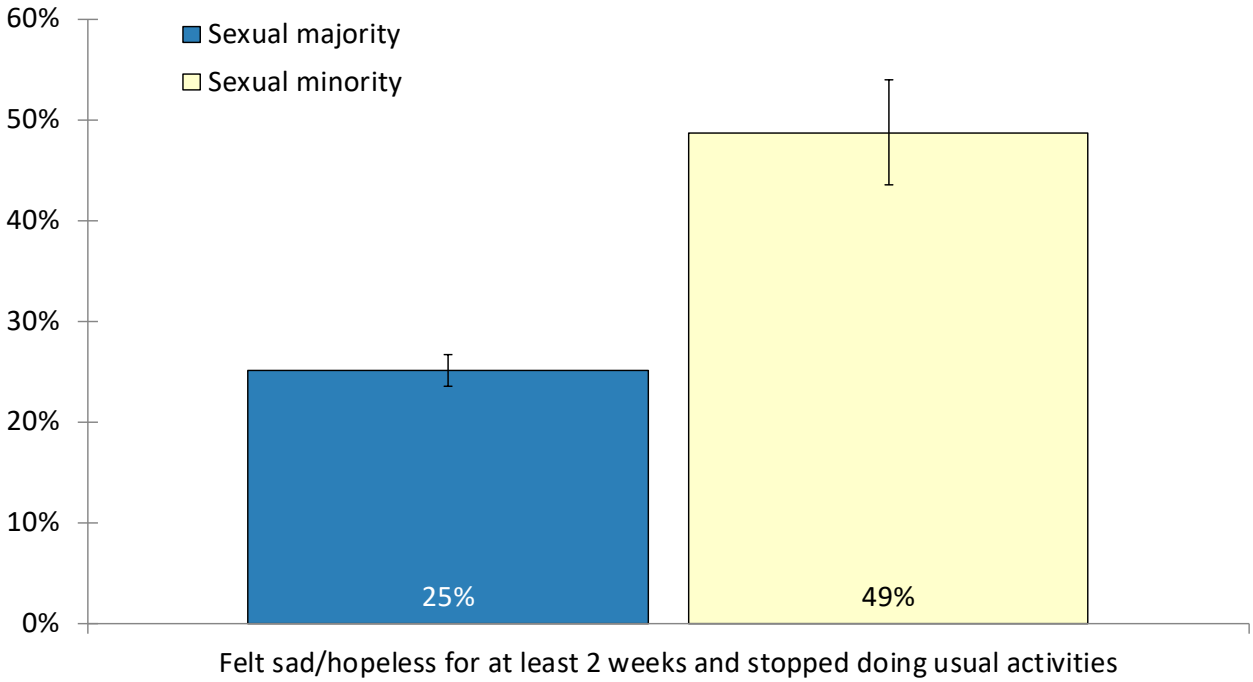
Suicide deaths, rate per 100,000, by sex and age, Wisconsin, 2008-2010



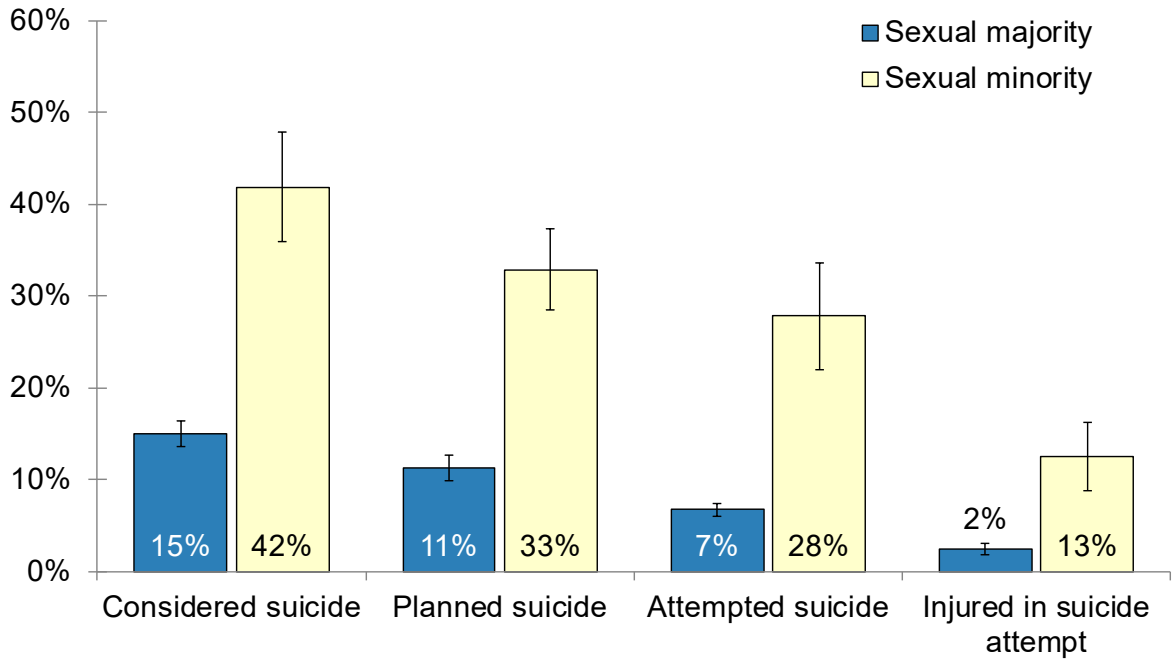
Suicide rates by county, age-adjusted rates per 100,000, Wisconsin, 2008-2010



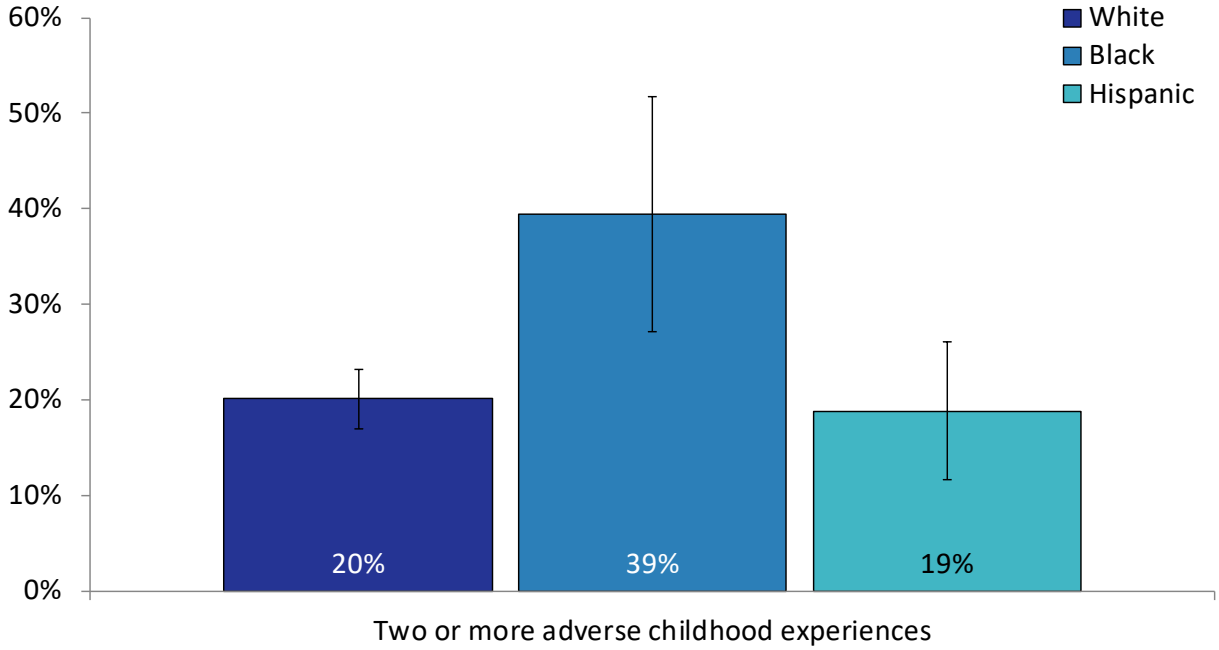
Depression among Wisconsin high school students by sexual minority status, 2007-2011



