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## Milwaukee Health Report 2011

*Health Disparities in Milwaukee  
By Socioeconomic Status*

Center for Urban  
Population Health

*Working together to improve the health of communities*



# Milwaukee Health Report 2011

*Health Disparities in Milwaukee  
By Socioeconomic Status*

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# INTRODUCTION

The Center for Urban Population Health and the City of Milwaukee Health Department are pleased to present the *Milwaukee Health Report 2011*. Now in its third year, this report continues to summarize the current state of the city's health, as well as the distribution of key factors that may have implications for future health.

As the largest city in Wisconsin, Milwaukee contains 10.7% of the state's population. In 2011, the *Wisconsin County Health Rankings* compared Milwaukee's health outcomes and health determinants with the rest of the state; the City of Milwaukee ranked worse than all but one county in overall health outcomes, and worse than all but one county in health determinants, or risk factors for future health (University of Wisconsin Population Health Institute, 2011).

The authors gratefully acknowledge the foundational work of the University of Wisconsin Population Health Institute's *Wisconsin County Health Rankings* (<http://uwphi.pophealth.wisc.edu/pha/wchr.htm>), which were first published in 2003 and included the City of Milwaukee beginning in 2006. The *Milwaukee Health Report 2011* builds upon that work, particularly by examining the disparities in health outcomes and health determinants between different areas of Milwaukee, as defined by socioeconomic status (SES).

In the *County Health Rankings* framework, health outcomes are considered the result of four groups of modifiable health determinants: healthcare access and quality, individual health behaviors, physical environment, and socioeconomic factors such as income and education. Thus, the distribution of health outcomes and health disparities results from differences in the distribution of the determinants of health in the population.

The relationship between socioeconomic determinants of health and health outcomes is one of the most robust and well documented findings in social science (Marmot, Wilkinson, 2006), and has been documented across counties, states, and nations. Members of our current research team also found that health disparities exist within the City of Milwaukee itself (Vila, Swain, Baumgardner, Halsmer, Remington, & Cisler, 2007). Furthermore, in the United States, race is closely correlated with socioeconomic status, and a previous study found Milwaukee to be the most segregated large metropolitan area for Blacks in the United States (Iceland, Weinberg, & Steinmetz, 2002).

The *Milwaukee Health Report 2011* provides information regarding health disparities among the SES groups within the city, and offers comparisons of health outcomes and health determinants between the City of Milwaukee, the State of Wisconsin and the United States.

Because a) health outcomes are driven by health determinants, b) health determinants may be affected by policies or programs designed to alter their distribution in the community, and c) the ultimate goal of population health is to improve the health of large groups of people, it follows that investments in policies and interventions that moderate the influence of these health determinants are essential (Kindig, 2007). Thus, the city itself – including not just the city government but also community groups, employers, and others – can play a significant role in improving health through the adoption of appropriate programs and policies. To that end, we hope that the information provide in the *Milwaukee Health Report 2011* may inform further discussion on policy change, program implementation, and resource allocation.

# METHODS

## DEFINING SOCIOECONOMIC STATUS (SES)

The *Milwaukee Health Report 2011* describes the city's health disparities by socioeconomic status (SES). In this report, SES is determined based on income and education levels following a previous approach by Vila and colleagues (Vila et al., 2007).

There are 29 ZIP (postal) codes wholly or partially contained within the City of Milwaukee; these ZIP codes represent over 10% of the state's 5.6 million citizens. Income and education information were obtained at the ZIP code level from 2007 data. To stratify the Milwaukee ZIP codes by socioeconomic status (SES) into three groups, we used an SES index (Mustard & Frohlich, 1995) composed of two equally-weighted components: the median reported income (the income component) in the ZIP code, and the percentage of people with a bachelor's degree (the education component) in the ZIP code. The average and the standard deviation of the education level and income across all ZIP codes were obtained. A z-score was then assigned to each ZIP code by taking the value for that ZIP code minus the average across all ZIP codes, divided by the standard deviation across all ZIP codes. Each z-score (for education and income) was then averaged into one score, and the ZIP codes were ranked on this summary index and grouped into three groups (tertiles) representing higher, middle, and lower SES areas of the city (see Figure 3).

### Income Index

The Income Index is defined as:

$$\text{Income Index} = \frac{(\text{Household Median Income})_i - (\text{Household Median Income})_{\text{Mean}}}{(\text{Household Median Income})_{SD}}$$

### Education Index

The Education Index is defined as:

$$\text{Education Index} = \frac{(\% \text{ People with a Bachelor's Degree})_i - (\% \text{ People with a Bachelor's Degree})_{\text{Mean}}}{(\% \text{ People with a Bachelor's Degree})_{SD}}$$

### SES Index

The SES Index is defined as:

$$\text{SES Index} = \frac{\text{Income Index} + \text{Education Index}}{2}$$

*i* : the number for an individual ZIP code  
*Mean* : average number across all the ZIP codes  
*SD* : standard deviation of the number across all the ZIP codes

## SELECTION OF POPULATION HEALTH MEASURES

The *Milwaukee Health Report 2011* focuses on two categories of health measures: health outcomes and health determinants. Health outcomes are intended to describe the current state of health in an SES area, while determinants are viewed as risk factors or predictors of health outcomes. In this report, a total of 35 measures of health outcomes and determinants were selected using the following criteria:

- (1) The measure is a direct or proxy measure of an important aspect of population health;
- (2) The data are sufficiently valid;
- (3) The data are available at the ZIP code level;
- (4) The data are adequately large for stratifying into SES-defined ZIP code tertiles; and
- (5) The data are current and updated periodically, in order to track measures over time.

### Health Outcomes

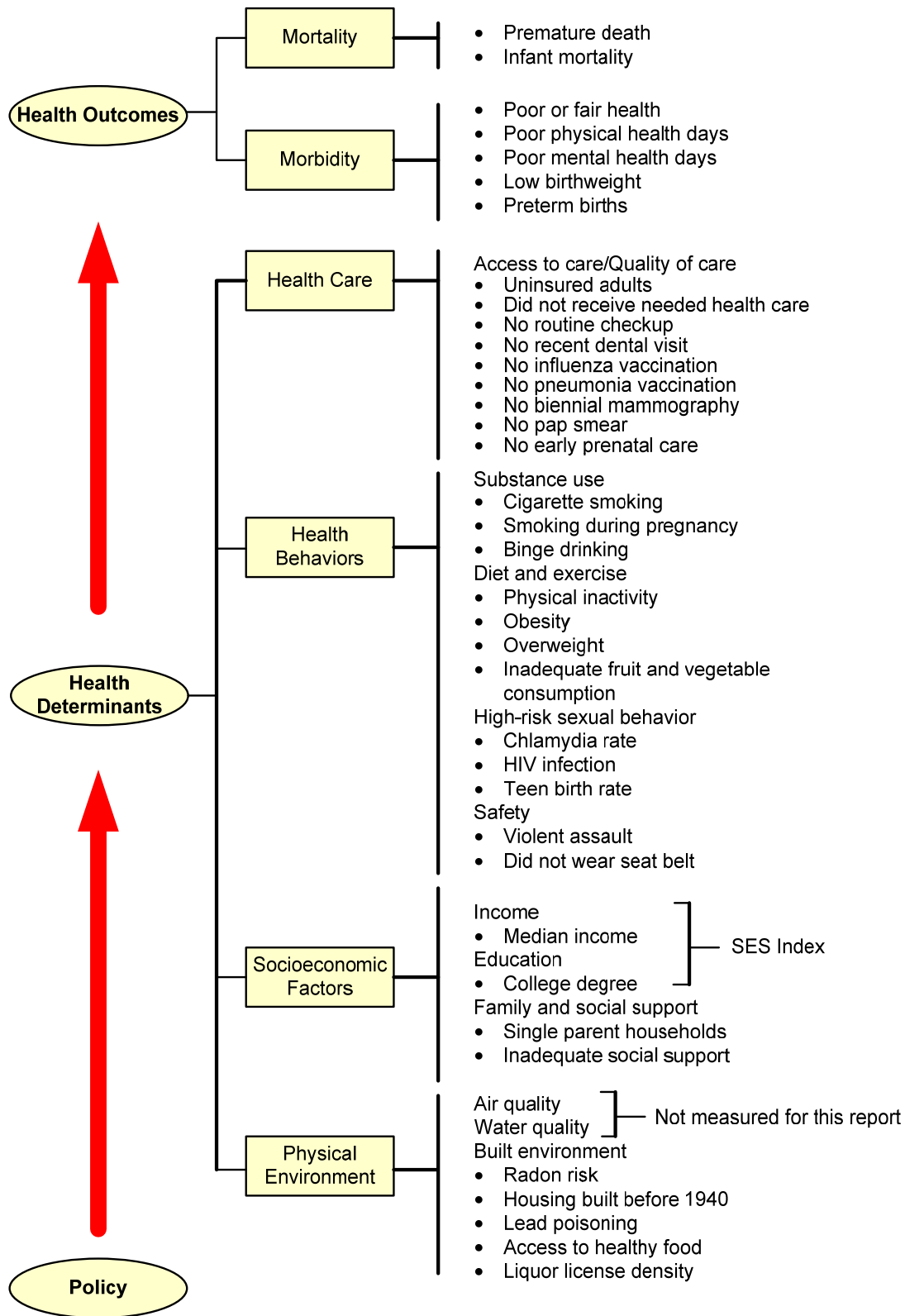
The selection of health outcome measures was primarily guided by the *County Health Rankings* produced by the University of Wisconsin Population Health Institute. Consistent with *County Health Rankings*, this report assessed morbidity and mortality based on Premature Death, Poor or Fair Health, Poor Physical Health Days, Poor Mental Health Days and Low Birthweight. In addition, this current report includes both Infant Mortality (as an additional mortality measure) and Preterm Births (as an additional morbidity measure). The seven health outcome measures are shown in Figure 1.

### Health Determinants

The selection of determinant measures was largely guided by the *Wisconsin State Health Plan priorities* (Wisconsin Department of Health and Family Services, 2005) and the *County Health Rankings* produced by University of Wisconsin Population Health Institute. We divided the 28 health determinant measures into four major components: health care, health behaviors, socioeconomic factors, and physical environment. Some of the four major components are comprised of multiple categories of health measures, as shown in Figure 1.

Although the selection of the health measures in this report was mostly based upon the framework of the *County Health Rankings* (University of Wisconsin Population Health Institute, 2011), it is important to note that there were some differences in the measures used between the two reports. In the *Milwaukee Health Report 2011*, no motor vehicle crash measure was included because the ZIP code level data were collected based on drivers' information but the residence information regarding the passengers was not provided. Further, physical environment measures of air quality and water quality were not included in this report as these measures typically encompass large areas, and differences between neighboring ZIP codes might not be noticeable or significant. Finally, while socioeconomic factors such as education and income are, themselves, strong determinants of health, they were used in this report to stratify the ZIP code groups.

Figure 1. Health Outcomes and Health Determinants Measures Assessed in this Report.



Adapted from: University of Wisconsin Population Health Institute. (2011). County Health Rankings.

## DATA SOURCES

Data regarding sociodemographic characteristics, health outcomes, and health determinants were retrieved from various existing public health datasets. The data sources of the health measures for the City of Milwaukee are described below. A comprehensive list – including the health outcome and determinant components, the categories within each component, the specific measures, and the sources of data used to compile the report – is provided in Table 1. This project was approved by the institutional review board at the University of Wisconsin-Madison.

### **Aurora Community Health Survey (ACHS)**

The Aurora Community Health Survey (ACHS) is a random digit dial (RDD) telephone survey of people 18 years and older who live in the City of Milwaukee and certain counties in eastern Wisconsin. It is conducted every 3 years through a grant provided by Aurora Health Care. The survey gathers information on the health practices and health-related behavioral risks of residents. For the *Milwaukee Health Report 2011*, data from the ACHS are used to measure various determinants. All data from the ACHS are weighted by population. ZIP code level data obtained from the ACHS contain data only within the City of Milwaukee. The ACHS website is located at <http://www.aurorahealthcare.org/yourhealth/comm-health-reports/index.asp>.

### **Behavioral Risk Factor Surveillance System (BRFSS)**

The Behavioral Risk Factor Surveillance System (BRFSS) is a national random digit dial (RDD) telephone survey. Data obtained from the BRFSS are representative of the total Wisconsin (non-institutionalized) population over 18 years of age living in households with a land line telephone. All data from the BRFSS are weighted by population. For the *Milwaukee Health Report 2011*, ZIP code level data were obtained directly from DHS to measure various health determinants and outcomes. ZIP code level data obtained from the BRFSS contain data only within the City of Milwaukee. The BRFSS website is located at <http://dhs.wisconsin.gov/stats/BRFS.htm>.

### **Community Mapping and Analysis for Safety Strategies (COMPASS)**

The Milwaukee COMPASS Project is a federally-funded initiative that aims to build and support collaborative efforts to improve and sustain cities. For the *Milwaukee Health Report 2011*, ZIP code level data regarding liquor licenses were obtained directly from COMPASS. The COMPASS website is located at <http://www.milwaukee.gov/compass/>

### **U.S. Census Data (CENSUS)**

The U.S. Census Bureau takes a census of the entire United States every 10 years, as mandated by the U.S. Constitution. While originally used for apportionment of the representatives for the U.S. House of Representatives, the census has evolved to serve many other purposes, including population-based research. For the *Milwaukee Health Report 2011*, census data from 2000 are used to obtain the total population within the City of Milwaukee. Also, data from ZIP Code Business Patterns (ZBP) and County Business Patterns (CBP) are used to estimate the measure of no access to healthy food. Census data are available online at <http://www.census.gov>.

### **Wisconsin Department of Health Services (DHS)**

The Wisconsin Department of Health Services (DHS), specifically the Division of Public Health (DPH), is the state department that is responsible for public health in Wisconsin. For the *Milwaukee Health Report 2011*, DHS data are used to provide radon risk, chlamydia rate (from

the Wisconsin STD Program) and rates of HIV infection (from the Wisconsin AIDS/HIV Program). The DHS website is located at <http://dhs.wisconsin.gov>.

### **Easy Analytic Software, Inc. (EASI)**

Easy Analytic Software, Inc. (EASI) is a leading publisher of demographic data and software. EASI has created The Right Site™ for demographic research. The Right Site™ provides various data such as standard demographics, site analyses, trend reports, etc. For the *Milwaukee Health Report 2011*, The Right Site™ data are used to obtain the sociodemographic factors. The EASI website is located at <http://www.easidemographics.com>.

### **Wisconsin Family Health Survey (FHS)**

The Wisconsin Family Health Survey (FHS) is an annual survey carried out by the Wisconsin Department of Health Services (DHS), Division of Public Health, Bureau of Health Information and Policy. Conducted by the University of Wisconsin Survey Center, this survey is used to assess health coverage, health status, health-related activity limitations, chronic conditions, and health services utilization. All data from the FHS are weighted by population. ZIP code level data were purchased directly from DHS to obtain several measures of health care. ZIP code level data obtained from the FHS contain data only within the City of Milwaukee. The FHS website is located at <http://dhs.wisconsin.gov/stats/familyhealthsurvey.htm>.

### **Milwaukee Health Department (MHD)**

The City of Milwaukee Health Department (MHD) is responsible for protecting and promoting public health in the City of Milwaukee. For the *Milwaukee Health Report 2011*, MHD data are used to provide data of premature death, infant mortality rate, teen birth rate, and lead poisoning. ZIP code level data obtained from the MHD contain data only within the City of Milwaukee. The MHD website is located at <http://www.milwaukee.gov/health>.

### **Wisconsin Interactive Statistics on Health (WISH)**

The Wisconsin Interactive Statistics on Health (WISH) database is prepared and maintained by the Department of Health Services (DHS), Division of Public Health, Bureau of Health Information and Policy. WISH reports many different public health indicators, and is used in the *Milwaukee Health Report 2011* to obtain several health outcomes and health determinants data. These data are available at <http://dhs.wisconsin.gov/wish>.

## **DATA ANALYSES**

For all measures used in this report, data were analyzed at the ZIP code level. Based on the three ZIP code groups created via the SES index, estimates from each measure were averaged across each SES group using a weighted average by population. Rates or means and 95% confidence intervals were then calculated for all measures and were used for comparison between the SES groups. Risk ratios were calculated for each measure to compare the relative risk between SES groups, while using the higher SES group as the referent. (For example, the infant mortality rate was 12.7 per 1,000 live births in the lower SES group, and was 5.5 per 1,000 live births in the higher SES group. Thus, the risk ratio of infant mortality in the lower SES group in comparison to the higher SES group would be  $12.7/5.5=2.3$ .) All statistical analyses were generated using SAS/STAT software, Version 9.2 of the SAS System for Windows. Copyright © 2002-2008 SAS Institute Inc. SAS and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc., Cary, NC, USA.