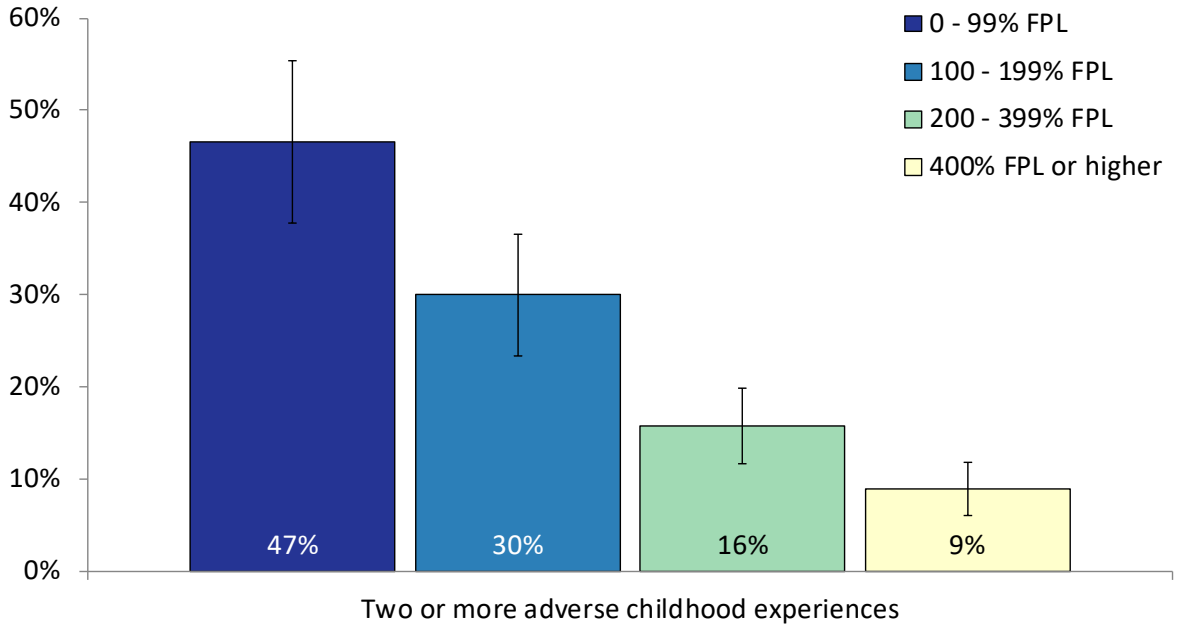
Suicide risk during past 12 months among Wisconsin high school students by sexual minority status, 2007-2011



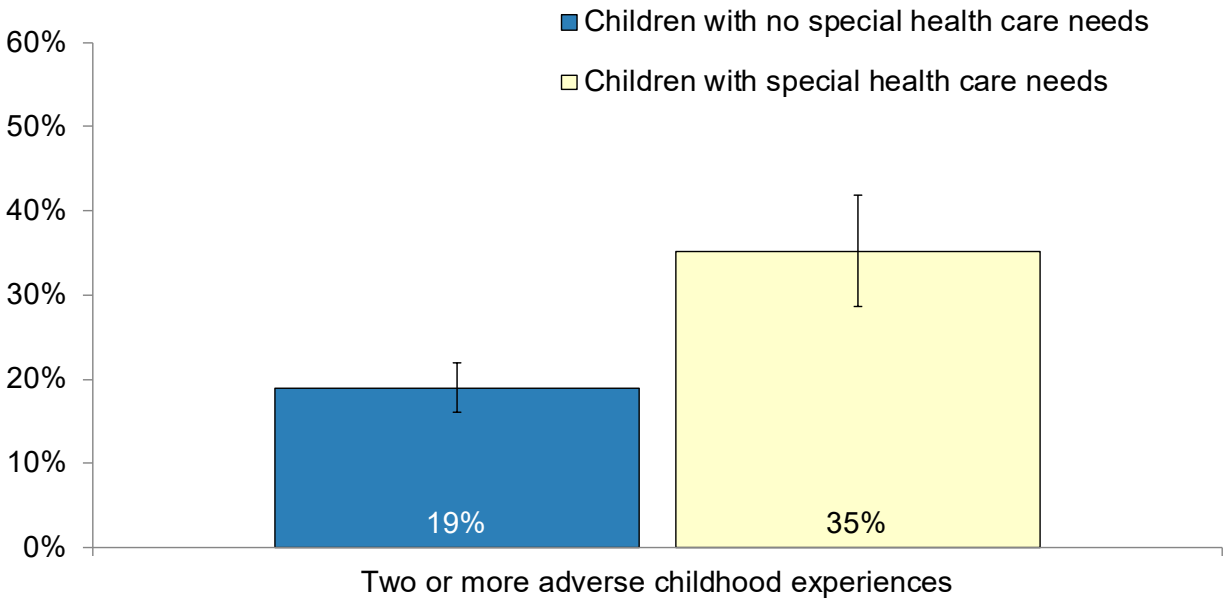
Percentage of children who have experienced two or more adverse childhood experiences (ACEs), by race/ethnicity, 2011-2012



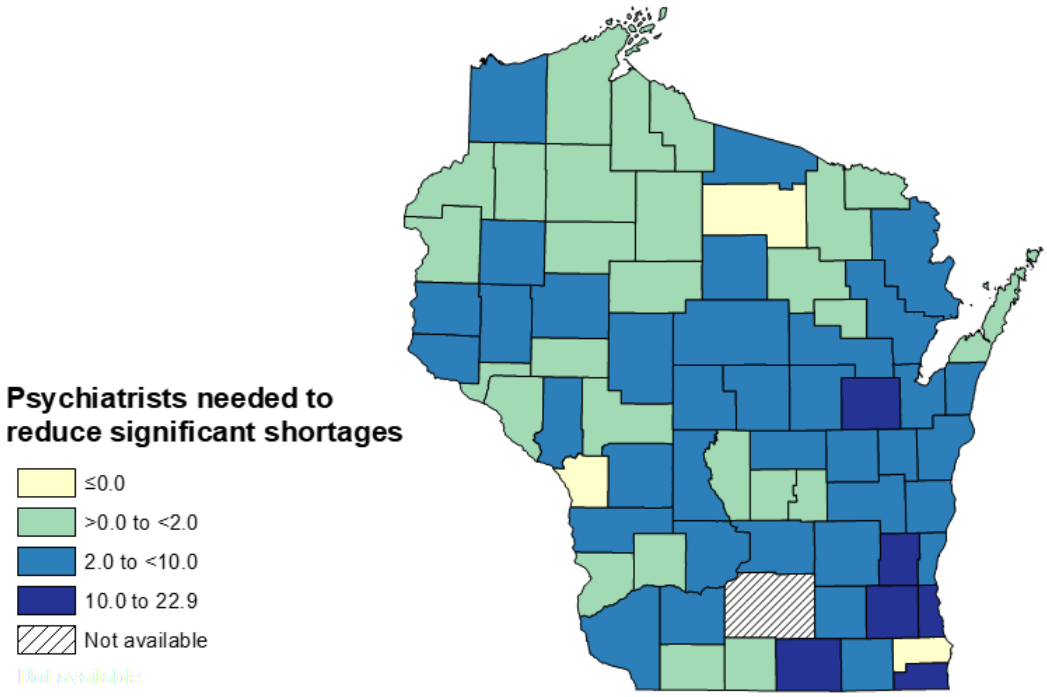
Percentage of children who have experienced two or more adverse childhood experiences (ACEs), by federal poverty level (FPL), 2011-2012



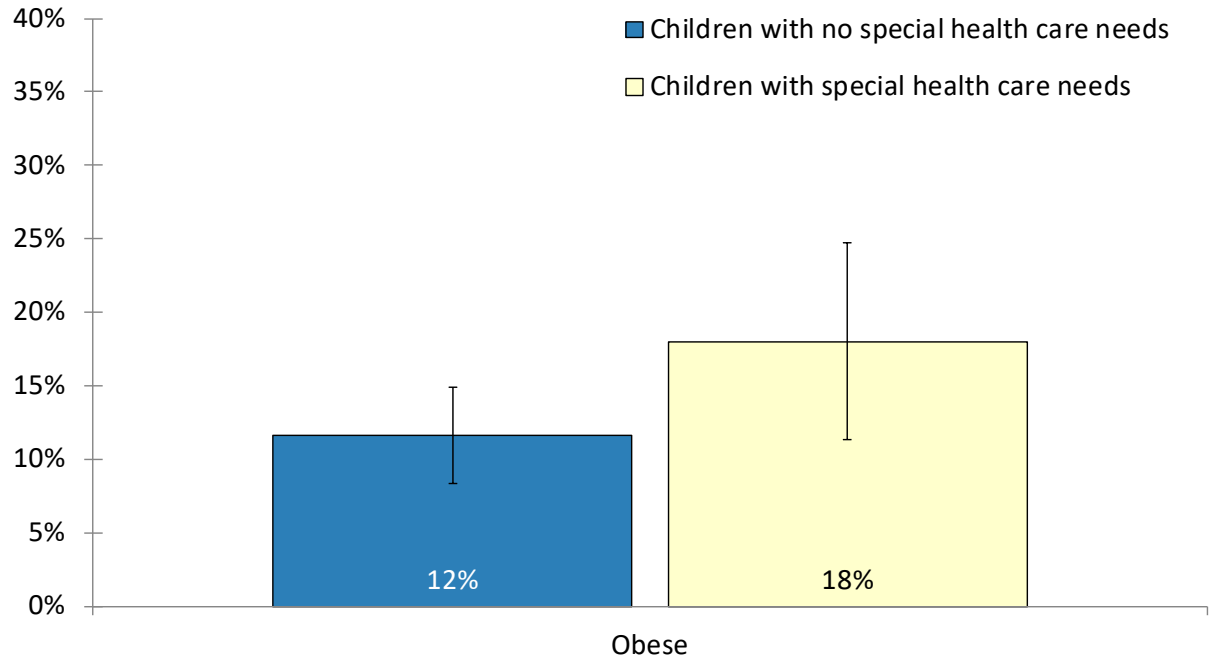
Percentage of children who have experienced two or more adverse childhood experiences (ACEs), by disability status, Wisconsin, 2011-2012



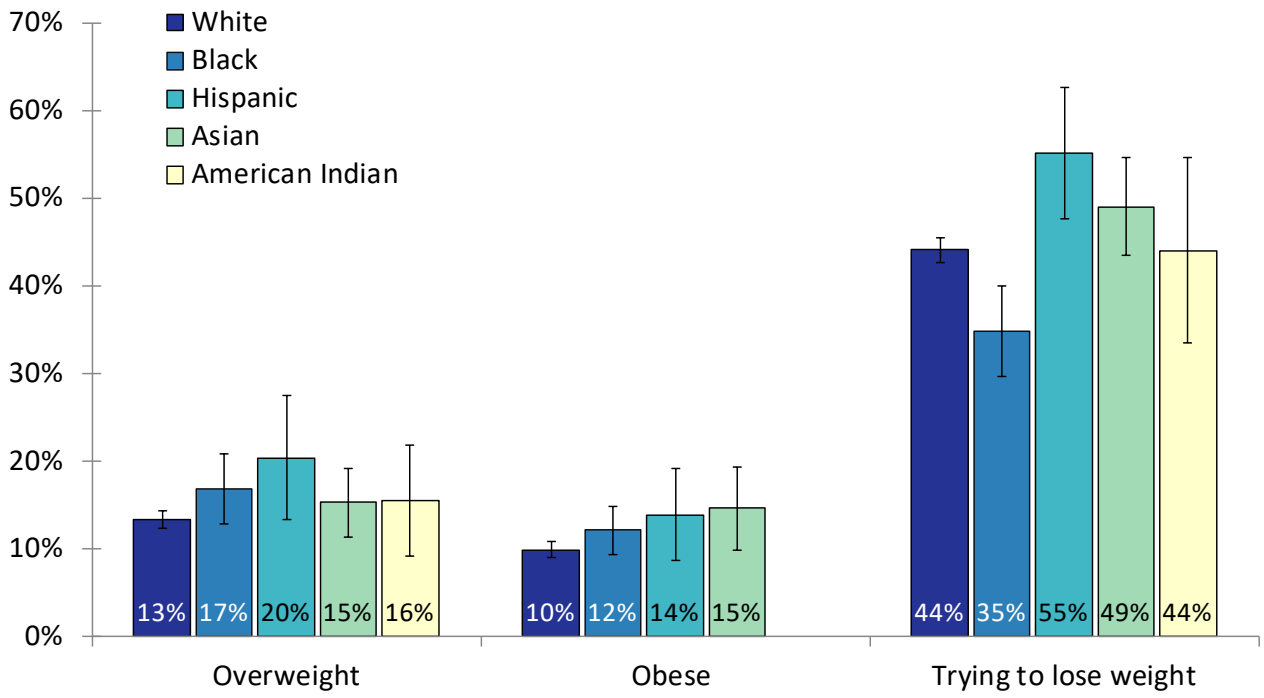
Number of full-time equivalent psychiatrists needed to remove significant shortages for the resident population, by county, 2011



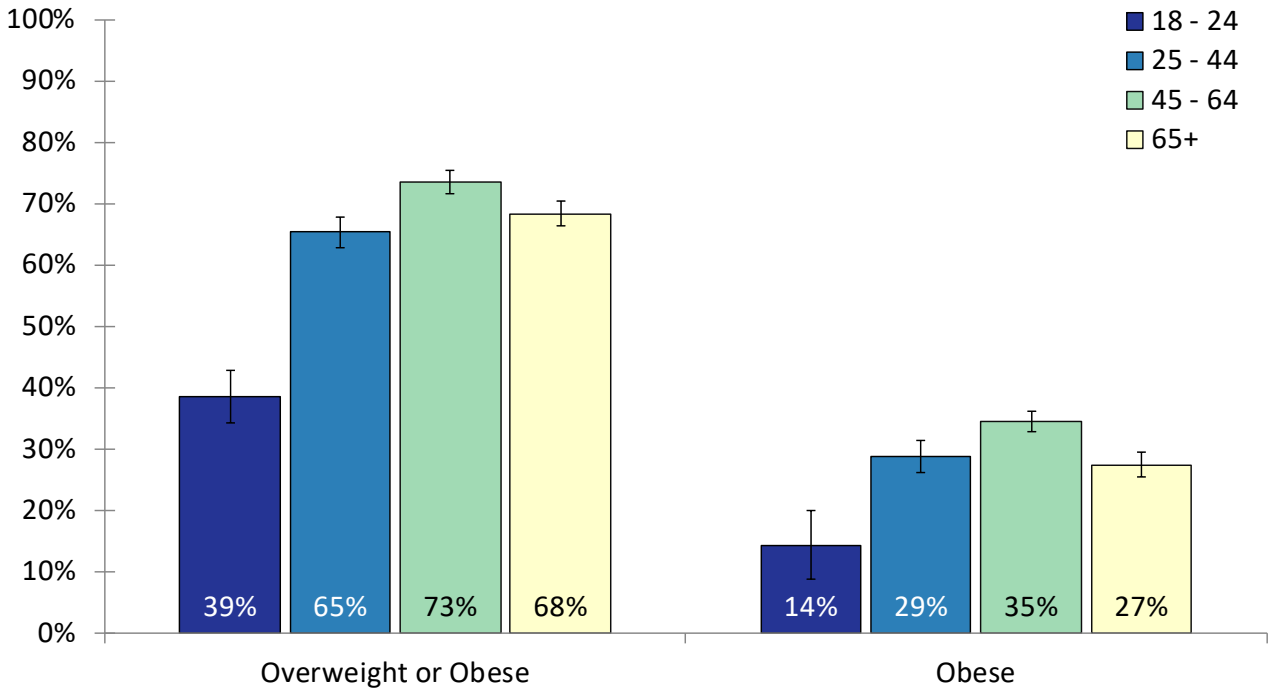
Obesity among children ages 10-17, by disability status, Wisconsin, 2011-2012



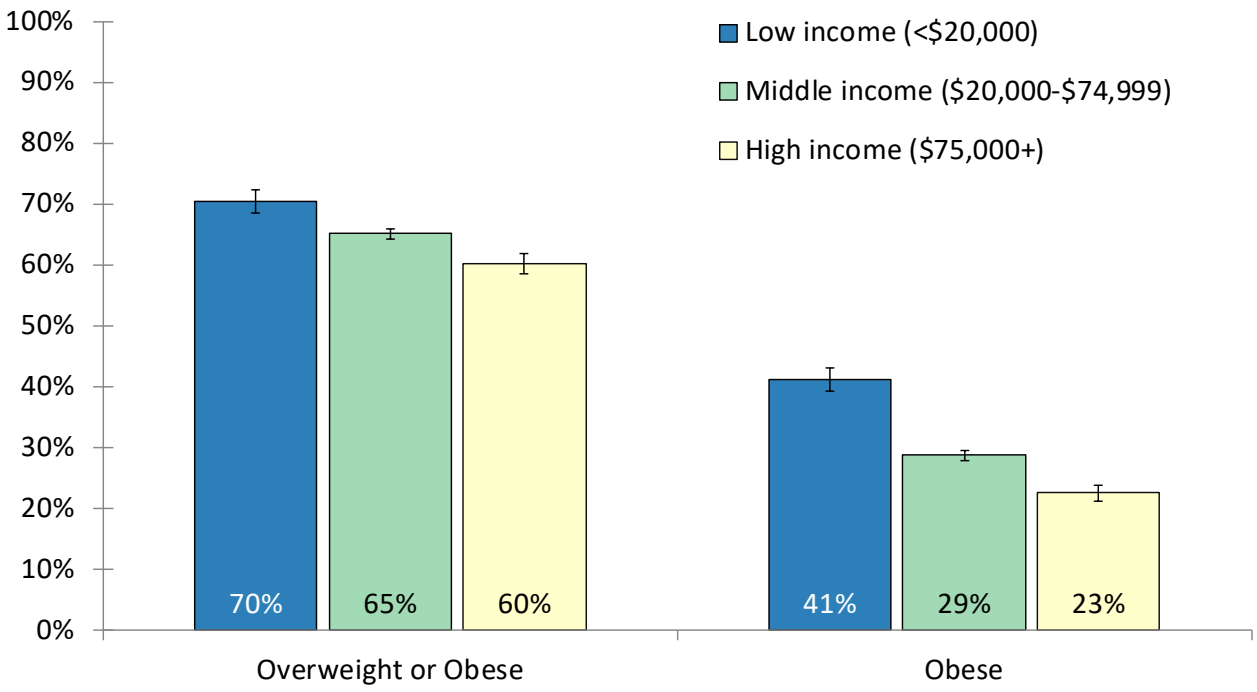
Overweight, obesity, and weight loss attempts among Wisconsin high school students, by race/ethnicity, 2007-2011