Table 1. Overview of Data Sources for All Health Measures.<sup>1</sup>

Health Report Framework	Measures	Data	Years
<b>Health Outcome</b>			
<b>Mortality</b>	Premature Death <sup>2</sup>	MHD	2007 - 2009
	Infant Mortality <sup>2</sup>	MHD	2007 - 2009
<b>Morbidity</b>	Poor or Fair Health <sup>2</sup>	BRFSS	2007 - 2009
	Poor Physical Health Days <sup>2</sup>	BRFSS	2007 - 2009
	Poor Mental Health Days <sup>2</sup>	BRFSS	2007 - 2009
	Low Birthweight <sup>3</sup>	WISH	2007 - 2009
	Preterm Births <sup>3</sup>	WISH	2007 - 2009
<b>Health Determinants</b>			
<b>Health Care</b>			
Access to Care/Quality of Care	Uninsured Adults <sup>2</sup>	FHS	2007 - 2009
	Did Not Receive Needed Health Care <sup>2</sup>	FHS	2007 - 2009
	No Routine Checkup <sup>2</sup>	FHS	2007 - 2009
	No Recent Dental Visit <sup>2</sup>	FHS	2007 - 2009
	No Influenza Vaccination <sup>2</sup>	BRFSS	2007 - 2009
	No Pneumonia Vaccination <sup>2</sup>	ACHS	2006, 2009
	No Biennial Mammography <sup>2</sup>	BRFSS	2006, 2008
	No Pap Smear <sup>2</sup>	BRFSS	2006, 2008
	No Early Prenatal Care <sup>3</sup>	WISH	2007 - 2009
<b>Health Behaviors</b>			
Substance Use	Cigarette Smoking <sup>2</sup>	BRFSS	2007 - 2009
	Smoking During Pregnancy <sup>3</sup>	WISH	2007 - 2009
	Binge Drinking <sup>2</sup>	BRFSS	2007 - 2009
Diet and Exercise	Physical Inactivity <sup>2</sup>	ACHS	2006, 2009
	Obesity <sup>2</sup>	BRFSS	2007 - 2009
	Overweight <sup>2</sup>	BRFSS	2007 - 2009
	Inadequate Fruit and Vegetable Consumption <sup>2</sup>	ACHS	2006, 2009
High Risk Sexual Behavior	Chlamydia Rate <sup>3</sup>	DHS	2007 - 2009
	HIV Infection <sup>3</sup>	DHS	2004 - 2009
	Teen Birth Rate <sup>3</sup>	MHD	2007 - 2009
Safety	Violent Assault <sup>2</sup>	ACHS	2006, 2009
	Did Not Wear Seat Belt <sup>2</sup>	ACHS	2006, 2009
<b>Socioeconomic Factors</b>			
Social Disruption	Single Parent Households <sup>3</sup>	EASI	2007
Social Support	Inadequate Social Support <sup>2</sup>	BRFSS	2007 - 2009
<b>Physical Environment</b>			
Built Environment	Radon Risk <sup>3</sup>	DHS	2009
	Housing Built Before 1940 <sup>3</sup>	EASI	2007
	Lead Poisoning <sup>2</sup>	MHD	2007 - 2009
	No Access to Healthy Food <sup>3</sup>	CENSUS	2008
	Liquor License Density <sup>2</sup>	COMPASS	2011

<sup>1</sup>Only lists city data sources; state and national data sources can be found on the page of each measure.

<sup>2</sup>ZIP code level data wholly contained within the City of Milwaukee.

<sup>3</sup>ZIP code level data wholly or partially contained within the City of Milwaukee.

# RESULTS: OVERVIEW OF THE CITY OF MILWAUKEE

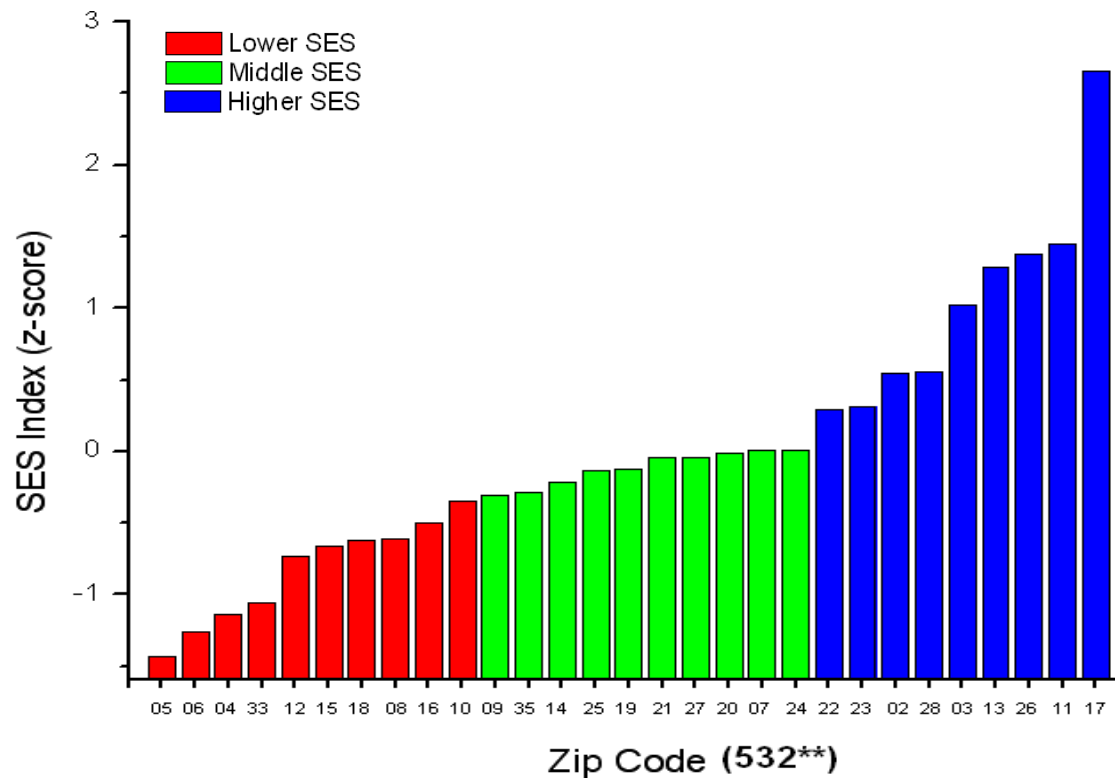
## SOCIOECONOMIC STATUS (SES) GROUPS

Table 2 provides the stratification of the ZIP codes into three groups by SES. The SES index vs. ZIP code is shown in Figure 2. Although the ZIP codes were not intentionally stratified by geographic location, the ZIP codes in the lower SES group are all clustered within the central and near-northwest portions of the City of Milwaukee, while the higher SES group was found to be dispersed in pockets along the outer edge of the city, as shown in Figure 3.

Table 2. Socioeconomic Status Groups by ZIP Codes.

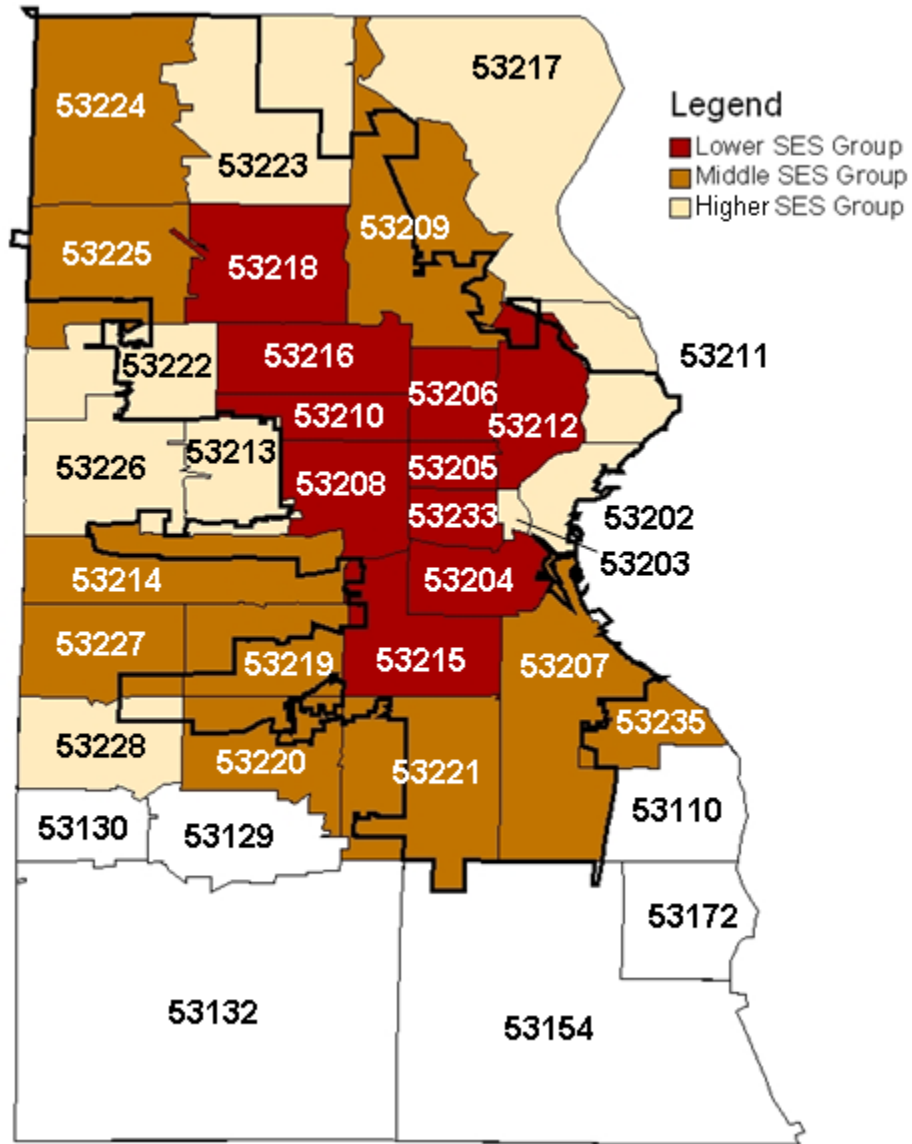
	Lower SES group	Middle SES group	Higher SES group
ZIP Code	53204, 53205, 53206, 53208, 53210, 53212, 53215, 53216, 53218, 53233	53207, 53209, 53214, 53219, 53220, 53221, 53224, 53225, 53227, 53235	53202, 53203, 53211, 53213, 53217, 53222, 53223, 53226, 53228

Figure 2. ZIP Code Tertiles by SES Index (Z-score).



(For example, Zip code "05" means "53205.")

Figure 3. Map of the City of Milwaukee by ZIP Code and SES Group.



## SOCIODEMOGRAPHIC PROFILE

The sociodemographic characteristics of the City of Milwaukee by SES group obtained from 2007 data are provided in Table 3, which was the same data we used in the 2010 report. The results demonstrate not only the large disparities in the distribution of education level and median and average income across the SES groups, but also differences in age, race/ethnicity, education, housing, and other SES-related measures between the ZIP code groups.

Table 3. Sociodemographic Characteristics of the City of Milwaukee by SES Group.<sup>1</sup>

Characteristics	Milwaukee			Wisconsin	US
	Lower SES group	Middle SES group	Higher SES group		
Population					
Total Population	303,929	285,459	194,584	5,573,578	300,876,796
Square Miles	35.8	72.2	52.2	54,310	3,537,438
Population Density	8,492	3,952	3,728	103	85
Age (years)					
Median Age	27.3	37.2	37.5	36.1	35.3
0 - 17 (%)	32.9	24.0	19.5	25.9	25.9
18 - 64 (%)	59.2	60.3	64.9	61.5	62.2
> 65 (%)	7.9	15.7	15.6	12.6	11.9
Gender (%)					
Male	48.2	47.6	48.1	49.7	49.4
Female	51.8	52.4	51.9	50.3	50.6
Race (%)					
White	31.2	73.7	84.7	88.3	73.0
Black	48.3	18.4	8.5	5.3	12.1
Asian	4.1	2.1	3.3	1.9	4.3
Other Races	16.3	5.8	3.5	4.5	10.6
Hispanic Ethnicity (%)	21.1	6.2	3.3	4.5	15.0
Education (%)					
Less than High School	30.9	15.6	7.6	12.9	17.1
High School	29.7	33.7	18.4	33.5	27.7
Some College	20.9	24.4	20.6	21.9	22.5
Associate Degree	5.1	6.8	5.9	7.7	6.5
College	9.1	13.6	29.5	16.4	16.8
Graduate Degree	4.2	5.7	18.1	7.6	9.4
Language Speaking (%)					
Speaks English	79.3	91.6	91.1	93.9	82.6
Speaks Spanish	16.5	4.2	2.6	3.6	11.6
Income (\$)					
Household Income, Median	29,066	45,405	55,935	52,048	49,565
Household Income, Average	38,356	53,988	74,836	64,034	66,816
Housing (%)					
Occupied by Renters	58.2	42.2	45.6	30.1	32.2
Household					
Average Size	2.7	2.2	2.0	2.4	2.5
Parkland as % of Total Land <sup>2</sup>	3.4	3.4	5.6	4.7	N/A

<sup>1</sup>Data Source: The Right Site, EASI, 2007.

<sup>2</sup>Data Source: Milwaukee County Department of Parks.

## **RESULTS: OVERVIEW OF HEALTH MEASURES**

The following section of this report contains one page of detailed information for each of the health measures used in the report. Each page provides the definition of the measure, and lists the data sources and reasons for inclusion. It also provides summary statistics for the city and comparison with the state and the nation, when applicable.

For each measure, there is a table of detailed data for all SES groups. In addition to the measure value, we have included sample sizes and confidence intervals in the tables when applicable. Each page displays the measure data in a bar chart by SES groups in a consistent manner (i.e., the higher the number, the worse the health outcome or determinant). Some important facts regarding each measure are also provided.

In this report, SES groups were created via an SES index based on income and education levels. Differences in values between SES groups for the individual measures should be interpreted with some caution, especially when some measures were not based on a complete or random sample (i.e., radon risk and lead poisoning). We hope that the confidence intervals and additional information provided on the page for each measure will help to put values for specific SES groups in context.

### **CHANGES FROM 2010**

Compared with the Milwaukee Health Report 2010, we added one additional health measure: Overweight.

Some measures that were not updated (because data are not collected annually), including: No pneumonia vaccination, Physical inactivity, Inadequate fruit and vegetable consumption, Violent assault, Did not wear seat belt, No biennial mammography, No pap smear, Single parent households, and Housing Units built before 1940.

For better ZIP code level estimates of Infant mortality, we changed the data source for this measure from the WISH infant mortality module to vital statistics provided by MHD. We also updated this measure in the online version of 2009 and 2010 reports using the MHD data.

# PREMATURE DEATH

## About the Measure

**What It Is:** Premature Death is a measure of premature mortality (early death) and is represented by the years of potential life lost before age 75. Every death occurring before age 75 contributes to the total number of years of potential life lost. For example, a person dying at age 50 would contribute 25 years of life lost to the YPLL index. The premature death is reported as a rate per 100,000 people.

**Where It Comes from:** Milwaukee City Data: MHD  
Wisconsin State Data: WISH - Mortality Module  
U.S. National Data: WISQARS<sup>1</sup>

**Reasons for Reporting:** Premature death is a widely used measure of the rate and distribution of premature mortality and it is associated with a variety of factors such as overall health, quality of and access to medical care, socioeconomic conditions, physical environment, health behaviors, and public health practices.

## Report Methodology

**Summary Measure:** Health Outcomes  
Mortality

**Years of Data Used:** 2007-2009

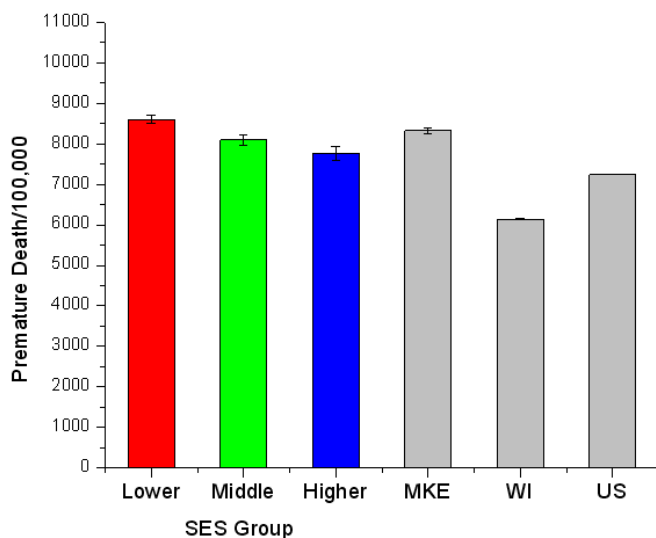
## Summary Information

**Overall in Milwaukee:** 8,329 (8,260 – 8,399)

**Overall in Wisconsin:** 6,138 (6,127 – 6,150)

**Overall in U.S.:** 7,236

SES Group	Population	Premature Death	Premature Death per 100,000	95% CI
Lower	331,069	28,503	8,609	8,514 – 8,705
Middle	182,551	14,787	8,100	7,975 – 8,226
Higher	89,304	6,929	7,759	7,584 – 7,935



### The facts about premature death:

- Premature deaths are a national problem and reduction of these deaths is an important objective for health policy.<sup>2</sup>
- Preventing premature deaths is consistent with the national Healthy People 2010 objectives, and should be a major priority of public health programs.<sup>2</sup>
- Premature death rates can guide federal, state, and local public health activities and community alliances toward Healthy People 2010 objectives.

<sup>1</sup>CDC. WISQARS Fatal Injuries: Years of Potential Life Lost Reports, 2007. Available at <http://webappa.cdc.gov/sasweb/ncipc/ypll10.html>.

<sup>2</sup>U.S. Department of Health and Human Services. *Healthy People 2010: understanding and improving health*, 2nd ed. Washington, DC: U.S. Government Printing Office; 2000.