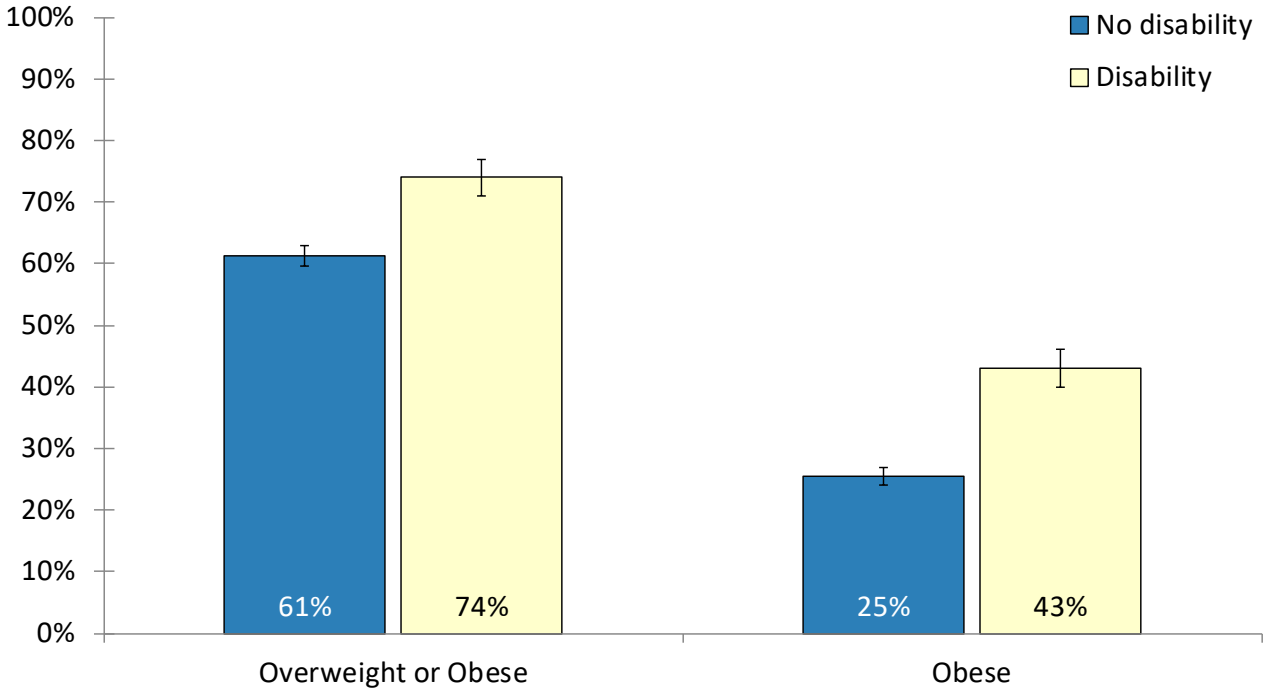
Overweight and obesity among Wisconsin adults, by age, 2009-2011



Age-adjusted rates of overweight and obesity among Wisconsin adults, by household income, 2008-2011



Rates of overweight and obesity by disability status, Wisconsin adults ages 18-64, 2008-2011

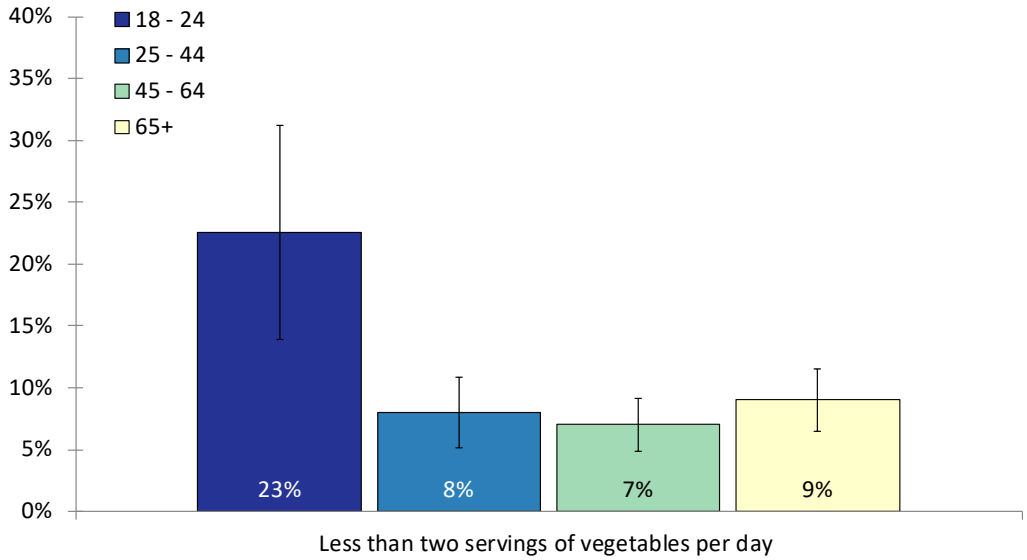


Among Wisconsin adults ages 18-64, those with a disability were more likely to be overweight or obese than were those without a disability. People with disabilities can find it more difficult to eat healthy, control their weight, and be physically active. These difficulties might be related to a variety of factors:

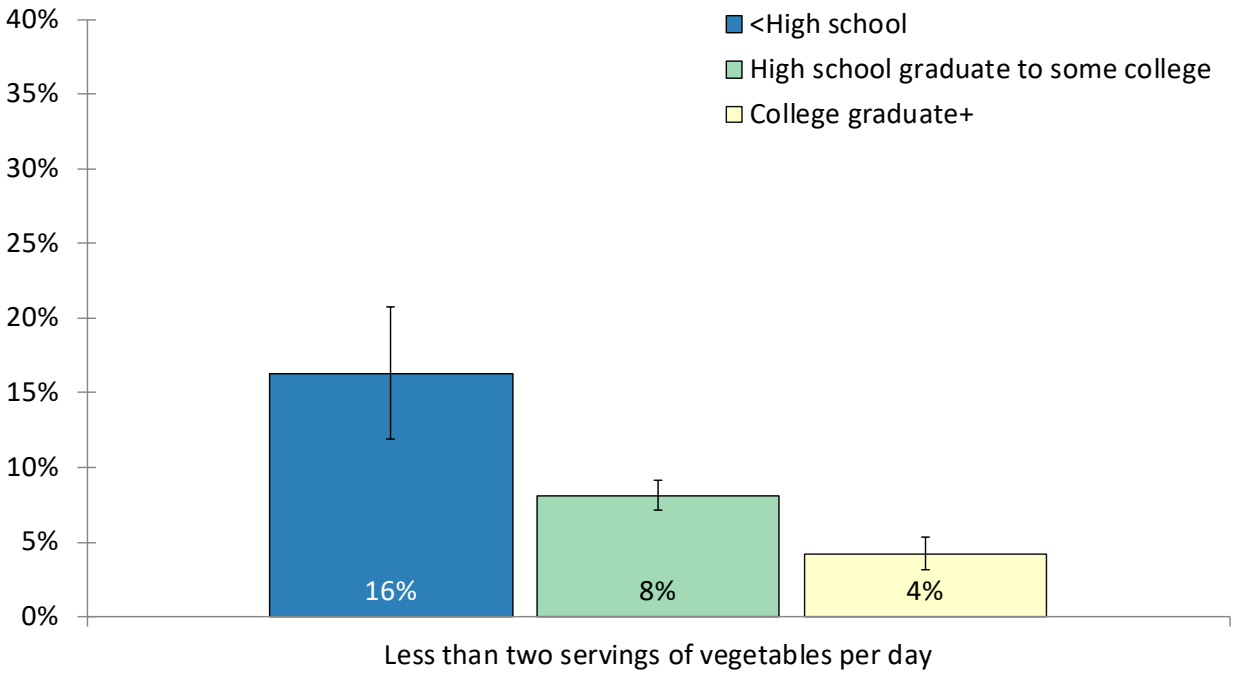
- A lack of healthy food choices.
- Difficulty with chewing or swallowing food or with the taste or texture of foods.
- Medications that can contribute to weight gain, weight loss, and changes in appetite.
- Physical limitations that can reduce a person's ability to exercise.
- Pain.
- A lack of energy.
- A lack of accessible environments (for example, sidewalks, parks, and exercise equipment) that can enable exercise.
- A lack of resources (for example, money; transportation; and social support from family, friends, neighbors, and community members).