# INFANT MORTALITY

## About the Measure

What It Is:	Infant Mortality is measured by the infant mortality rate (IMR), reported as number of infant deaths (at or before 365 days of age) occurring in a given year per 1,000 live births occurring during that same calendar year.
Where It Comes from:	Milwaukee City Data: MHD Wisconsin State Data: WISH - Infant Mortality Module U.S. National Data: National Center for Health Statistics <sup>1</sup>
Reasons for Reporting:	Infant mortality is an important measure of a population's health, and it is associated with a variety of factors such as maternal health, quality and access to medical care, socioeconomic conditions, and public health practices.

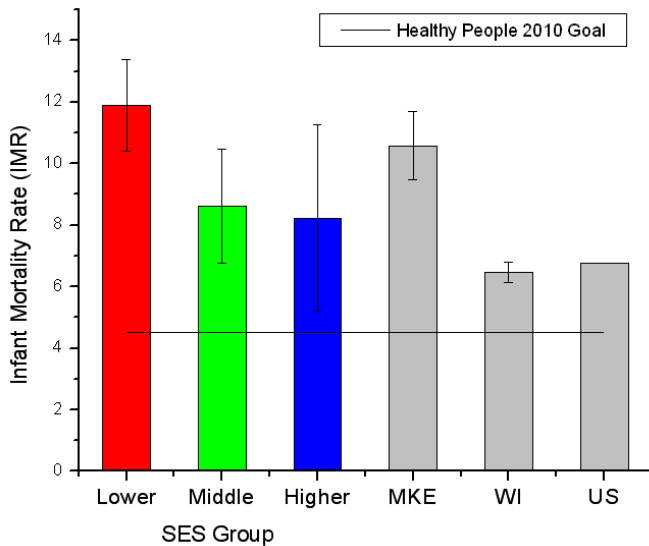
## Report Methodology

Summary Measure:	Health Outcomes Mortality
Years of Data Used:	2007-2009

## Summary Information

Overall in Milwaukee:	10.6 (9.5 – 11.7)
Overall in Wisconsin:	6.5 (6.1 – 6.8)
Overall in U.S.:	6.8

SES Group	# Live Births	# Infant Deaths	Infant Mortality Rate (IMR)	95% CI
Lower	20,441	243	11.9	10.4 – 13.4
Middle	9,509	82	8.6	6.8 – 10.5
Higher	3,400	28	8.2	5.2 – 11.3



### The facts about infant mortality:

- The Healthy People 2010 goal for infant mortality is 4.5 deaths per 1,000 births (Objective 16-1c).
- In 2004, the U.S. ranked 29<sup>th</sup> in the world in infant mortality.<sup>2</sup> IMRs in the U.S. are disproportionately high among various racial and ethnic groups.
- According to the 2007 Big Cities Health Inventory, the City of Milwaukee ranks 7<sup>th</sup> worst for infant mortality among the 53 largest cities in the U.S.
- Milwaukee's infant mortality rate increased from 9.7 per 1,000 live births in 2007 to 11.0 per 1,000 live births in 2009, and Milwaukee's black infants still die at more than twice the rate of its white infants.

<sup>1</sup>Xu JQ, Kochanek KD, Murphy SL, Tejada-Vera B. Deaths: Final data for 2007 National vital statistics reports; vol 58 no 19. Hyattsville, MD: National Center for Health Statistics. 2010.

<sup>2</sup>MacDorman MF, Mathews TJ. Recent Trends in Infant Mortality in the United States. Available at <http://www.cdc.gov/nchs/data/databriefs/db09.htm>.

## POOR OR FAIR HEALTH

### About the Measure

**What It Is:** Poor or Fair Health measure is self-reported health status based on answers to the question, "In general, would you say that your health is excellent, very good, good, fair, or poor?" The percentages stated in this Report are the percentage of people reporting "fair" or "poor" health.

**Where It Comes from:** Milwaukee City Data: BRFSS  
Wisconsin State Data: BRFSS<sup>1</sup>  
U.S. National Data: BRFSS<sup>1</sup>

**Reasons for Reporting:** Self-reported health status provides an estimate of the health-related quality of life, or morbidity, of a population.

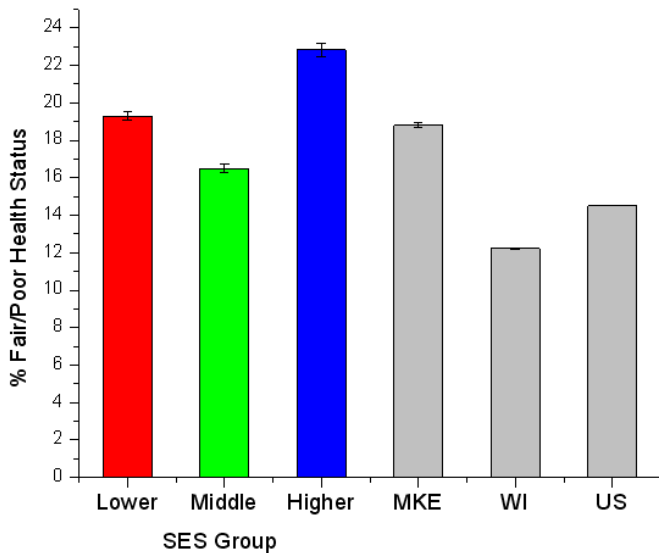
### Report Methodology

**Summary Measure:** Health Outcomes  
Morbidity  
**Years of data used:** 2007-2009

### Summary Information

**Overall in Milwaukee:** 18.8 (18.7 – 18.9)  
**Overall in Wisconsin:** 12.2 (12.2 – 12.3)  
**Overall in U.S.:** 14.5

SES Group	Sample Size	# Poor/Fair	% Poor/Fair	95% CI
Lower	134,910	26,025	19.3	19.1 – 19.5
Middle	120,054	19,806	16.5	16.3 – 16.7
Higher	51,769	11,821	22.8	22.5 – 23.2



The facts about poor or fair health:

- Self-rated health status has been found to be an independent predictor of morbidity and mortality.<sup>2</sup>
- Racial/ ethnic disparities in self-rated health status persist among the U.S. adult population. Black and Hispanic adults are more likely to report their general health status as poor or fair compared with white adults.<sup>2</sup>
- The result for poor and fair health is worse in higher and lower SES groups. This trend started in the 2010 Report. At this time, it is not clear if this trend is reflective of actual change in the populations or is an artifact of the random sampling used to obtain these samples.

<sup>1</sup>Centers for Disease Control and Prevention (CDC), Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2009.

<sup>2</sup>Centers for Disease Control and Prevention (CDC), Racial/Ethnic Disparities in Self-Rated Health Status Among Adults With and Without Disabilities -- United States, 2004 – 2006. *MMWR* 2008; 57(39):1069-1073.

## POOR PHYSICAL HEALTH DAYS

### About the Measure

What It Is:	Poor Physical Health Days measure is based on responses to the question: "Thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?" We present the average number of days the adult respondents reported that their physical health was not good.
Where It Comes from:	Milwaukee City Data: BRFSS Wisconsin State Data: BRFSS U.S. National Data: BRFSS <sup>1</sup>
Reasons for Reporting:	Poor physical health days can be the result of acute or chronic illness or injury, and may interfere with an individual's ability to enjoy good quality of life. Feeling physically unhealthy can lead to reduced ability to perform normal activities such as work, recreational activities, and household tasks.

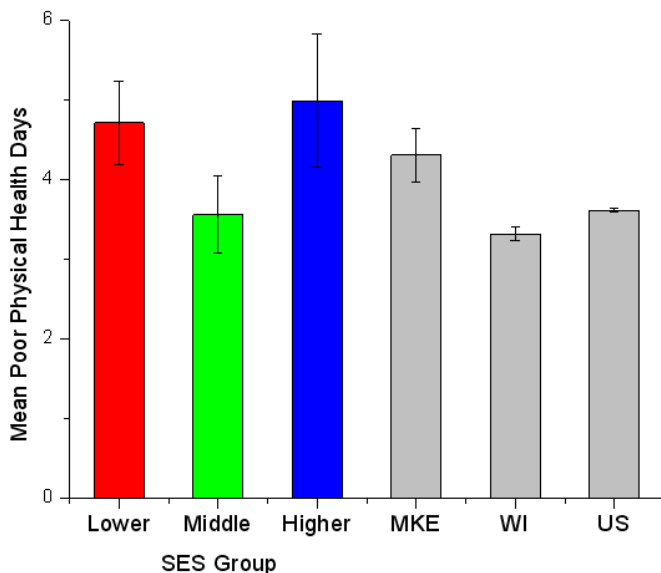
### Report Methodology

Summary Measure:	Health Outcomes Morbidity
Years of data used:	2007-2009

### Summary Information

Overall in Milwaukee:	4.3 (3.7 – 5.0)
Overall in Wisconsin:	3.3 (3.2 – 3.5)
Overall in U.S.:	3.6 (3.6 – 3.7)

SES Group	Sample Size	Mean Poor Physical Health Days	95% CI
Lower	134,238	4.7	3.7 – 5.7
Middle	119,864	3.6	2.6 – 4.5
Higher	51,769	5.0	3.4 – 6.6



The facts about poor physical health days:

- Older adults suffer poor physical health and activity limitation more than younger individuals. Thus, if all else were equal, we would expect to see fewer poor physical health days in the lower SES ZIP code group, which has a mean age of 27 as compared to 37 for the other two ZIP code tertiles.
- Americans with chronic diseases or disabilities report high levels of unhealthy days.<sup>2</sup>
- As individuals generally seek care mainly when they feel that their health is poor, this measure of poor physical health days may also serve to indicate the potential burden on the health care system.<sup>3</sup>

<sup>1</sup>Centers for Disease Control and Prevention (CDC), Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2009.

<sup>2</sup>Centers for Disease Control and Prevention (CDC). Health-Related Quality of Life: Findings. Available at <http://www.cdc.gov/hrqol/findings.htm>.

<sup>3</sup>Centers for Disease Control and Prevention (CDC). Measuring Healthy Days. Atlanta, Georgia: CDC, November 2000.

## POOR MENTAL HEALTH DAYS

### About the Measure

What It Is:	Poor Mental Health Days measure is based on responses to the question: "Thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?" We present the average number of days the adult respondents reported that their mental health was not good.
Where It Comes from:	Milwaukee City Data: BRFSS Wisconsin State Data: BRFSS U.S. National Data: BRFSS <sup>1</sup>
Reasons for Reporting:	Overall health depends on both physical and mental well-being. The number of days when people feel that their mental health is not good affects their ability to perform normal activities such as work, recreational activities, and household tasks, and represents an important measure of health-related quality of life.

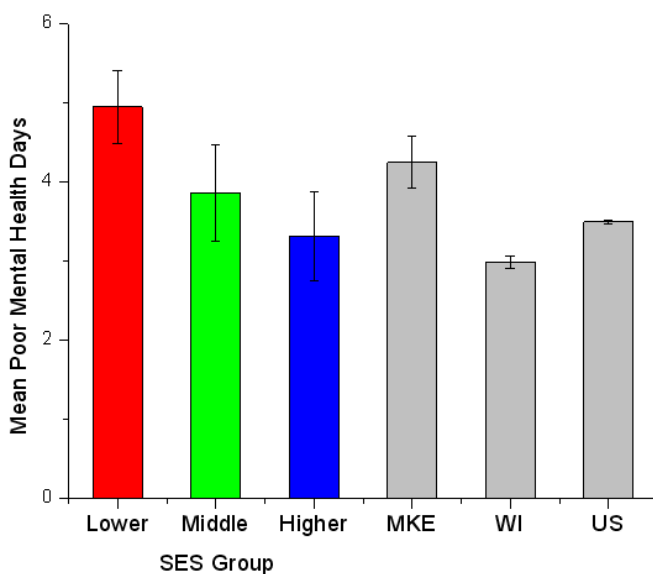
### Report Methodology

Summary Measure:	Health Outcomes Morbidity
Years of data used:	2007-2009

### Summary Information

Overall in Milwaukee:	4.2 (3.6 – 4.9)
Overall in Wisconsin:	3.0 (2.8 – 3.1)
Overall in U.S.:	3.5 (3.4 – 3.5)

SES Group	Sample Size	Mean Poor Mental Health Days	95% CI
Lower	134,551	4.9	4.0 – 5.9
Middle	120,413	3.9	2.7 – 5.1
Higher	51,386	3.3	2.2 – 4.4



The facts about poor mental health days:

- An estimated 26.2 percent of Americans ages 18 and older—about one in four adults—suffer from a diagnosable mental disorder in a given year. Mental disorders are the leading cause of disability in the U.S. for ages 15-44.<sup>2</sup>
- Nearly one-third of Americans say they suffer from some mental or emotional problem every month—including 10 percent who said their mental health was not good for 14 or more days a month.<sup>3</sup>
- Major depressive disorder is more prevalent in women than in men.<sup>2</sup>
- Depression is treatable. With adequate medications and psychological treatments, future episodes of depression can be prevented or reduced in severity.

<sup>1</sup>Centers for Disease Control and Prevention (CDC), Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2009.

<sup>2</sup>National Institute of Mental Health. The Numbers Count: Mental Disorders in America. Available at <http://www.nimh.nih.gov/health/publications/the-numbers-count-mental-disorders-in-america.shtml>.

<sup>3</sup>Centers for Disease Control and Prevention (CDC). Health-Related Quality of Life: Findings. Available at <http://www.cdc.gov/hrqol/findings.htm>.

# LOW BIRTHWEIGHT

## About the Measure

**What It Is:** Low Birthweight is the percent of live births for which the infant weighed less than 2,500 grams (approximately 5 lbs., 8 oz.).

**Where It Comes from:** Milwaukee City Data: WISH - Infant Mortality Module  
Wisconsin State Data: WISH - Infant Mortality Module  
U.S. National Data: National Center for Health Statistics<sup>1</sup>

**Reasons for Reporting:** Low birthweight correlates with maternal exposure to health risks as well as with an infant's current morbidity, future morbidity, and premature mortality risk. The health consequences of low birthweight are numerous and serious.

## Report Methodology

**Summary Measure:** Health Outcomes  
Morbidity

**Years of Data Used:** 2007-2009

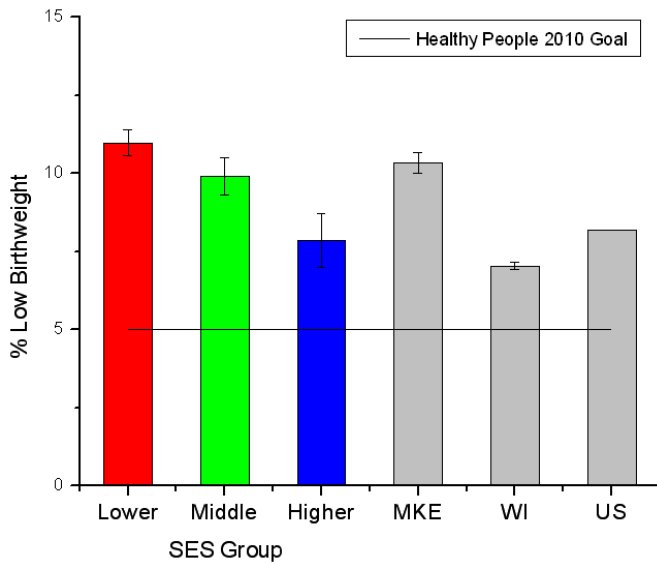
## Summary Information

**Overall in Milwaukee:** 10.3 (10.0 – 10.7)

**Overall in Wisconsin:** 7.0 (6.9 – 7.1)

**Overall in U.S.:** 8.2

SES Group	# Live Births	# Low Birthweight	% Low Birthweight	95% CI
Lower	20491	2251	11.0	10.6 – 11.4
Middle	9694.2	961.6	9.9	9.3 – 10.5
Higher	3713.8	291.4	7.8	7.0 – 8.7



### The facts about low birthweight:

- The Healthy People 2010 goal for low birth weight (LBW) is 5% (Objective 16-10a).
- Birthweight is a strong indicator not only of a birth mother's health and nutritional status but also a newborn's risk for infant mortality and its chances for healthy long-term growth, psychosocial development, and school performance.
- Preterm birth and fetal growth restriction are two main reasons why a baby may be born with low birthweight. About 65% of Milwaukee's 2007-2009 low-birthweight babies were preterm.

<sup>1</sup>Hamilton BE, Martin JA, Ventura SJ. Births: Preliminary data for 2009. National vital statistics reports; vol 59 no 3. National Center for Health Statistics. 2010.

# PRETERM BIRTHS

## About the Measure

What It Is:	Preterm Births is the percent of live births for which the infant was born before 37 completed weeks of gestation.
Where It Comes from:	Milwaukee City Data: WISH - Infant Mortality Module Wisconsin State Data: WISH - Infant Mortality Module U.S. National Data: National Center for Health Statistics <sup>1</sup>
Reasons for Reporting:	Preterm birth is a serious health problem. Preterm babies are at increased risk for death as well as for serious, long-term health complications, such as breathing problems, mental retardation, learning and behavioral problems, cerebral palsy, and vision and hearing loss.

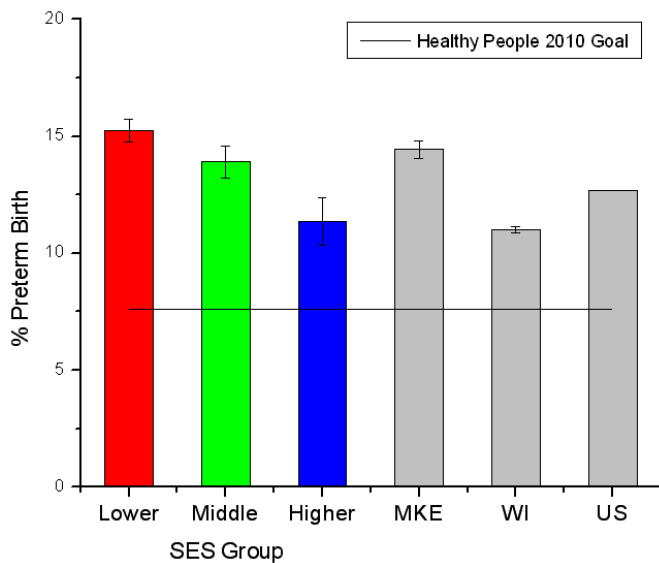
## Report Methodology

Summary Measure:	Health Outcomes Morbidity
Years of Data Used:	2007-2009

## Summary Information

Overall in Milwaukee:	14.4 (14.1 – 14.8)
Overall in Wisconsin:	11.0 (10.9 – 11.1)
Overall in U.S.:	12.7

SES Group	# Live Births	# Preterm Births	% Preterm Births	95% CI
Lower	20,491	3123	15.2	14.7 – 15.7
Middle	9,694	1348.6	13.9	13.2 – 14.6
Higher	3713.8	422.4	11.4	10.4 – 12.4



### The facts about preterm births:

- The Healthy People 2010 goal for preterm birth is 7.6% (Objective 16-11a).
- In the United States, the percentage of births delivered preterm has risen more than 20% since 1990, and 36% since the early 1980s.<sup>2</sup>
- Preterm babies have an increased risk of death in the first year of life (infant mortality), with most of that occurring in the first month of life (neonatal mortality). In the U.S., prematurity is the leading cause of neonatal mortality, and is associated with 25% of neonatal deaths.<sup>3</sup>

<sup>1</sup> Martin JA, Hamilton BE, Sutton PD, et al. Births: Final data for 2007. National vital statistics reports; vol 58 no 24. Hyattsville, MD: National Center for Health Statistics. 2010.

<sup>2</sup> Martin JA, Hamilton BE, Sutton PD, Ventura SJ, et al. Births: Final data for 2006. National vital statistics reports; vol 57 no 7. Hyattsville, MD: National Center for Health Statistics. 2009.

<sup>3</sup> Mathew TJ, MacDorman MF (2006). "Infant Mortality Statistics from the 2003 Period Linked Birth/Infant Death Data Set". National Vital Statistics Reports 54 (16).

# UNINSURED ADULTS

## About the Measure

**What It Is:** Uninsured Adults is the percentage of the adult population under 65 years of age that reported not having health insurance coverage of any kind, including prepaid plans, HMOs, or government plans such as Medicare or Medicaid, at the time of the survey.

**Where It Comes From:** Milwaukee City Data: FHS  
Wisconsin State Data: The Kaiser Family Foundation, [statehealthfacts.org](http://statehealthfacts.org)<sup>1</sup>  
U.S. National Data: The Kaiser Family Foundation, [statehealthfacts.org](http://statehealthfacts.org)<sup>1</sup>

**Reasons for Reporting:** Lack of health care coverage is a strong barrier to health care access, and makes people more likely to forego appropriate preventive care as well as needed acute care and chronic disease management.<sup>2</sup>

## Report Methodology

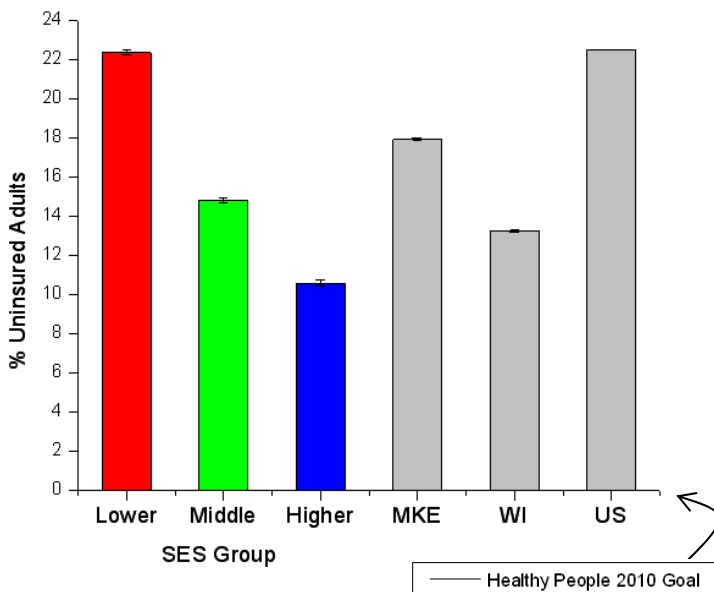
**Summary Measure:** Health Determinants  
Health Care

**Years of data used:** 2007-2009

## Summary Information

**Overall in Milwaukee:** 17.9 (17.9 – 18.0)  
**Overall in Wisconsin:** 13.3 (13.2 – 13.3)  
**Overall in U.S.:** 22.5 (22.5 – 22.5)

SES Group	Sample Size	# Uninsured Adults	% Uninsured Adults	95% CI
Lower	522,749	116,878	22.4	22.2 – 22.5
Middle	380,856	56,474	14.8	14.7 – 14.9
Higher	154,614	16,384	10.6	10.4 – 10.8



The facts about uninsured adults:

- The Healthy People 2010 goal for all persons under 65 years old having some type of health care coverage is 100%, which means the goal for “Uninsured Adults” is 0% (Objective 01-01).
- Most of the U.S. uninsured are full-time or part-time workers. The number of uninsured children in 2008 was 8.1 million – or 10.3% of all children in the U.S.<sup>2</sup> People under age 65 with low incomes (<200% of the poverty level) were much more likely to be uninsured than those with higher incomes.<sup>2</sup>
- Population estimates of health insurance coverage are necessary for the development and assessment of federal and state insurance programs and policies.<sup>1</sup>

<sup>1</sup>The Kaiser Family Foundation, [statehealthfacts.org](http://statehealthfacts.org). Data Source: Urban Institute and Kaiser Commission on Medicaid and the Uninsured estimates based on the Census Bureau’s March 2009 and 2010 Current Population Survey (CPS: Annual Social and Economic Supplements).

<sup>2</sup>Smolderen KG, Spertus JA, Nallamothu BK, Krumholz HM, Tang F, Ross JS, Ting HH, Alexander KP, Rathore SS, Chan PS. Health care insurance, financial concerns in accessing care, and delays to hospital presentation in acute myocardial infarction. *JAMA*. 303(14):1392-400, 2010.

<sup>3</sup>Cohen, RA, Makuc DM. State, Regional, and National Estimates of Health Insurance Coverage for People Under 65 Years of Age: National Health Interview Survey, 2004-2006. *National Health Statistics Report; no 1*. Hyattsville, MD: National Center for Health Statistics, 2008.

## DID NOT RECEIVE NEEDED HEALTH CARE

### About the Measure

What It Is:	Did Not Receive Needed Health Care is the percentage of the population reporting that they did not get the medical or surgical care that they felt they should have had within the past 12 months. This measure is based on answers to the question, "During the last 12 months, was there any time when you or anyone in your household needed medical care or surgery but did not get it?"
Where It Comes From:	Milwaukee City Data: FHS Wisconsin State Data: FHS U.S. National Data: N/A
Reasons for Reporting:	Not receiving needed health care may contribute to chronic conditions and cause more serious health problems in the future.

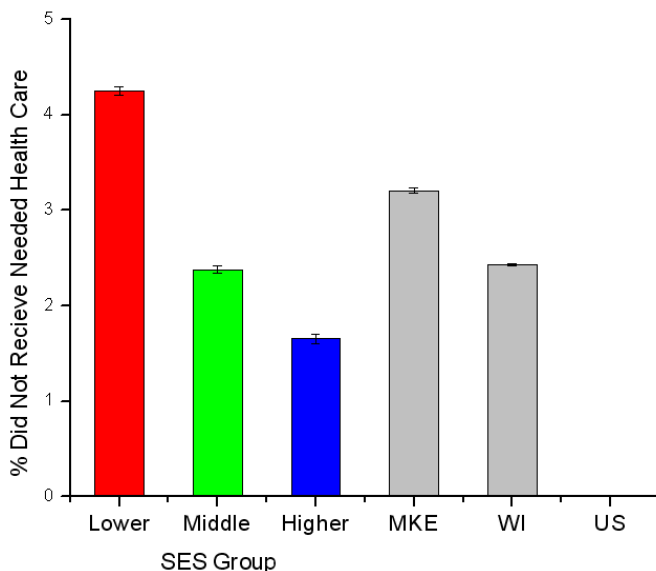
### Report Methodology

Summary Measure:	Health Determinants Health Care
Years of data used:	2007-2009

### Summary Information

Overall in Milwaukee:	3.2 (3.2 – 3.2)
Overall in Wisconsin:	2.4 (2.4 – 2.4)
Overall in U.S.:	N/A

SES Group	Sample Size	# No Needed Health Care	% No Needed Health Care	95% CI
Lower	842,165	35,772	4.2	4.2 – 4.3
Middle	614,190	14,607	2.4	2.3 – 2.4
Higher	236,586	3,916	1.7	1.6 – 1.7



The facts about needed health care:

- The Healthy People 2010 goal for the proportion of families that experience difficulties or delays in obtaining health care or do not receive needed care for one or more family members is 7% (Objective 1-6). Note that our measure does not include those experienced "difficulties or delays."
- Various barriers impede receiving needed medical services, including
  - financial barriers (e.g., having no health insurance or being underinsured);
  - structural barriers (e.g., no facilities or health care professionals nearby, services not available during non-work hours, lack of public transportation options, or environmental challenges for people with disabilities);
  - personal barriers (e.g., sexual orientation, cultural differences, language differences, not knowing what to do).

## NO ROUTINE CHECKUP

### About the Measure

What It Is:	No Routine Checkup is a measure of the percentage of respondents reporting that they didn't have a routine health checkup within the past 2 years. This measure is based on answers to the question, "A routine check-up is a general physical exam, not an exam for a specific injury, illness or condition. About how long has it been since you last received a routine checkup?"
Where It Comes From:	Milwaukee City Data: FHS Wisconsin State Data: FHS U.S. National Data: BRFSS <sup>1</sup>
Reasons for Reporting:	Routine visits can be used to monitor a person's health (e.g., blood pressure) and help prevent minor health issues from becoming major problems. People receive immunizations and other important preventive care at routine visits.

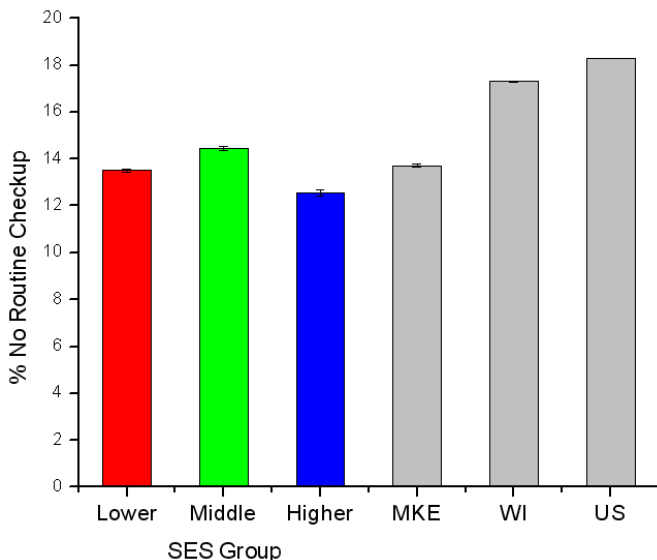
### Report Methodology

Summary Measure:	Health Determinants Health Care
Years of data used:	2007-2009

### Summary Information

Overall in Milwaukee:	13.7 (13.7 – 13.8)
Overall in Wisconsin:	17.3 (17.3 – 17.3)
Overall in U.S.:	18.3 (18.3 – 18.3)

SES Group	Sample Size	# No Routine Checkup	% No Routine Checkup	95% CI
Lower	819,931	110,770	13.5	13.4 – 13.6
Middle	610,961	88,138	14.4	14.3 – 14.5
Higher	234,874	29,509	12.6	12.4 – 12.7



The facts about routine checkup:

- Adults with health insurance are twice as likely to receive a routine checkup as adults without health insurance.
- Women have routine checkups more frequently than men.
- The US Preventive Services Task Force lists a number of evidence-based, cost-effective, recommended screening services.<sup>2</sup>

<sup>1</sup>Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2009.

<sup>2</sup>U.S. Preventive Services Task Force (USPSTF). Available at <http://www.ahrq.gov/clinic/uspstfix.htm>.

## NO RECENT DENTAL VISIT

### About the Measure

**What It Is:** No Recent Dentist Visit is the percentage of the population reporting that they did not have a dental visit in the year prior to being interviewed. This measure is based on answers to the question, “How long has it been since you last visited a dentist or a dental clinic for any reason? Include visits to dental specialists, such as orthodontists.”

**Where It Comes From:** Milwaukee City Data: FHS  
Wisconsin State Data: FHS  
U.S. National Data: BRFSS<sup>1</sup>

**Reasons for Reporting:** Oral health is an essential and integral component of health throughout life. Poor dental health markedly affects quality of life. Tooth and gum diseases are not only important themselves, but are also related to various other health problems, including cardiovascular health.

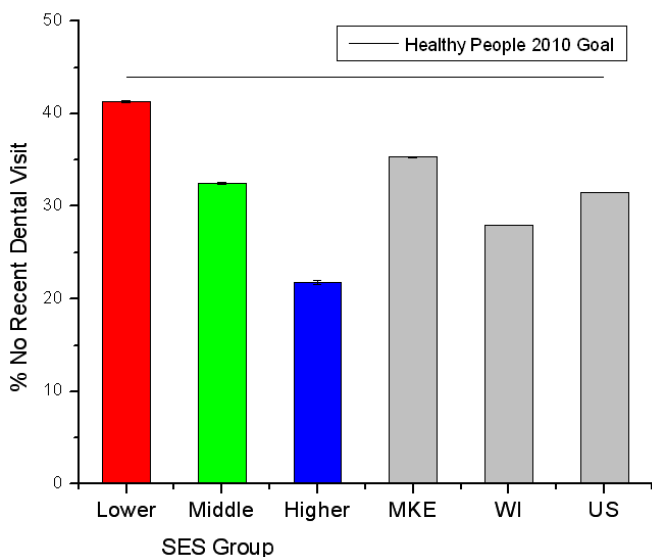
### Report Methodology

**Summary Measure:** Health Determinants  
Health Care  
**Years of data used:** 2007-2009

### Summary Information

**Overall in Milwaukee:** 35.3 (35.2 – 35.4)  
**Overall in Wisconsin:** 27.9 (27.9 – 28.0)  
**Overall in U.S.:** 31.5

SES Group	Sample Size	# No Dental Visit	% No Dental Visit	95% CI
Lower	810,495	334,570	41.3	41.2 – 41.4
Middle	595,047	193,278	32.5	32.4 – 32.6
Higher	234,078	50,976	21.8	21.6 – 21.9



The facts about dental visit:

- The Healthy People 2010 goal for an annual dental visit is 56%, which means the goal for “no dental visit” is no more than 44% (Objective 21-10).
- Poor oral health and untreated oral conditions can have a significant impact on quality of life.
- Barriers to dental care include cost, lack of dental insurance, lack of providers from underserved racial and ethnic groups or in underserved neighborhoods, and fear of dental visits.
- National surveys show that the proportion of the U.S. population that annually makes at least one dental visit and the average number of visits made vary significantly by age, race, level of education, and family income.<sup>2,3</sup>

<sup>1</sup>Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2008.

<sup>2</sup>Centers for Disease Control and Prevention (CDC). National Health Interview Survey, unpublished data, 1997. Hyattsville, MD: CDC.

<sup>3</sup>Agency for Healthcare Research and Quality (AHRQ). Medical Expenditure Panel Survey (MEPS), unpublished data, 1996.

# NO INFLUENZA VACCINATION

## About the Measure

**What It Is:** No Influenza Vaccination is a measure of the percentage of respondents aged 65 years old and older reporting that they did not have a “flu” shot or a “flu” vaccine that was sprayed in their nose within the past year.

**Where It Comes From:** Milwaukee City Data: BRFSS  
Wisconsin State Data: BRFSS<sup>1</sup>  
U.S. National Data: BRFSS<sup>1</sup>

**Reasons for Reporting:** Vaccination is an effective strategy to reduce illness and deaths due to influenza. Influenza vaccine is safe and effective, but must be given every year to protect against that year’s circulating strain(s).