Note: The WDHS behavioral risk factor survey from which this data was gleaned does not collect information on the cause of disability. The presence of a chronic condition may be the reason some people report themselves as having a disability.

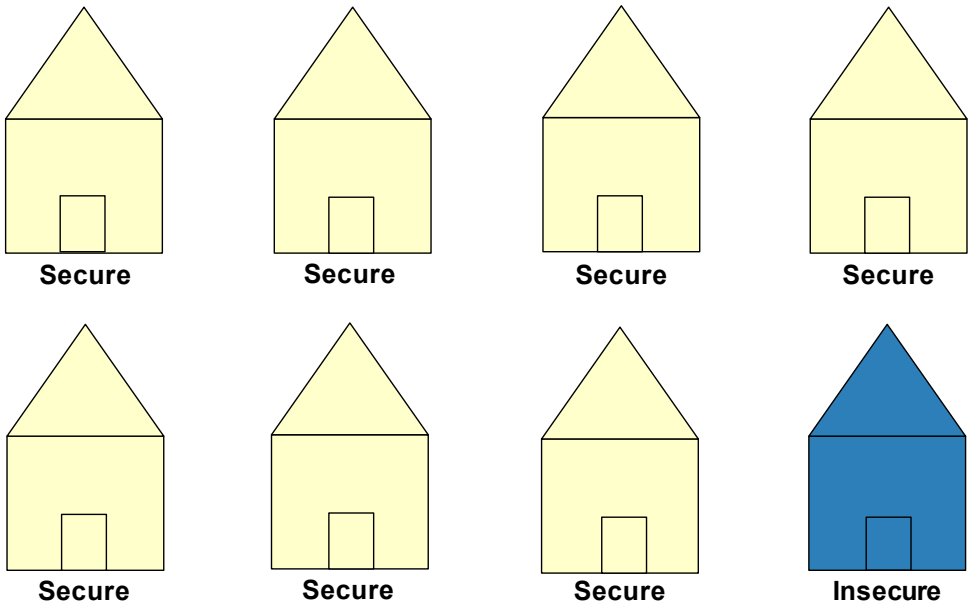
Low vegetable consumption among Wisconsin adults, by age, 2009



Age-adjusted rate of low vegetable consumption among Wisconsin adults, by education level, 2009

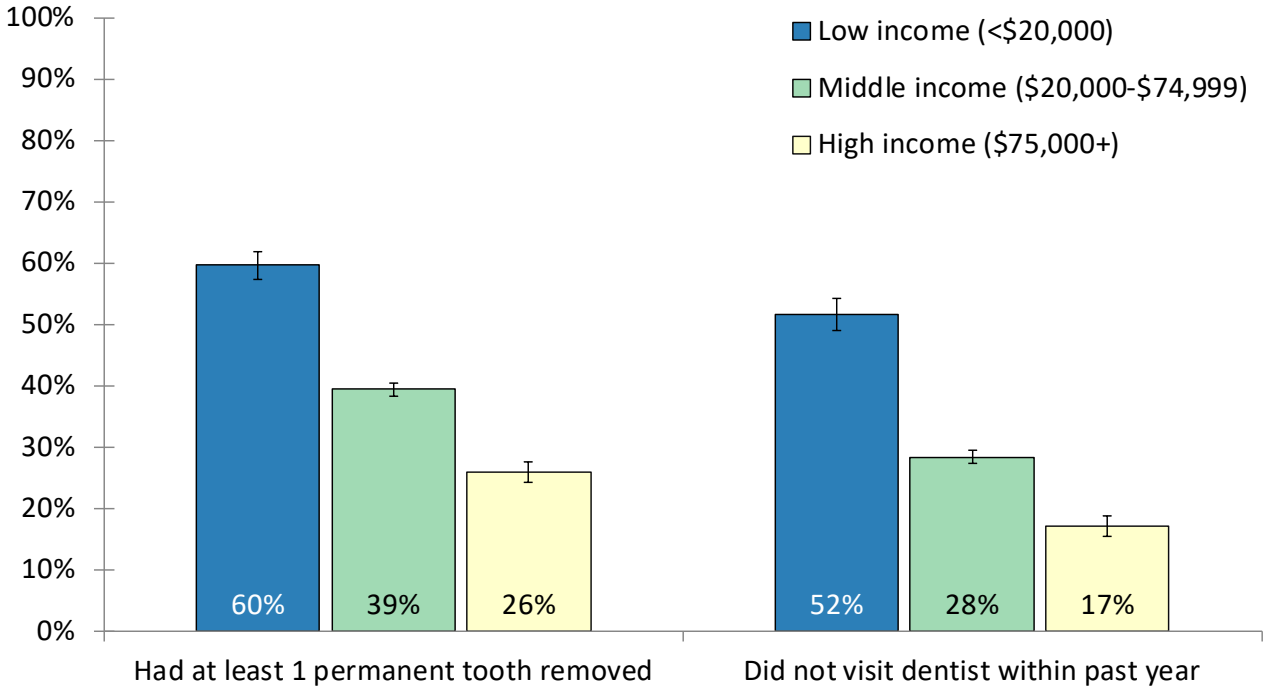


Proportion of households that experience food insecurity, Wisconsin, 2010

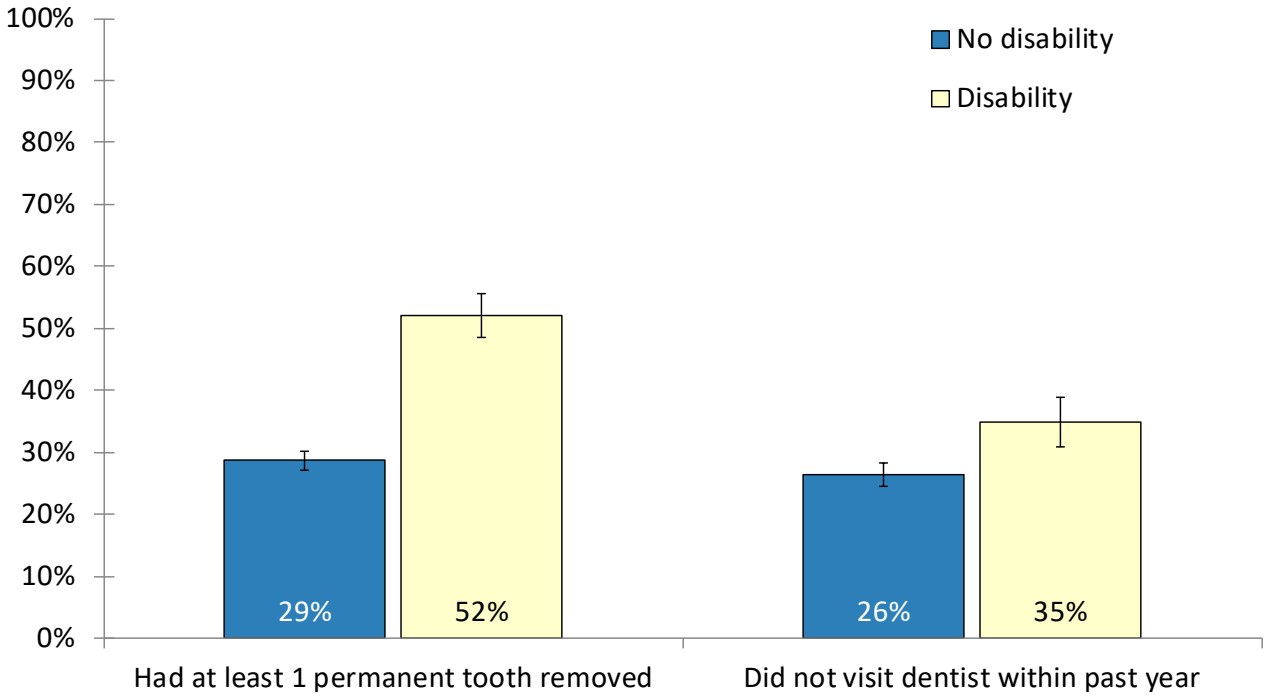


1 in 8 households experience food insecurity

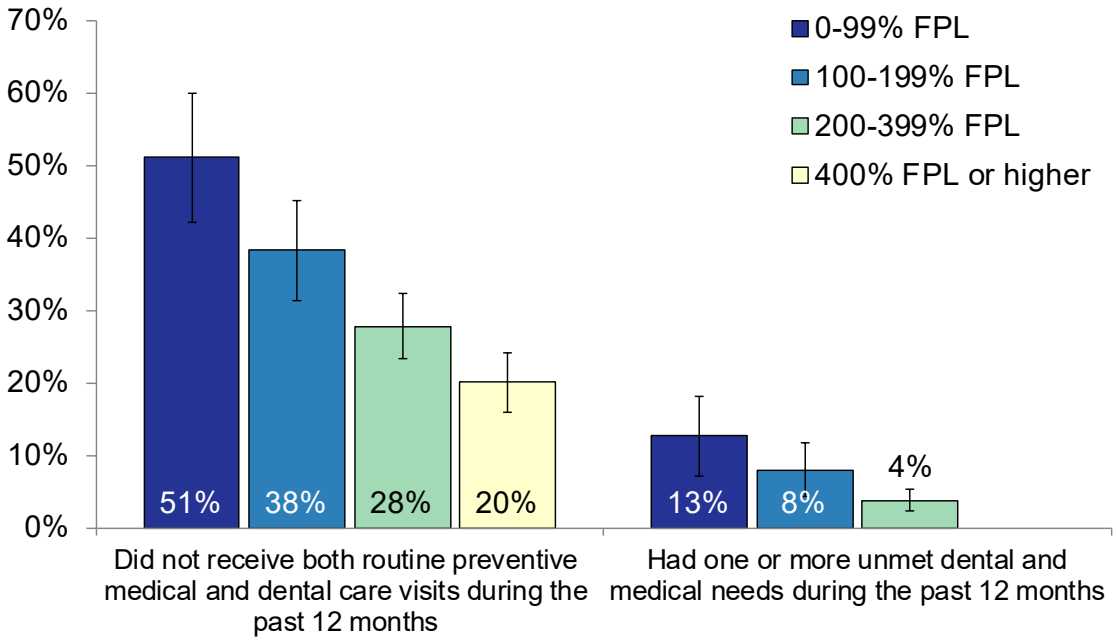
Age-adjusted rates of tooth removal and dental visits in the past year among Wisconsin adults, by household income level, 2008-2011



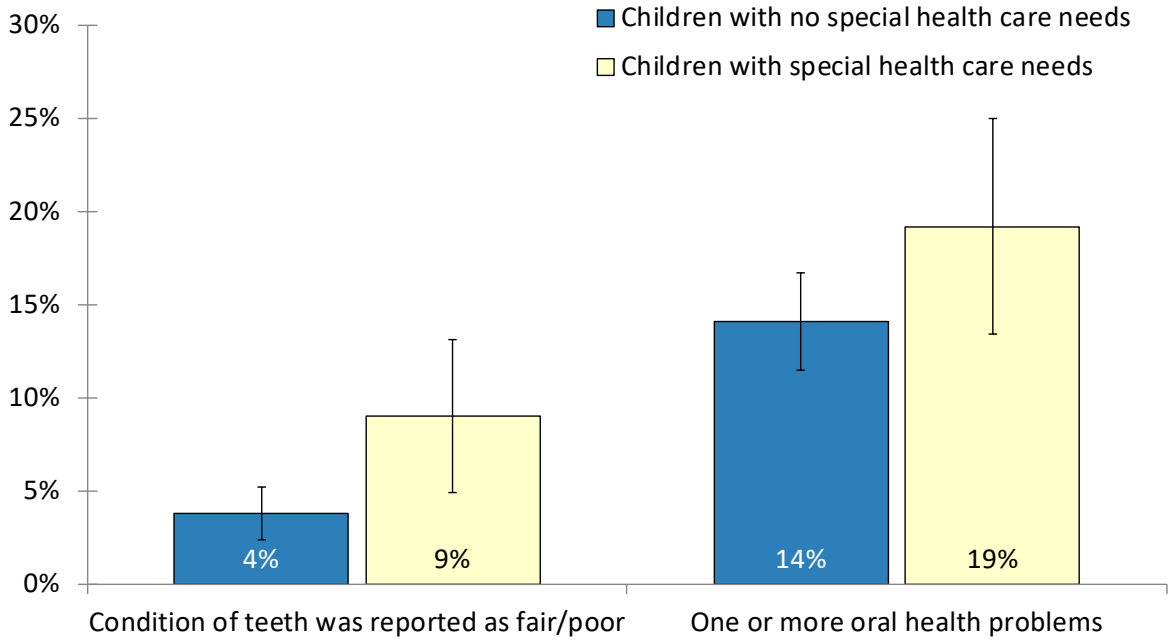
Rates of tooth removal and dental visits in the past year, by disability status, Wisconsin adults ages 18-64, 2008-2011



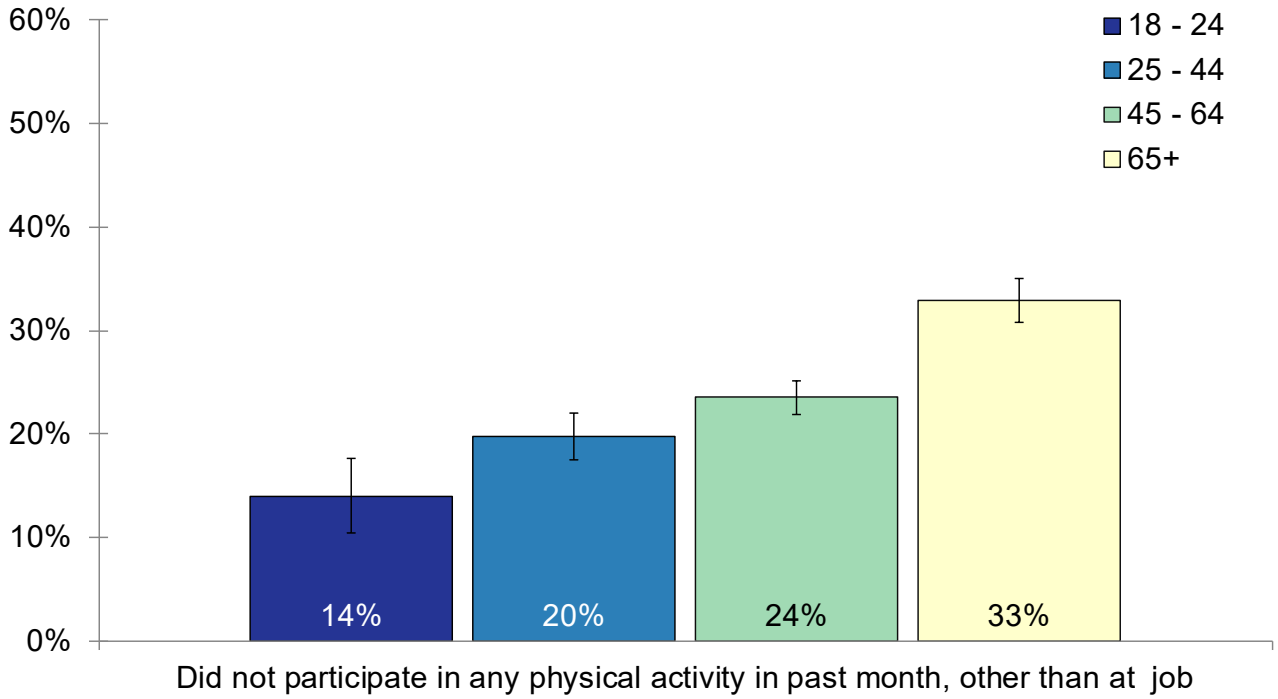
Lack of routine preventive medical and dental care and unmet medical and dental needs among children, by poverty status, Wisconsin, 2011-2012