## Report Methodology

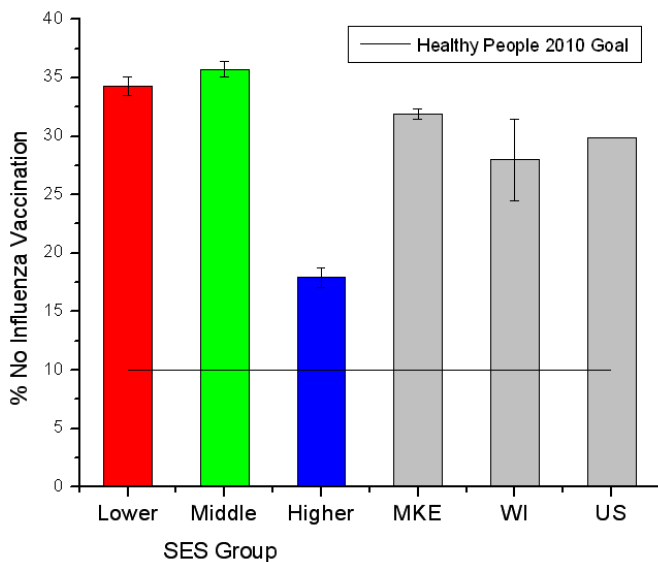
**Summary Measure:** Health Determinants  
Health Care

**Years of data used:** 2007-2009

## Summary Information

**Overall in Milwaukee:** 31.9 (31.4 – 32.3)  
**Overall in Wisconsin:** 28.0 (24.5 – 31.4)  
**Overall in U.S.:** 29.9

SES Group	Sample Size	# No Influenza Vaccination	% No Influenza Vaccination	95% CI
Lower	13,757	4,721	34.3	33.5 – 35.1
Middle	20,644	7,373	35.7	35.1 – 36.4
Higher	8,088	1,450	17.9	17.1 – 18.8



The facts about influenza (“flu”) vaccination:

- The Healthy People 2010 goal for persons 65 and older having an influenza vaccination within the past 12 months is 90%, which means the goal for not having an influenza vaccination is no more than 10% (Objective 14-29a).
- Approximately 36,000 Americans die each year from influenza or its complications. Current levels of coverage vary widely among age, risk, and racial and ethnic groups.
- Influenza vaccine is covered by Medicare. Despite the continually increasing vaccination rates among persons aged 65 years and older over the decade, coverage rates for certain racial and ethnic groups remain substantially below the general population.<sup>2</sup>

<sup>1</sup>Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2009.

<sup>2</sup>Guyer B, Smith DR, Chalk R. Calling the shots: immunization finance policies and practices. Executive summary of the report of the Institute of Medicine. *American Journal of Preventive Medicine* 2000;19:4 –12.

# NO PNEUMONIA VACCINATION

## About the Measure

**What It Is:** No Pneumonia Vaccination is a measure of the percentage of respondents aged 65 years or older who report that they have never had a pneumonia vaccination. This measure is based on answers to the question, "Have you ever had a pneumonia or pneumococcal shot?"

**Where It Comes From:** Milwaukee City Data: ACHS  
Wisconsin State Data: BRFSS<sup>1</sup>  
U.S. National Data: BRFSS<sup>1</sup>

**Reasons for Reporting:** Pneumococcal disease is common and serious, causing a significant number of hospitalizations and deaths. People 65 years and older are at greater risk from pneumococcal disease. A pneumococcal vaccine is usually given once or twice in a person's lifetime. It is more than 90% effective against serious pneumococcal disease.

## Report Methodology

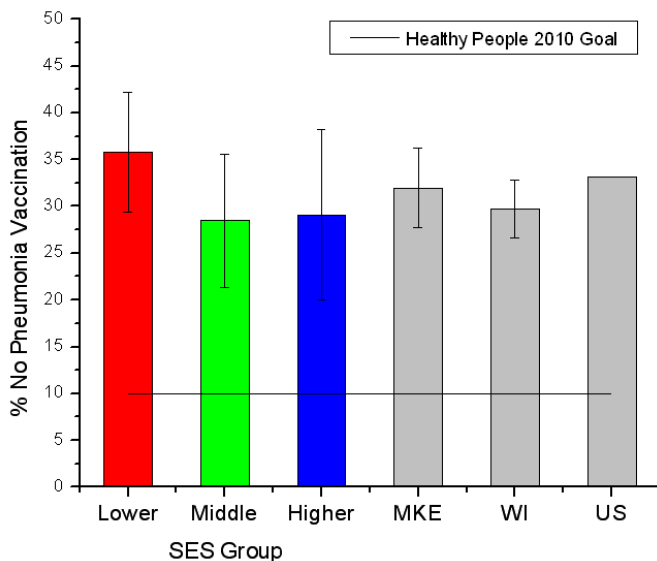
**Summary Measure:** Health Determinants  
Health Care

**Years of data used:** 2006, 2009

## Summary Information

**Overall in Milwaukee:** 32.0 (27.7 – 36.2)  
**Overall in Wisconsin:** 29.7 (26.6 – 32.8)  
**Overall in U.S.:** 33.1

SES Group	Sample Size	# No Pneumonia Vaccination	% No Pneumonia Vaccination	95% CI
Lower	215	77	35.7	29.3 – 42.1
Middle	155	44	28.5	21.4 – 35.6
Higher	97	28	29.1	20.0 – 38.2



The facts about pneumonia vaccination:

- The Healthy People 2010 goal for persons 65 or older ever having a pneumococcal vaccine is 90%, which means the goal for not having a pneumococcal vaccine is no more than 10%. (Objective 14-29b).
- Pneumococcal vaccine is fully covered by Medicare Part B if the healthcare provider accepts the Medicare-approved amount.
- Pneumococcal vaccine can be given at the same time as influenza vaccine or any other vaccine.

<sup>1</sup>Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2008.

# NO BIENNIAL MAMMOGRAPHY

## About the Measure

**What It Is:** No Biennial Mammography is a measure of the percentage of female respondents 40 years and older who reported that they did not have a mammogram within the past 2 years. This measure is based on answers to the question, “A mammogram is an x-ray of each breast to look for breast cancer. How long has it been since you had your last mammogram?”

**Where It Comes From:** Milwaukee City Data: BRFSS  
Wisconsin State Data: BRFSS<sup>1</sup>  
U.S. National Data: BRFSS<sup>1</sup>

**Reasons for Reporting:** Breast cancer is extremely common, and mammography plays a central role in diagnosing breast cancer at an early stage. Improving mammography rates can lead to earlier identification of breast cancer, and can improve the survival rate of people with the disease.

## Report Methodology

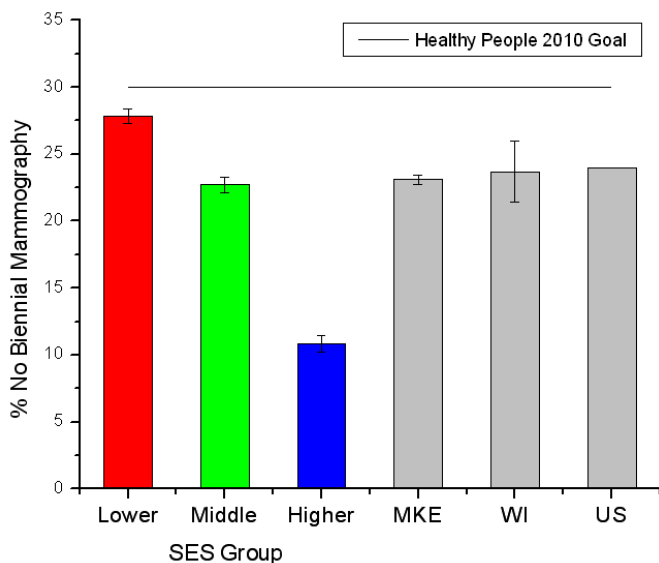
**Summary Measure:** Health Determinants  
Health Care

**Years of data used:** 2006, 2008

## Summary Information

**Overall in Milwaukee:** 23.1 (22.7 – 23.4)  
**Overall in Wisconsin:** 23.7 (21.5 – 26.0)  
**Overall in U.S.:** 24.0

SES Group	Sample Size	# No Biennial Mammography	% No Biennial Mammography	95% CI
Lower	25,858	7,191	27.8	27.3 – 28.4
Middle	19,597	4,451	22.7	22.1 – 23.3
Higher	9,352	1,016	10.9	10.2 – 11.5



The facts about mammography:

- The Healthy People 2010 goal for women 40 and older having a mammogram within the past two years is 70% (Objective 03-13), which means the goal for not having a mammogram is no more than 30%.
- Breast cancer is one of the most common forms of cancer among women in the United States. In 2004, 186,772 U.S. women were diagnosed with breast cancer, and 40,954 women died from breast cancer.
- Most women should have their first mammogram at age 50, with higher risk women beginning at age 40. Thereafter, routine screening for breast cancer with mammography every two years is generally recommended.<sup>2</sup>

<sup>1</sup>Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2008.

<sup>2</sup>U.S. Preventive Services Task Force. Screening for Breast Cancer: Recommendation statement updated December 2009. Available at <http://www.ahrq.gov/clinic/uspstf09/breastcancer/brcanrs.htm>, last accessed 4/18/10.

## NO PAP SMEAR

### About the Measure

**What It Is:** No Pap Smear is a measure of the percentage of female respondents 18 and older reporting that they did not have a pap test within the past 3 years. This measure is based on the question, "How long has it been since you had your last pap smear?"

**Where It Comes From:** Milwaukee City Data: BRFSS  
Wisconsin State Data: BRFSS<sup>1</sup>  
U.S. National Data: BRFSS<sup>1</sup>

**Reasons for Reporting:** The pap smear is a screening test used to detect cancer and pre-cancerous conditions of the cervix. Pre-cancerous changes can often be treated, thus preventing cervical cancer. Improving pap smear rates can also lead to early detection of cervical cancer, which has a better survival rate if treated in early stages compared to later stages.

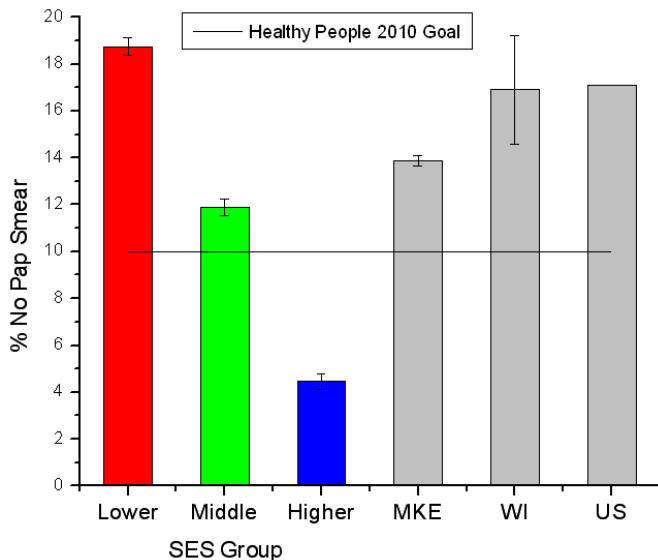
### Report Methodology

**Summary Measure:** Health Determinants  
Health Care  
**Years of data used:** 2006, 2008

### Summary Information

**Overall in Milwaukee:** 13.9 (13.7 – 14.1)  
**Overall in Wisconsin:** 16.9 (14.6 – 19.2)  
**Overall in U.S.:** 17.1

SES Group	Sample Size	# No Pap Smear	% No Pap Smear	95% CI
Lower	45,682	8,565	18.7	18.4 – 19.1
Middle	33,056	3,926	11.9	11.5 – 12.2
Higher	16,615	740	4.5	4.1 – 4.8



### The facts about Pap smear:

- The Healthy People 2010 goal for women 18 years and older having a Pap smear within the past three years is 90% (Objective 03-11b), which means the goal for not having a Pap smear is  $\leq 10\%$ .
- Cervical cancer morbidity and mortality rates are much higher among African American women than among White women. This is in part due to the fact that Black women in the U.S. tend to get fewer pap smears than White women.
- All women are at risk for cervical cancer. Routine Pap smear screening should begin within 3 years of onset of sexual activity or at age 21 (whichever comes first), and should be repeated at least every three years.<sup>2</sup>

<sup>1</sup>Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2008.

<sup>2</sup>Smith RA, Cokkinides V, Brooks D, Saslow D, Shah M, Brawley O. Cancer screening in the United States, 2011: a review to current American Cancer Society guidelines and issues in cancer screening. CA Cancer J Clin. 2011; 61: 8-30.

# NO EARLY PRENATAL CARE

## About the Measure

**What It Is:** Prenatal care refers to the medical care recommended for women during pregnancy. No Early Prenatal Care measures the percentage of women who did not receive prenatal care in the first trimester (first 3 months) of pregnancy.

**Where It Comes From:** Milwaukee City Data: WISH - Prenatal Care Module  
Wisconsin State Data: WISH - Prenatal Care Module  
U.S. National Data: National Center for Health Statistics<sup>1</sup>

**Reasons for Reporting:** Routine prenatal care can help in reducing maternal death rates and miscarriages as well as birth defects, low birth weight, pre-term labor, eclampsia, and other preventable maternal and infant problems.<sup>2</sup>

## Report Methodology

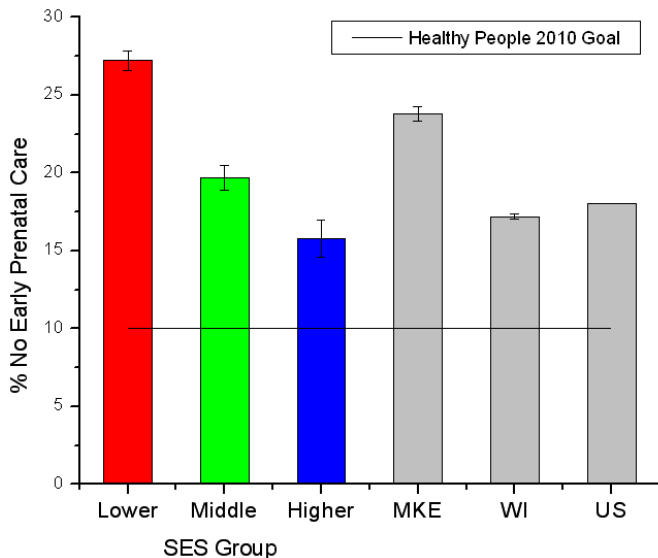
**Summary Measure:** Health Determinants  
Health Care

**Years of data used:** 2007-2009

## Summary Information

**Overall in Milwaukee:** 23.8 (23.3 – 24.3)  
**Overall in Wisconsin:** 17.2 (17.0 – 17.3)  
**Overall in U.S.:** 18.0

SES Group	# Births	# Births to Mothers Who Received No Early Prenatal Care	% Births to Mothers Who Received No Early Prenatal Care	95% CI
Lower	20,491	5,575	27.2	26.6 – 27.8
Middle	9,694	1,907	19.7	18.9 – 20.5
Higher	3,714	586	15.8	14.6 – 17.0



The facts about prenatal care:

- The Healthy People 2010 goal for pregnant women receiving early and adequate care beginning in the first trimester of pregnancy is 90%, which means the goal for no early care is no more than 10% (Objectives 16-6a and -6b).
- Various barriers impede receiving needed prenatal services, including
  - financial barriers (e.g., having no health insurance or being underinsured);
  - structural barriers (e.g., no facilities or health care professionals nearby, services not available during non-work hours, lack of public transportation options, or environmental challenges for people with disabilities);
  - personal barriers (e.g., sexual orientation, cultural differences, language differences, not knowing what to do).

<sup>1</sup>National Center for Health Statistics. Health, United States, 2010: With Special Feature on Death and Dying. Hyattsville, MD. 2011.

<sup>2</sup>Daniels P, Noe G, and Mayberry R. Barriers to prenatal care among black women of low socioeconomic status. *American Journal of Health Behavior*, March 2006;30(2):188-198.

# CIGARETTE SMOKING

## About the Measure

What It Is:	Cigarette Smoking is a measure of the percentage of the population reporting that they have smoked at least 100 cigarettes in their lifetime and that they currently smoke.
Where It Comes from:	Milwaukee City Data: BRFSS Wisconsin State Data: BRFSS <sup>1</sup> U.S. National Data: BRFSS <sup>1</sup>
Reasons for Reporting:	Cigarette smoking has been shown to cause a variety of health problems including heart disease, several kinds of cancer (lung, larynx, esophagus, pharynx, mouth, and bladder), and chronic lung disease (e.g., emphysema).

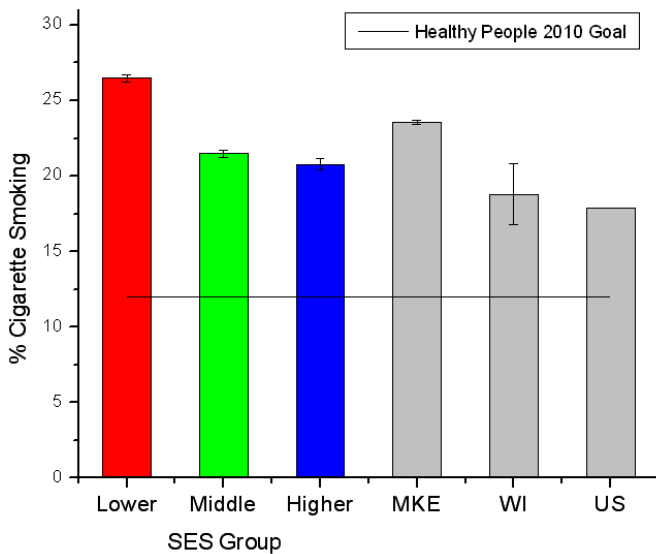
## Report Methodology

Summary Measure:	Health Determinants Health Behaviors
Years of Data Used:	2007-2009

## Summary Information

Overall in Milwaukee:	23.6 (23.4 – 23.7)
Overall in Wisconsin:	18.8 (16.7 – 20.8)
Overall in U.S.:	17.9

SES Group	Sample Size	# Current Smoker	% Current Smoker	95% CI
Lower	134,891	35,719	26.5	26.2 – 26.7
Middle	120,455	25,887	21.5	21.3 – 21.7
Higher	51,706	10,743	20.8	20.4 – 21.1



The facts about cigarette smoking:

- The Healthy People 2010 goal for adult smoking is 12% (Objective 27-01a).
- Cigarette smoking remains the leading preventable cause of death in the U.S.<sup>2</sup> Each year in the U.S., smoking results in more deaths than AIDS, alcohol, cocaine, heroin, homicide, suicide, motor vehicle crashes, and fires—combined.
- Cigarette smoking is more common among men (23.1%) than women (18.3%). Cigarette smoking is more common among adults who live below the poverty level (31.5%) than among those living at or above the poverty level (19.6%).<sup>3</sup>

<sup>1</sup>Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2008.