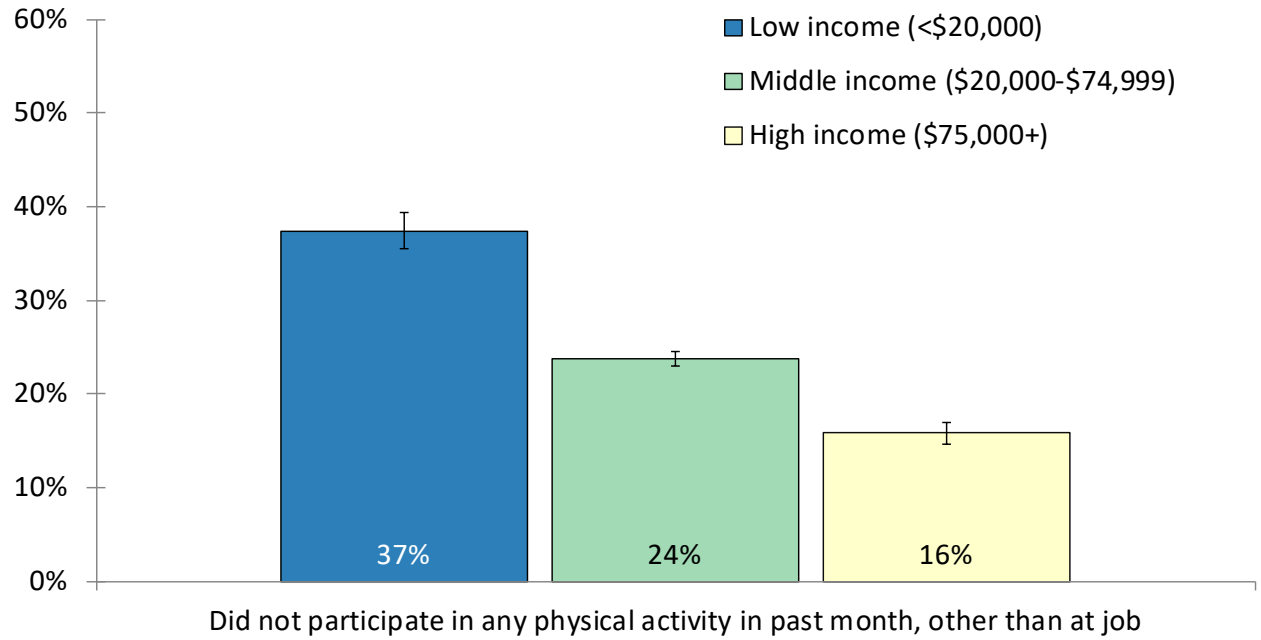
Percentage of children with oral health needs by disability status, Wisconsin, 2011-2012



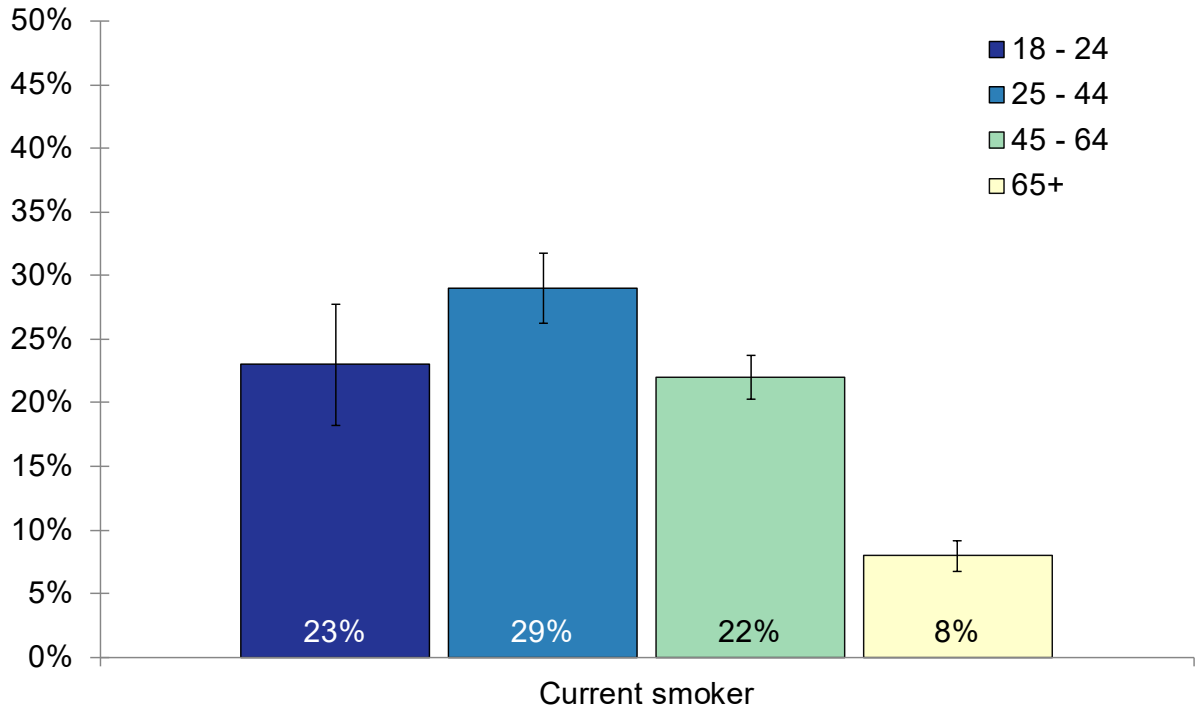
Physical inactivity among Wisconsin adults, by age, 2009-2011



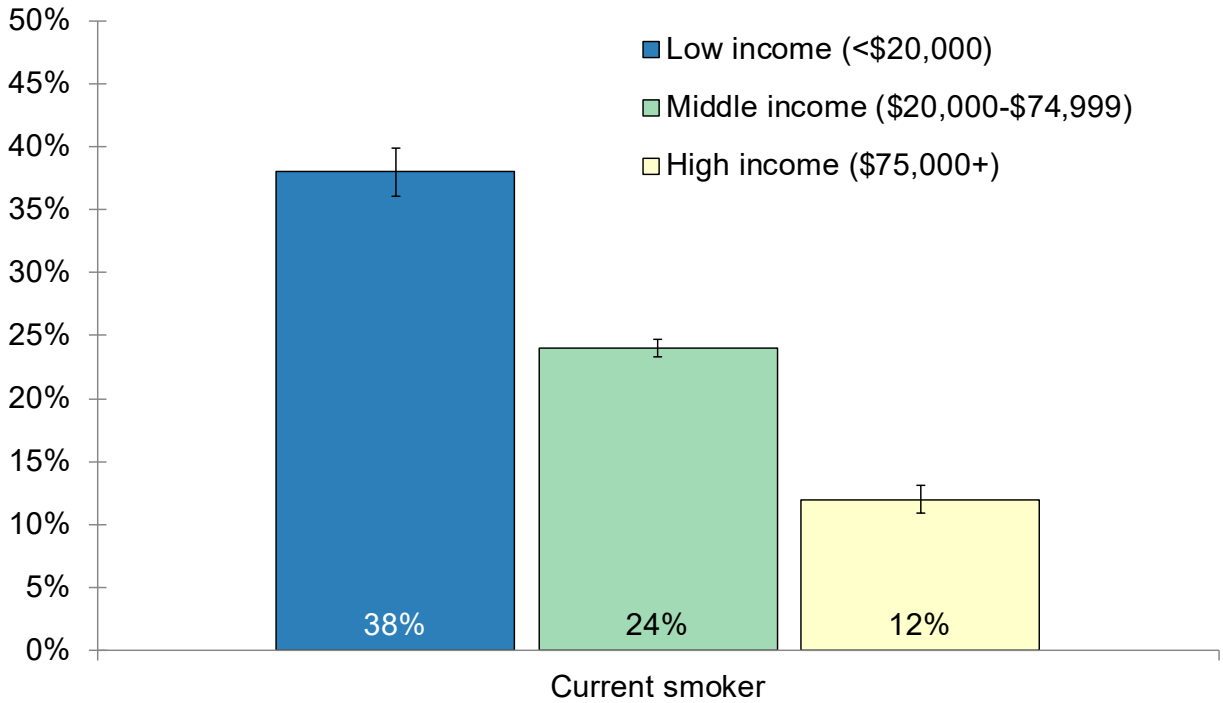
Age-adjusted rate of physical inactivity among Wisconsin adults, by household income, 2008-2011