<sup>2</sup>Centers for Disease Control and Prevention (CDC). Annual Smoking-Attributable Mortality, Years of Potential Life Lost, and Economic Costs—United States, 1995–1999. *MMWR* 2002; 51(14):300–303.

<sup>3</sup>Centers for Disease Control and Prevention (CDC). Cigarette Smoking Among Adults—United States, 2008. *MMWR* 2009; 58(44):1227–1232.

# SMOKING DURING PREGNANCY

## About the Measure

What It Is:	Women giving birth in a hospital are asked about their smoking status after delivering the baby. Smoking During Pregnancy measures the percentage of women in the population reporting that they smoked during their pregnancy.
Where It Comes from:	Milwaukee City Data: WISH - Birth Counts Module Wisconsin State Data: WISH - Birth Counts Module U.S. National Data: Pregnancy Risk Assessment Monitoring System <sup>1</sup>
Reasons for Reporting:	Smoking during pregnancy has been shown to be associated with low birth weight, a higher risk of miscarriages, and Sudden Infant Death Syndrome (SIDS).

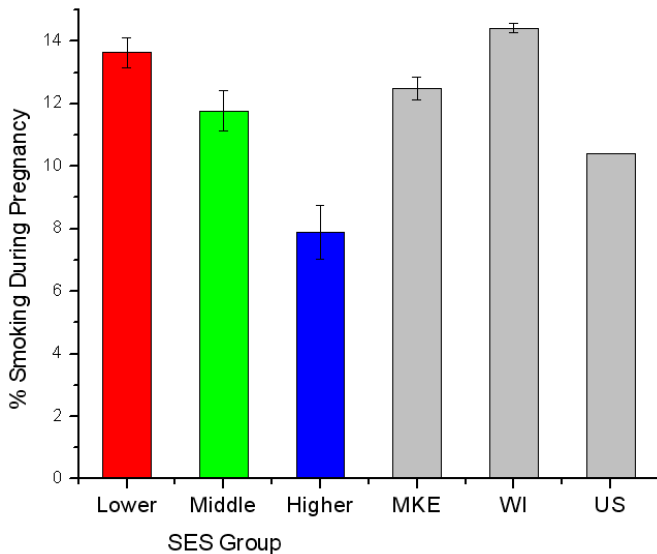
## Report Methodology

Summary Measure:	Health Determinants Health Behaviors
Years of Data Used:	2007-2009

## Summary Information

Overall in Milwaukee:	12.5 (12.1 – 12.8)
Overall in Wisconsin:	14.4 (14.3 – 14.6)
Overall in U.S.:	10.4

SES Group	# Births	# Mothers smoked during pregnancy	% Births for which mothers smoked during pregnancy	95% CI
Lower	20,446	2,788	13.6	13.2 – 14.1
Middle	9,692	1,141	11.8	11.1 – 12.4
Higher	3,704	293	7.9	7.0 – 8.8



The facts about smoking during pregnancy:

- Smoking before and during pregnancy is one of the most preventable causes of illness and death among mothers and infants. In particular, smoking increases the risk of preterm labor, low birth weight, infant mortality, and the development of chronic diseases in the infant.<sup>2</sup>
- Women who quit smoking before or early in pregnancy significantly reduce the risk for adverse outcomes.<sup>3</sup>
- Pregnant women who have received smoking cessation counseling are more likely to quit smoking. Effective smoking cessation interventions should be offered to pregnant smokers at the first prenatal visit, throughout the pregnancy, and after the baby is born.

<sup>1</sup>Martin JA, Hamilton BE, Sutton PD, et al. Births: Final data for 2007. National vital statistics reports; vol 58 no 24. Hyattsville, MD: National Center for Health Statistics. 2010

<sup>2</sup>CDC. Preventing Smoking and Exposure to Secondhand Smoke Before, During, and After Pregnancy. Available at <http://www.cdc.gov/nccdphp/publications/factsheets/Prevention/smoking.htm>.

<sup>3</sup>Pregnancy Risk Assessment Monitoring System (PRAMS) data from 26 states. Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention. 2004.

# BINGE DRINKING

## About the Measure

**What It Is:** Binge Drinking is a measure of the percentage of the population reporting that they drank more than five alcoholic beverages in one day, at least once per month. Binge Drinking is defined as 5 or more drinks on an occasion for men, and 4 or more drinks for women.

**Where It Comes from:** Milwaukee City Data: BRFSS  
Wisconsin State Data: BRFSS<sup>1</sup>  
U.S. National Data: BRFSS<sup>1</sup>

**Reasons for Reporting:** Binge drinking is associated with many health problems, such as liver disease, sexually transmitted diseases (STDs), and neurological damage. Alcohol abuse can also cause psychosocial problems, including violence, and can contribute to injuries and deaths from drunk driving.

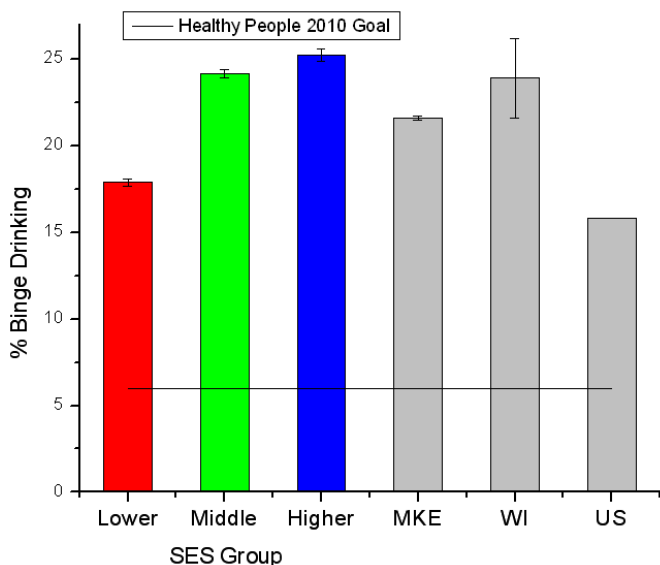
## Report Methodology

**Summary Measure:** Health Determinants  
Health Behaviors  
**Years of Data Used:** 2007-2009

## Summary Information

**Overall in Milwaukee:** 23.9 (21.7 – 26.2)  
**Overall in Wisconsin:** 22.8 (21.1 – 24.6)  
**Overall in U.S.:** 15.8

SES Group	Sample Size	# Binge Drinking	% Binge Drinking	95% CI
Lower	132,664	23,737	17.9	17.7 – 18.1
Middle	118,309	28,587	24.2	23.9 – 24.4
Higher	51,430	12,968	25.2	24.8 – 25.6



The facts about binge drinking:

- Healthy People 2010 goal for adult binge drinking is 6% (Objective 26-11c).
- Alcohol is the most commonly used substance, regardless of race or ethnicity. There are approximately 79,000 deaths attributable to excessive alcohol use each year in the United States.<sup>2</sup>
- Binge drinking is twice as prevalent among men as among women. The proportion of current binge drinkers is highest in the 18- to 20-year-old group.<sup>3</sup>
- Binge drinkers are 14 times more likely to report alcohol-impaired driving than non-binge drinkers.<sup>3</sup>

<sup>1</sup>Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2009.

<sup>2</sup>CDC. Alcohol-Related Disease Impact (ARDI). Atlanta, GA: CDC. Available at <http://www.cdc.gov/alcohol/ardi.htm>.

<sup>3</sup>CDC. Quick stats: Binge drinking. Atlanta, GA: CDC. Available at [http://www.cdc.gov/alcohol/quickstats/binge\\_drinking.htm](http://www.cdc.gov/alcohol/quickstats/binge_drinking.htm).

# PHYSICAL INACTIVITY

## About the Measure

**What It Is:** Physical Inactivity is a measure of the percentage of the population reporting levels of activity that do not meet the recommended levels of moderate physical activity (30 minutes per day of moderate physical activity >5 days a week) or vigorous physical activity (20 minutes per day of vigorous physical activity for >3 days of the week).

**Where It Comes from:** Milwaukee City Data: ACHS  
Wisconsin State Data: BRFSS<sup>1</sup>  
U.S. National Data: BRFSS<sup>1</sup>

**Reasons for Reporting:** Regular physical activity has been shown to prevent or reduce the severity of coronary heart disease (CHD), heart attack, diabetes, obesity, cancer, depression and a variety of other health problems.

## Report Methodology

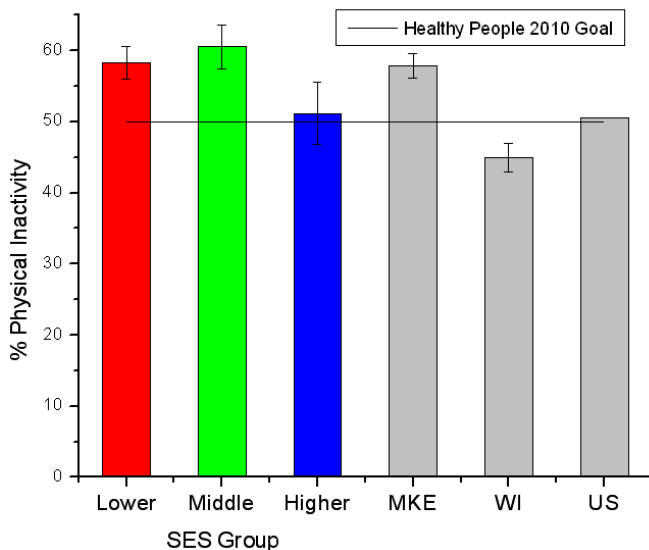
**Summary Measure:** Health Determinants  
Health Behaviors

**Years of Data Used:** 2006, 2009

## Summary Information

**Overall in Milwaukee:** 57.8 (56.1 – 59.5)  
**Overall in Wisconsin:** 44.9 (42.9 – 46.9)  
**Overall in U.S.:** 50.5

SES Group	Sample Size	# Inactivity	% Inactivity	95% CI
Lower	1,739	1,013	58.3	56.0 – 60.6
Middle	946	573	60.5	57.4 – 63.7
Higher	499	255	51.1	46.7 – 55.5



The facts about physical inactivity:

- The Healthy People 2010 goal for moderate physical activity for at least 30 minutes per day 5 or more days per week or vigorous physical activity for at least 20 minutes per day 3 or more days per week is 50%, which means the goal for physical inactivity is no more than 50% (Objective 22-02).
- On average, physically active people outlive those who are inactive.
- Non-Hispanic blacks and Hispanics were more inactive during their leisure time than were non-Hispanic whites. Social class seems to moderate the relationship between race/ethnicity and leisure-time physical inactivity.<sup>2</sup>

<sup>1</sup>Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2007.

<sup>2</sup>Marshall SJ, Jones DA, Ainsworth BE, Reis JP, Levy SS, Macera CA. Race/ethnicity, social class, and leisure-time physical inactivity. Med Sci Sports Exerc 2007;39:44–51.

# OBESITY

## About the Measure

**What It Is:** Obesity is a measure of the percentage of the population that has a body mass index (BMI)  $\geq 30$  kg/m<sup>2</sup>. This measure is calculated using a formula, which is based on answers to the questions, “About how much do you weigh without shoes?” and “About how tall are you without shoes?”

**Where It Comes from:** Milwaukee City Data: BRFSS  
Wisconsin State Data: BRFSS<sup>1</sup>  
U.S. National Data: BRFSS<sup>1</sup>

**Reasons for Reporting:** Obesity is a strong determinant of various health problems including hypertension, diabetes, coronary heart disease (CHD), stroke, sleep apnea, and a variety of others.

## Report Methodology

**Summary Measure:** Health Determinants  
Health Behaviors

**Years of Data Used:** 2007-2009

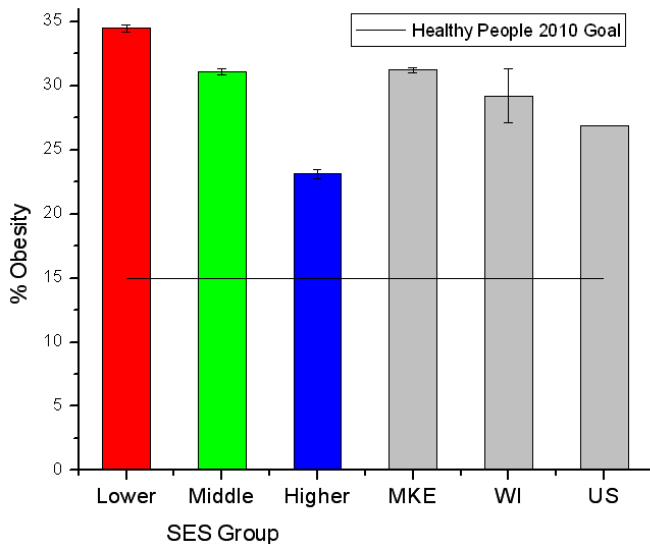
## Summary Information

**Overall in Milwaukee:** 31.2 (31.0 – 31.4)

**Overall in Wisconsin:** 29.2 (27.1 – 31.4)

**Overall in U.S.:** 26.9

SES Group	Sample Size	# Obesity	% Obesity	95% CI
Lower	131,932	45,466	34.5	34.2 – 34.7
Middle	118,181	36,734	31.1	30.8 – 31.3
Higher	51,089	11,806	23.1	22.7 – 23.5



## The facts about obesity:

- The Healthy People 2010 goal for obesity is 15% for persons 20 and older (Objective 19-02).
- More than half of adults in the U.S. are estimated to be overweight or obese. Obesity is especially prevalent among women with lower incomes.<sup>2</sup>
- People in low income neighborhoods often can not afford a health club membership and may live in more dangerous areas making it more difficult to exercise or play outdoors. Also, low income neighborhoods often have fewer and more expensive healthy food choices, and greater concentrations of fast food outlets and liquor stores. It is important to create environments that make it easier to engage in physical activities and healthy diets.

<sup>1</sup>Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2009.

<sup>2</sup>Fairburn CG, Brownell KD. *Eating Disorders and Obesity: A Comprehensive Handbook*. 2nd ed. New York, NY: Guilford Press; 2002.

# OVERWEIGHT

## About the Measure

**What It Is:** Overweight is a measure of the percentage of the population that has a body mass index (BMI)  $\geq 25$  but  $<30$  kg/m<sup>2</sup>. This measure is calculated using a formula, which is based on answers to the questions, “About how much do you weigh without shoes?” and “About how tall are you without shoes?”

**Where It Comes from:** Milwaukee City Data: BRFSS  
Wisconsin State Data: BRFSS<sup>1</sup>  
U.S. National Data: BRFSS<sup>1</sup>

**Reasons for Reporting:** Overweight is associated with increased risk of various health problems including hypertension, diabetes, coronary heart disease (CHD), stroke, sleep apnea, cancer, and a variety of others.

## Report Methodology

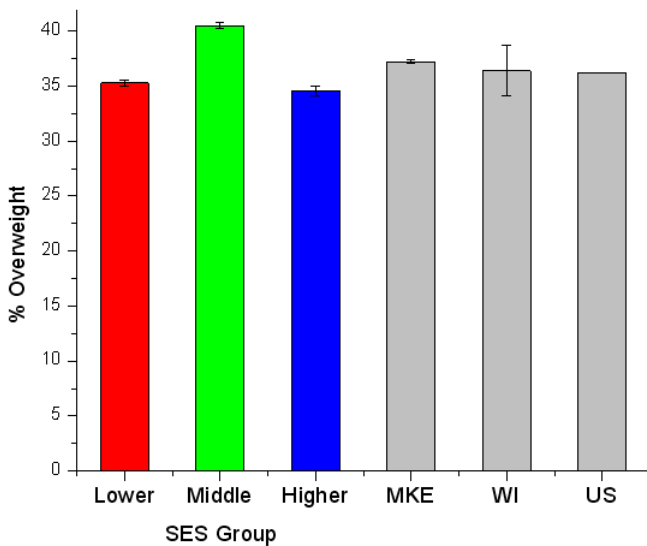
**Summary Measure:** Health Determinants  
Health Behaviors

**Years of Data Used:** 2007-2009

## Summary Information

**Overall in Milwaukee:** 37.2 (37.0 – 37.4)  
**Overall in Wisconsin:** 36.4 (34.1 – 38.8)  
**Overall in U.S.:** 36.2

SES Group	Sample Size	# Obesity	% Obesity	95% CI
Lower	131,932	46,549	35.3	35.0 – 35.5
Middle	118,181	47,847	40.5	40.2 – 40.8
Higher	51,089	17,663	34.6	34.2 – 35.0



The facts about overweight:

- The Healthy People 2010 goal for healthy weight (BMI between 18.5 and 25) is 60% for persons 20 and older (Objective 19-01).
- Overweight and obesity and their associated health problems have a significant economic impact on the U.S. health care system.
- Existing literature suggests that overweight youth are at increased risk of remaining overweight.<sup>2</sup> Efforts to maintain a healthy weight should start early in childhood and continue throughout adulthood, as this is likely to be more successful than efforts to lose substantial amounts of weight.

<sup>1</sup>Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2009.

<sup>2</sup>Serdula MK, Ivery D, Coates RJ, Freedman DS, Williamson DF, Byers T. Do obese children become obese adults? A review of the literature. *Prev Med* 1993; 22: 167–177.

# INADEQUATE FRUIT AND VEGETABLE CONSUMPTION

## About the Measure

What It Is:	Inadequate Fruit and Vegetable Consumption is a measure of the percentage of the population reporting that they consume less than 5 servings of fruits and/or vegetables per day.
Where It Comes from:	Milwaukee City Data: ACHS Wisconsin State Data: BRFSS <sup>1</sup> U.S. National Data: BRFSS <sup>1</sup>
Reasons for Reporting:	There is strong evidence that a diet with a sufficient level of fruits and vegetables can lower the risk of heart disease, cancer, and stroke. <sup>2</sup>

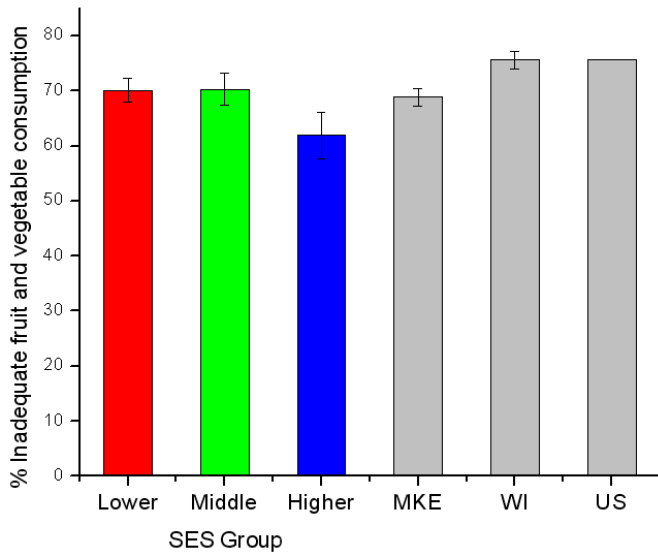
## Report Methodology

Summary Measure:	Health Determinants Health Behaviors
Years of Data Used:	2006, 2009

## Summary Information

Overall in Milwaukee:	68.9 (67.3 – 70.5)
Overall in Wisconsin:	75.6 (74.0 – 77.2)
Overall in U.S.:	75.6

SES Group	Sample Size	# Inadequate consumption	% Inadequate consumption	95% CI
Lower	1,735	1,216	70.1	68.0 – 72.3
Middle	944	663	70.3	67.4 – 73.2
Higher	499	309	61.9	57.6 – 66.2



The facts about fruit and vegetable consumption:

- The Healthy People 2010 goal for persons aged 2 years and older consuming at least 2 daily servings of fruit is 75% (Objective 19-05), and consuming at least 3 daily servings of vegetables (at least 1/3 being dark green or deep yellow) is 50% (Objective 19-06).
- A diet high in fruits and vegetables is associated with decreased risk for chronic diseases.<sup>2</sup>
- In 1991, the 5 A Day for Better Health program was initiated to promote healthy eating through fruit and vegetable consumption.<sup>2</sup>
- In 2005, no state reached the Healthy People 2010 national objectives for fruit and vegetable consumption.<sup>2</sup>

<sup>1</sup>Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2007.

<sup>2</sup>US Department of Health and Human Services, US Department of Agriculture. Dietary guidelines for Americans, 2005. 6th ed. Washington, DC: US Government Printing Office; 2005. Available at <http://www.health.gov/dietaryguidelines>.

# CHLAMYDIA RATE

## About the Measure

**What It Is:** Chlamydia Rate is reported as incidence (the number of new cases reported) per 100,000 population.

**Where It Comes from:** Milwaukee City Data: Wisconsin STD Program  
Wisconsin State Data: Wisconsin STD Program  
U.S. National Data: Sexually Transmitted Disease (STD) Surveillance<sup>1</sup>

**Reasons for Reporting:** Chlamydia is the most common bacterial STD in North America and is one of the major causes of tubal infertility, ectopic pregnancy, pelvic inflammatory disease, and chronic pelvic pain. STDs in general are associated with a significantly increased risk of morbidity and mortality, including increased risk of cervical cancer, involuntary infertility, and premature death.

## Report Methodology

**Summary Measure:** Health Determinants  
Health Behaviors

**Years of Data Used:** 2007-2009

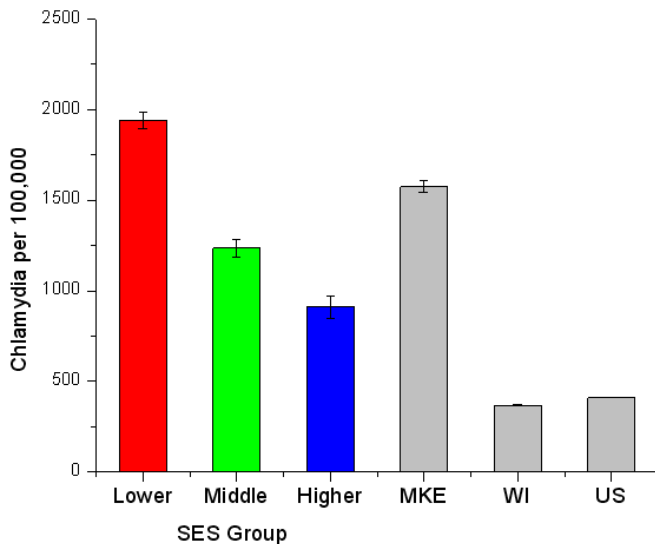
## Summary Information

**Overall in Milwaukee:** 1,575 (1,543 – 1,606)

**Overall in Wisconsin:** 368 (363 – 373)

**Overall in U.S.:** 409

SES Group	Population	# Chlamydia Cases	Chlamydia per 100,000	95% CI
Lower	331,069	6,427	1,941	1,894 – 1,988
Middle	182,551	2,253	1,234	1,184 – 1,285
Higher	89,304	814	911	849 – 974



The facts about chlamydia rate:

- There is no Healthy People 2010 goal for chlamydia cases per year. The Healthy People 2010 goal for sexually transmitted diseases (STDs) is to promote responsible sexual behaviors, strengthen community capacity, and increase access to quality services to prevent STDs and their complications.
- Increases in reported chlamydia infections may reflect the expansion of chlamydia screening, use of increasingly sensitive diagnostic tests, an increased emphasis on case reporting from providers and laboratories, improvements in the information systems for reporting, as well as true increases in disease.
- Nationally, STD rates tend to be higher in poor, urban areas.

<sup>1</sup>Centers for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, Division of STD Prevention. Available at <http://www.cdc.gov/std/stats09/tables/1.htm>

# HIV INFECTION

## About the Measure

**What It Is:** HIV Infection is a measure of the average annual number of reported cases of Human Immunodeficiency Virus (HIV) infection per year, and is reported as the crude rate per 100,000 in the population. The reported rate is not age-adjusted.

**Where It Comes from:** Milwaukee City Data: Wisconsin AIDS/HIV Program  
Wisconsin State Data: Wisconsin AIDS/HIV Program  
U.S. National Data: CDC<sup>1</sup>

**Reasons for Reporting:** In the United States, HIV/AIDS remains a significant cause of illness, disability, and death. Elimination of disparities in the rate of infection among certain racial and ethnic groups, particularly African American and Hispanic populations, remains a challenge.

## Report Methodology

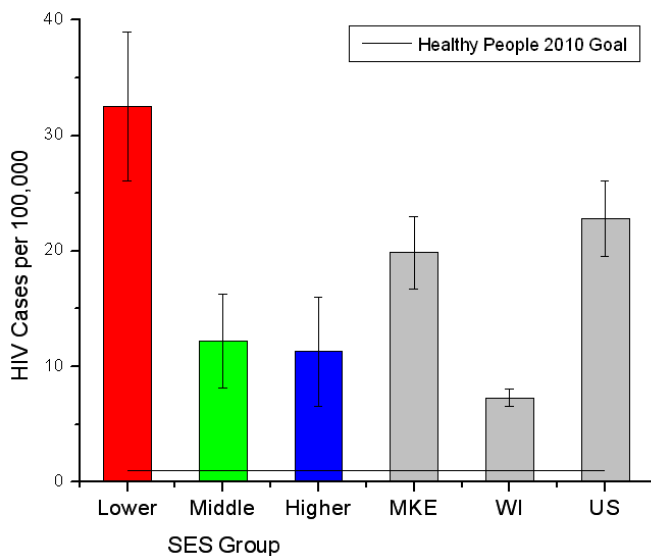
**Summary Measure:** Health Determinants  
Health Behaviors

**Years of Data Used:** 2004-2009

## Summary Information

**Overall in Milwaukee:** 19.9 (16.7 – 23.0)  
**Overall in Wisconsin:** 7.3 ( 6.6 – 8.0)  
**Overall in U.S.:** 22.8 (19.5 – 26.1)

SES Group	Population	# HIV Cases	HIV per 100,000	95% CI
Lower	303,929	99	32.5	26.1 – 38.9
Middle	285,459	35	12.2	8.2 – 16.3
Higher	194,584	22	11.3	6.6 – 16.6



The facts about HIV infection:

- The Healthy People 2010 goal for AIDS is 1.0 new case per 100,000 persons.
- About one-half of all new HIV infections in the United States are among people under age 25 years, and the majority of cases are infected through sexual contact.
- HIV and AIDS, compared to other racial and ethnic groups, have affected African Americans and Hispanics disproportionately.
- The cost-effectiveness of HIV testing compares favorably with many recommended routine screening programs in the United States.<sup>2</sup>

<sup>1</sup>Hall HI, Song R, Rhodes P, et al. Estimation of HIV Incidence in the United States. *JAMA*. 2008;300:520–529.

<sup>2</sup>Walensky RP, Freedberg KA, Weinstein MC, Paltiel AD. Cost-effectiveness of HIV testing and treatment in the United States. *Clin Infect Dis*. 2007;45 Suppl 4:S248-54.

# TEEN BIRTH RATE

## About the Measure

**What It Is:** Teen Birth Rate is reported as the number of births per 1,000 females, ages 15-19.

**Where It Comes from:** Milwaukee City Data: MHD  
Wisconsin State Data: WISH – Teen Births Module  
U.S. National Data: National Center for Health Statistics<sup>1</sup>

**Reasons for Reporting:** Teen pregnancy is associated with poor prenatal care and pre-term delivery. The adverse long-term consequences of teen pregnancy, such as lower levels of educational attainment, higher rates of marital instability, and increased likelihood of single parenthood compared to older mothers make it a particularly crucial health measure for communities to track and an important health risk to target for intervention.

## Report Methodology

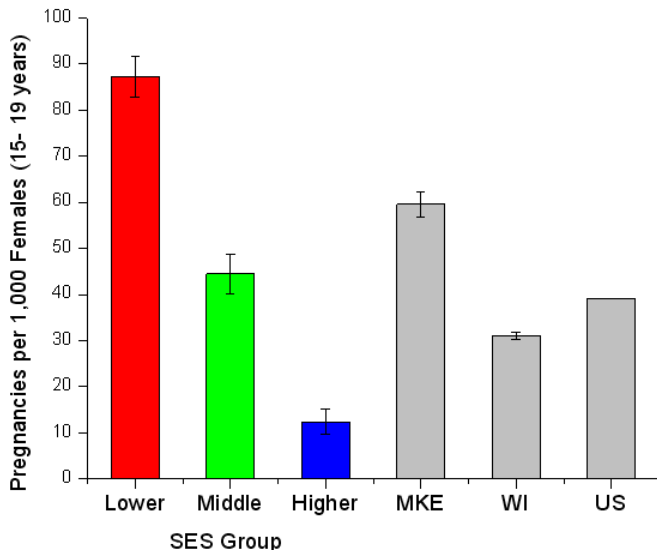
**Summary Measure:** Health Outcomes  
Health Behaviors

**Years of Data Used:** 2007-2009

## Summary Information

**Overall in Milwaukee:** 59.5 (56.9 – 62.2)  
**Overall in Wisconsin:** 31.1 (30.3 – 31.9)  
**Overall in U.S.:** 39.1

SES Group	# Female Population Aged 15-19	# Live Births by Female Aged 15-19	Teen Birth Rate	95% CI
Lower	15,151	1,322	87.3	82.8 – 91.8
Middle	8,833	393	44.5	40.2 – 48.8
Higher	6,103	75	12.3	9.6 – 15.1



The facts about teen birth rate:

- The Healthy People 2010 goal for reducing pregnancies among adolescent females is 43 pregnancies per 1,000 females aged 15 to 17 years (Objective 9-7). Our data, which include live births from females aged 15-19 years, are not directly comparable to this Healthy People 2010 goal.
- Pregnant teens are more likely than older women to receive late or no prenatal care.<sup>2</sup> They may also be more likely to have a pre-term delivery and low birth weight, increasing the risk of child developmental delay, illness, and mortality.<sup>3</sup>
- The U.S. birth rate for teenagers in 2009 was the lowest it has ever been in the nearly 70 years for which national data are available.<sup>1</sup>

<sup>1</sup>Ventura SJ, Hamilton BE. U.S. teenage birth rate resumes decline. NCHS data brief, no 58. Hyattsville, MD: National Center for Health Statistics. 2011.

<sup>2</sup>Hueston WJ, Geesey ME, Diaz V. Prenatal care initiation among pregnant teens in the United States: an analysis over 25 years. *J Adolesc Health*. 2008;42(3):243-8. Epub 2008 Jan 28.

<sup>3</sup>Chandra PC, Schiavello HJ, Ravi B, Weinstein AG, Hook FB. Pregnancy outcomes in urban teenagers. *Int J Gynaecol Obstet*. 2002;79:117-122.

# VIOLENT ASSAULT

## About the Measure

What It Is:	Violent Assault is a measure of the percentage of the respondents reporting that they had been pushed, kicked, slapped or hit in the past year. It is based on the answers to the question, "During the past year has anyone pushed, kicked, slapped, hit or otherwise hurt you?"
Where It Comes from:	Milwaukee City Data: ACHS Wisconsin State Data: N/A U.S. National Data: N/A
Reasons for Reporting:	Each year, violence causes approximately 50,000 deaths and results in over 2.5 million injuries in the U.S. Violence erodes communities by reducing productivity, decreasing property values, disrupting social services, reducing social cohesion, and increasing overall stress levels.

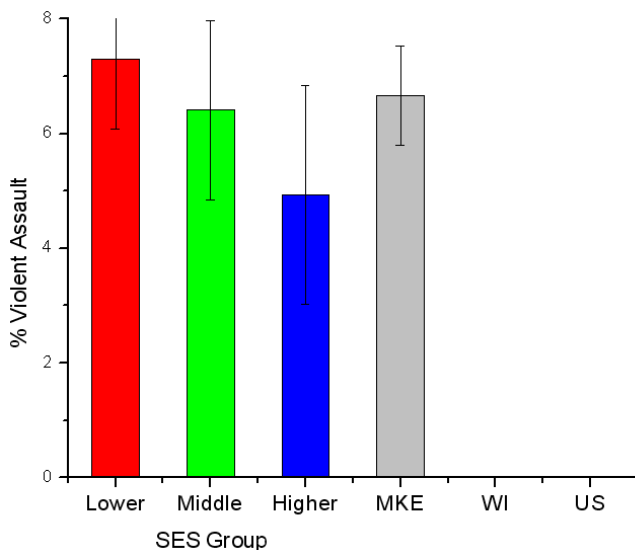
## Report Methodology

Summary Measure:	Health Determinants Health Behaviors
Years of Data Used:	2006, 2009

## Summary Information

Overall in Milwaukee:	6.7 (5.8 – 7.5)
Overall in Wisconsin:	N/A
Overall in U.S.:	N/A

SES Group	Sample Size	# Violent Assault	% Violent Assault	95% CI
Lower	1,737	127	7.3	6.1 – 8.5
Middle	944	61	6.4	4.9 – 8.0
Higher	498	25	4.9	3.0 – 6.8



### The facts about violent assault:

- Domestic violence is associated with poor health and risky sexual behavior.<sup>1</sup>
- Violence in the U.S. is pervasive. On an average day in America, at least 18,000 persons survive interpersonal assaults.<sup>2</sup>
- The estimated total costs associated with nonfatal injuries and deaths due to violence in 2000 were more than \$70 billion.<sup>3</sup>
- Men or women living in poverty are at especially high risk of violence.<sup>4,5</sup>

<sup>1</sup>Centers for Disease Control and Prevention (CDC). MMWR 2008; 57(5).

<sup>2</sup>Moscicki, EK, O'Carroll, PW, Rae, DS, et al. Suicide ideation and attempts: The Epidemiologic Catchment Area Study. In: *Report of the Secretary's Task Force on Youth Suicide*. Vol. 4. Washington, DC: HHS, 1989.

<sup>3</sup>CDC. The Cost of Violence in the United States. Atlanta, GA: CDC. Available at <http://www.cdc.gov/ncipc/factsheets/CostOfViolence.htm>.

<sup>4</sup>Reiss, AJ Jr., Roth, JA (Eds). Understanding and preventing violence. Washington, DC: National Research Council. 1993.