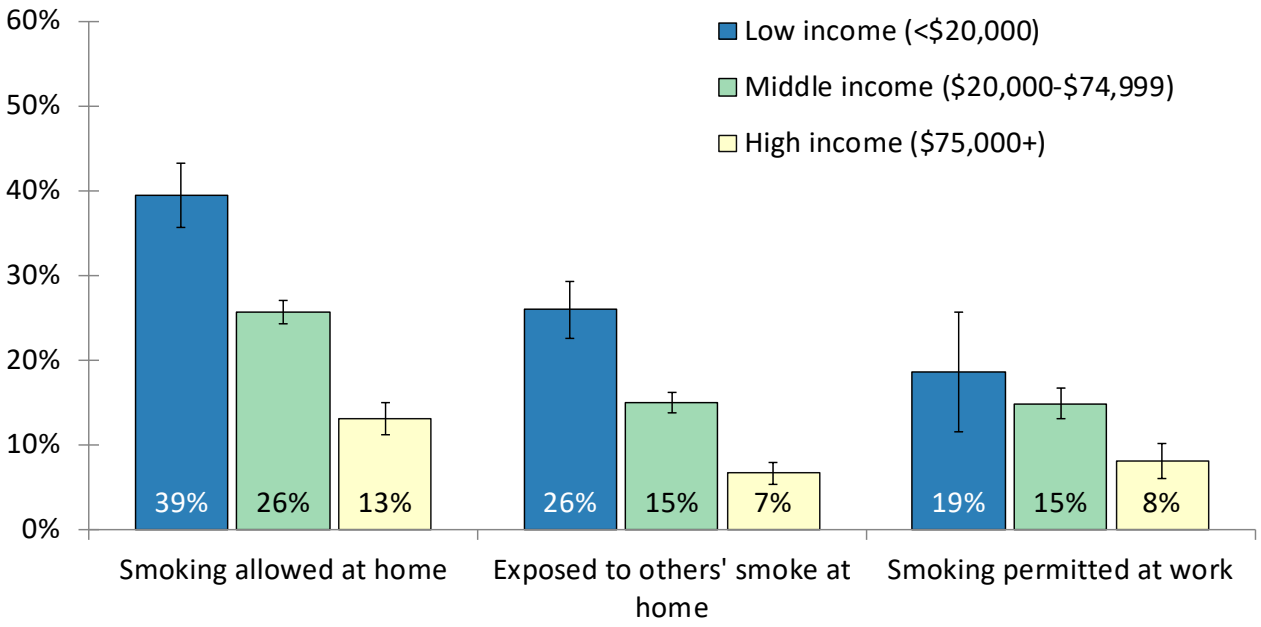
Smoking rates among Wisconsin adults, by age, 2009-2011



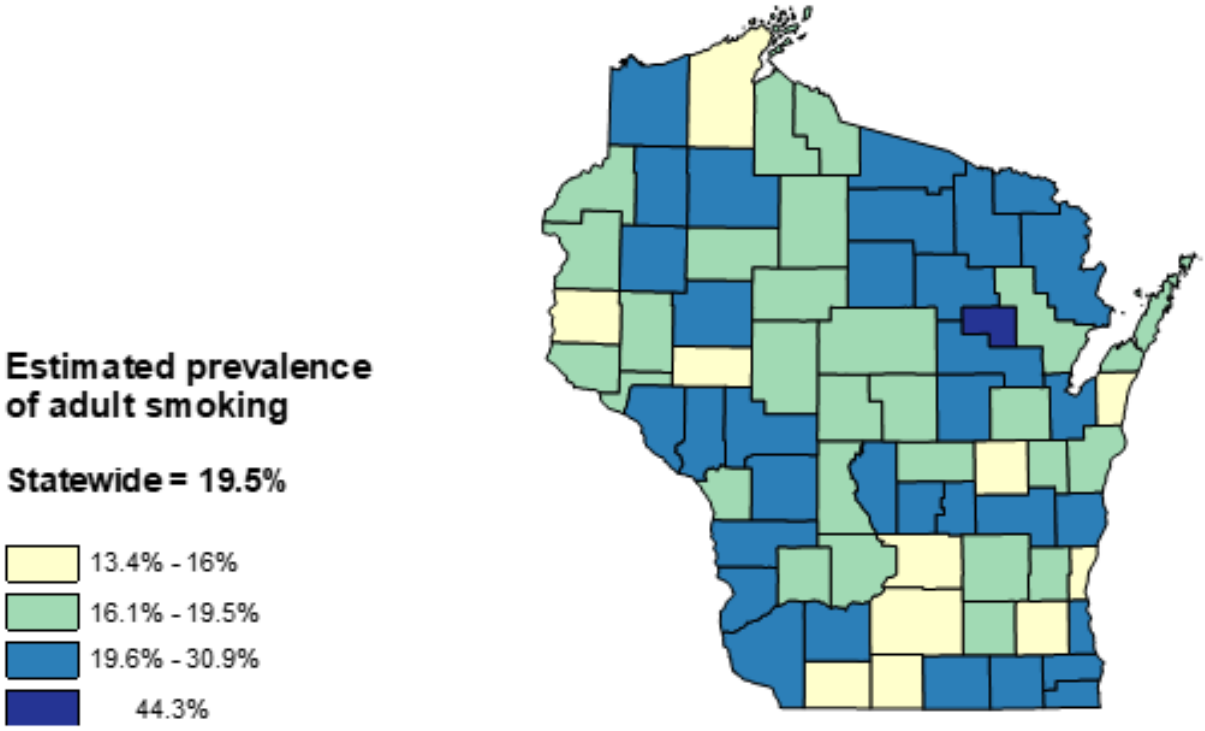
Age-adjusted rates of smoking among Wisconsin adults, by household income, 2008-2011



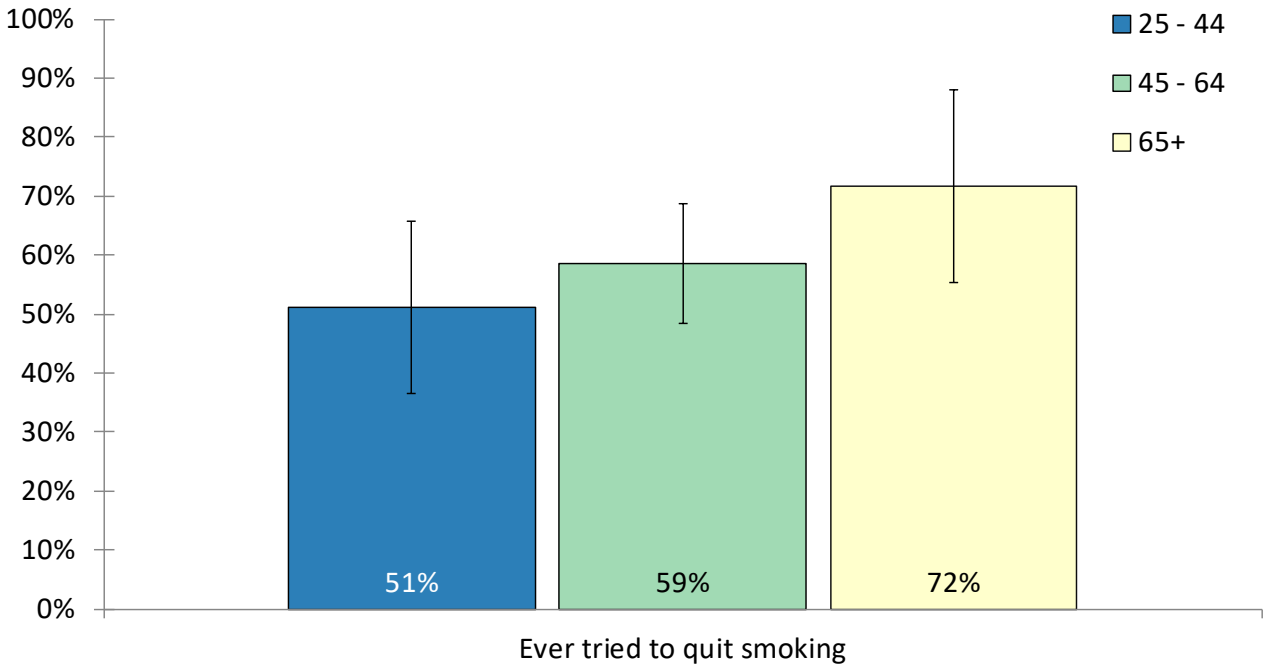
Rates of secondhand smoke exposure among Wisconsin adults, by household income, 2008-2011



Estimated prevalence of smoking among Wisconsin adults, by county, 2006-2008



Attempts to quit smoking among adult smokers in Wisconsin, by age, 2008-2011



Attempts to quit smoking among adult smokers in Wisconsin, by household income, 2009-2011