<sup>5</sup>Browne, A, Bassuk, SS. Intimate violence in the lives of homeless and poor house women: Prevalence and patterns in an ethnically diverse sample. *American Journal of Orthopsychiatry*, 67(2), 261-278. 1997.

# DID NOT WEAR SEAT BELT

## About the Measure

**What It Is:** Did Not Wear Seat Belt is a measure of the percentage of the respondents reporting they always or nearly always do not wear a seat belt while driving or riding in a motor vehicle. It was based on the answers of the question “How often do you use seat belts when you drive or ride in a motor vehicle?”

**Where It Comes from:** Milwaukee City Data: ACHS  
Wisconsin State Data: National Occupant Protection Use Survey (NOPUS)<sup>1</sup>  
U.S. National Data: National Occupant Protection Use Survey (NOPUS)<sup>1</sup>

**Reasons for Reporting:** Motor vehicle crashes are the single most predictable and preventable cause of death and injury in the United States. Seat belts remain the most effective tool for preventing deaths and injuries from motor vehicle crashes.

## Report Methodology

**Summary Measure:** Health Determinants  
Health Behaviors

**Years of Data Used:** 2006, 2009

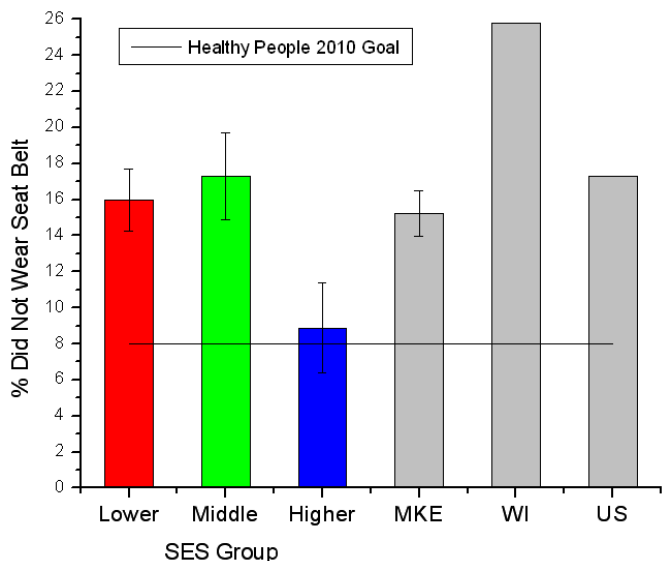
## Summary Information

**Overall in Milwaukee:** 15.2 (14.0 – 16.5)

**Overall in Wisconsin:** 24.6

**Overall in U.S.:** 19.0

SES Group	Sample Size	# Did Not Wear Seat Belt	% Did Not Wear Seat Belt	95% CI
Lower	1,732	276	16.0	14.2 – 17.7
Middle	941	163	17.3	14.9 – 19.7
Higher	498	44	8.9	6.4 – 11.4



The facts about wearing seat belts:

- The Healthy People 2010 goal for total population using safety belts is 92%, which means the goal for not using safety belts is no more than 8% (Objective 15-19).
- Research has found that when used, lap/shoulder seat belts reduce the risk of fatal injury to front-seat passenger car occupants by 45 percent and the risk of moderate-to-critical injury by 50 percent.<sup>2</sup>
- Among reproductive-aged women (15–44 years), motor vehicle crashes account for 13% of all deaths. Proper seat belt use is an effective means of preventing morbidity and mortality among pregnant women and their unborn infants.<sup>3</sup>

<sup>1</sup>National Occupant Protection Use Survey (NOPUS), 2008, Available at <http://www-nrd.nhtsa.dot.gov/Pubs/811106.PDF>

<sup>2</sup>NHTSA Traffic Safety Facts: Occupant Protection. DOT HS 810 807. 2007. Washington, DC: National Center for Statistics and Analysis, National Highway Traffic Safety Administration.

<sup>3</sup>CDC. 2002 PRAMS Surveillance Report: Multistate Exhibits Prenatal Care Counseling: Seat Belt Use During Pregnancy, Atlanta, GA: CDC. Available at: <http://www.cdc.gov/PRAMS/2002PRAMSSurvReport/MultiStateExhibits/Multistates6.htm>.

# SINGLE PARENT HOUSEHOLDS

## About the Measure

**What It Is:** Single Parent Households is a measure of the number of households run by a single parent (male householder with no female partner present, or female householder with no male partner present) with one or more of their own children under 18 years. It is reported as a percentage of the total number of households.

**Where It Comes from:** Milwaukee City Data: EASI  
Wisconsin State Data: EASI  
U.S. National Data: EASI

**Reasons for Reporting:** This measure is included as a proxy for social and economic support from the family and the community. Studies have shown that being raised in a single-headed household can have negative effects on health in the future, such as increased anxiety symptoms.<sup>1</sup>

## Report Methodology

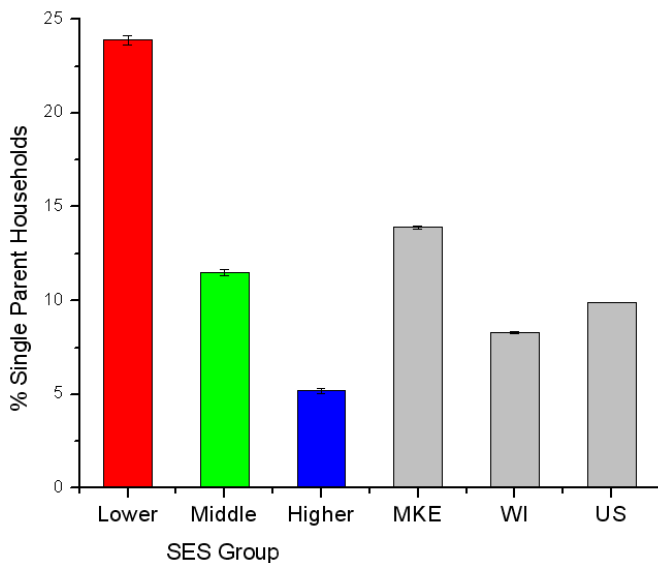
**Summary Measure:** Health Determinants  
Socioeconomic Factor

**Years of Data Used:** 2007

## Summary Information

**Overall in Milwaukee:** 13.9 (13.8 – 14.0)  
**Overall in Wisconsin:** 8.3 (8.3 – 8.4)  
**Overall in U.S.:** 9.9 (9.9 – 10.0)

SES Group	# Total Households	# Households Run by a Single Parent	% Households Run by a Single Parent	95% CI
Lower	109,349	26,179	23.9	23.7 – 24.2
Middle	126,029	14,497	11.5	11.3 – 11.7
Higher	91,872	4,749	5.2	5.0 – 5.3



The facts about single parent households:

- According to the latest data on America's families and households released by the U.S. Census Bureau, the percentage of households headed by single parents has stayed relatively stable from 1994 through 2006, at about 9%, up from 5% in 1970.
- Many factors influence how children develop in single-parent households: the parent's age, education level, and occupation; the income, and the support network of friends and extended family members (including the non-resident parent, if available). Disadvantages in these factors that often accompany single parenting appear to cause most of the associations with poor health, rather than single parenting itself.<sup>1</sup>

<sup>1</sup>Kroes M, Kalff AC, Steyaert J, et al. A longitudinal community study: Do psychosocial risk factors and child behavior checklist scores at 5 years of age predict psychiatric diagnoses at a later age? *Journal of the American Academy of Child and Adolescent Psychiatry* 2002; 41: 955–963.

# INADEQUATE SOCIAL SUPPORT

## About the Measure

**What It Is:** Inadequate Social Support measure is based on responses to the question: “How often do you get the social and emotional support you need?” The percentages stated in this report are the percentages of adult population reporting that they “never,” “rarely,” or “sometimes” get the support they need.

**Where It Comes from:** Milwaukee City Data: BRFSS  
Wisconsin State Data: BRFSS  
U.S. National Data: BRFSS<sup>1</sup>

**Reasons for Reporting:** Poor family support, minimal contact with others, and limited involvement in community life are associated with increased morbidity and early mortality. Furthermore, social support networks have been identified as powerful predictors of health behaviors, suggesting that individuals without a strong social network are less likely to participate in healthy lifestyle choices.

## Report Methodology

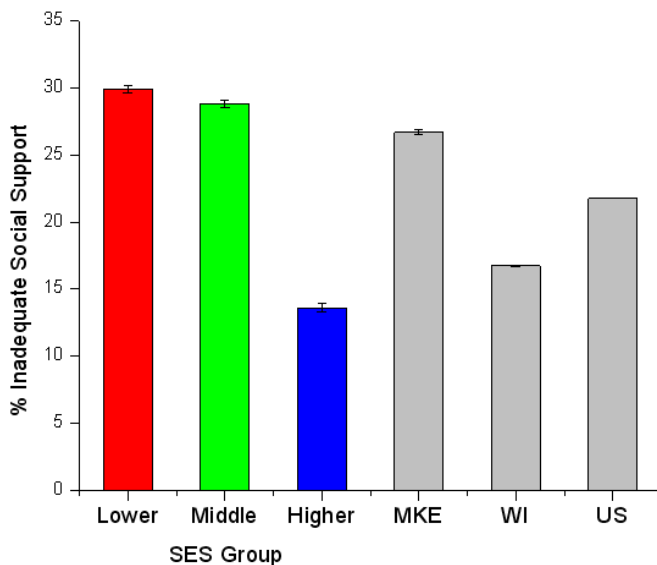
**Summary Measure:** Health Determinants  
Socioeconomic Factor

**Years of Data Used:** 2007-2009

## Summary Information

**Overall in Milwaukee:** 26.7 (26.5 – 26.9)  
**Overall in Wisconsin:** 16.7 (16.7 – 16.8)  
**Overall in U.S.:** 21.8 (21.7 – 21.8)

SES Group	Sample Size	# Inadequate Social Support	% Inadequate Social Support	95% CI
Lower	121,211	36,228	29.9	29.6 – 30.1
Middle	113,694	32,784	28.8	28.6 – 29.1
Higher	48,329	6,579	13.6	13.3 – 13.9



The facts about inadequate social support:

- The association between socially isolated individuals and poor health outcomes has been well established in the literature. Socially isolated individuals typically have limited access to the types of support provided by social relationships.<sup>2</sup>
- From a meta-analysis of predictors of positive health practices, social support was the second most powerful predictor of positive health practices out of 14 total predictors.<sup>3</sup> This suggests that individuals with an inadequate social network are less likely to participate in healthy lifestyle choices.

<sup>1</sup>Centers for Disease Control and Prevention (CDC), Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2009.

<sup>2</sup>Kawachi IK, Bruce P, Glass R. Social capital and self-rated health: A contextual analysis. *Am J Public Health.* 1999;89:1187-1193.

<sup>3</sup>Yarcheski A, Mahon NE, Yarcheski TJ, Cannella BL. A meta-analysis of predictors of positive health practices. *J Nurs Scholarsh.* 2004;36:102-108.

# RADON RISK

## About the Measure

**What It Is:** Radon Risk is the percentage of homes tested that report radon levels greater than 10 pCi/L at the basement level, which corresponds to a level of at least 4 pCi/L at ground level. (This measure is not based on a complete or random sample of housing units and should be interpreted with caution.)

**Where It Comes from:** Milwaukee City Data: DHS  
Wisconsin State Data: DHS  
U.S. National Data: N/A

**Reasons for Reporting:** Indoor radon is the second leading cause of lung cancer after smoking, according to a 1999 report from the National Academy of Sciences. The United States Environmental Protection Agency and the U.S. Surgeon General strongly recommend that all homes be tested for radon, and if a problem exists, corrective action be taken.

## Report Methodology

**Summary Measure:** Health Determinants  
Physical Environment

**Years of Data Used:** 2009

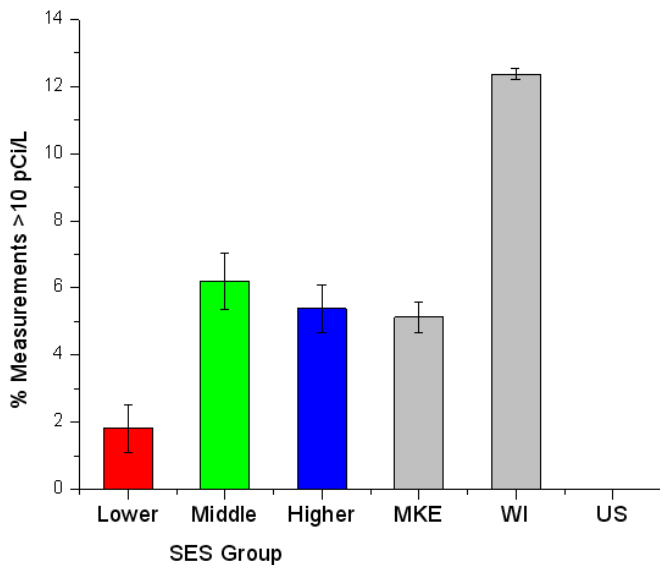
## Summary Information

**Overall in Milwaukee:** 5.1 ( 4.7 – 5.6)

**Overall in Wisconsin:** 12.4 (12.2 – 12.5)

**Overall in U.S.:** N/A

SES Group	# Measurements in Basements	# Measurements >10 pCi/L	% Measurements >10 pCi/L	95% CI
Lower	1370	25	1.8	1.1 – 2.5
Middle	3256	202	6.2	5.4 – 7.0
Higher	3897	210	5.4	4.7 – 6.1



The facts about radon risk:

- The Healthy People 2010 goal for radon risk is to increase the proportion of persons who live in homes tested for radon concentrations and the number of new homes constructed to be radon resistant.
- Radon is a naturally occurring, odorless, toxic, radioactive gas that can cause lung cancer.
- The only way to know the radon level in a house is to measure it. Radon test kits can be obtained in hardware stores or from local health agencies for around \$20.

## HOUSING BUILT BEFORE 1940

### About the Measure

What It Is:	Housing Built Before 1940 is the percentage of houses that were built before the year of 1940. Residents of these houses are more likely to be exposed to lead paint.
Where It Comes from:	Milwaukee City Data: EASI Wisconsin State Data: EASI U.S. National Data: EASI
Reasons for Reporting:	Housing that was built before 1940 has a higher risk of lead poisoning for its inhabitants. In children, lead poisoning can cause learning disabilities, attention deficit disorder (ADD), violent behavior, and many other problems, many of which may persist into adulthood.

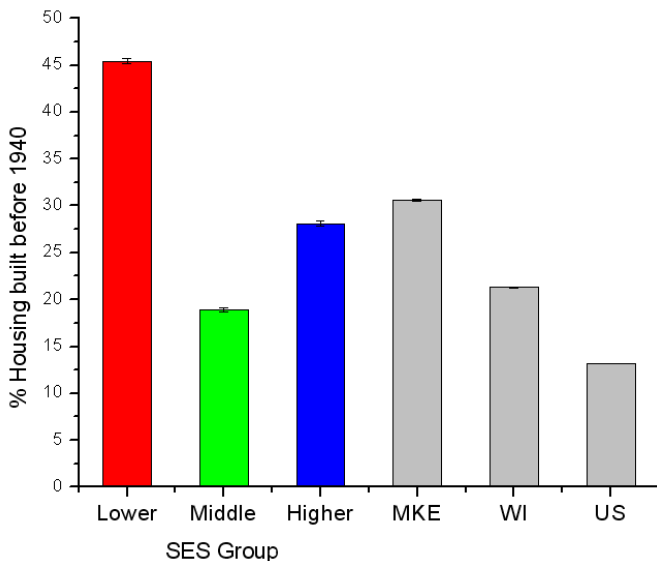
### Report Methodology

Summary Measure:	Health Determinants Physical Environment
Years of Data Used:	2007

### Summary Information

Overall in Milwaukee:	30.6 (30.4 – 30.7)
Overall in Wisconsin:	21.3 (21.2 – 21.3)
Overall in U.S.:	13.2 (13.2 – 13.2)

SES Group	# Total Housing	# Housing built before 1940	% Housing built before 1940	95% CI
Lower	118,218	53,619	45.4	45.1 – 45.6
Middle	130,758	24,761	18.9	18.7 – 19.1
Higher	94,935	26,700	28.1	27.8 – 28.4



The facts about housing built before 1940:

- Any home or multifamily housing building built before 1978 may contain lead-based paint. After 1940, paint manufacturers voluntarily began to reduce the amount of lead they added to their consumer paints. As a result, painted surfaces in homes built before 1940 are likely to have higher levels of lead than homes built between 1940 and 1978.<sup>1,2</sup>
- Peeling, chipping, chalking, or cracking lead-based paint is a hazard and needs immediate attention. Lead-based paint may also be a hazard when found on surfaces that get a lot of wear-and-tear, including windows and window sills, doors and door frames, stairs, railings and banisters and porches and fences.<sup>1,2</sup>

<sup>1</sup>DHS. Lead-Safe Wisconsin. Available at <http://dhs.wisconsin.gov/lead/index.htm>.

<sup>2</sup>Energy Efficient Rehab Advisor. Lead-based Paint as a Hazard During Remodeling. Available at <http://www.rehabadvisor.pathnet.org/sp.asp?id=10420>.

# LEAD POISONING

## About the Measure

**What It Is:** Lead Poisoning is a measure of the percentage of positive lead tests on children < 72 months (age 6). A positive test in a child is defined as a blood lead level (BLL)  $\geq 10$  micrograms per deciliter ( $\mu\text{g/dL}$ ). (This measure is not based on a complete or random sample and should be interpreted with caution).

**Where It Comes from:** Milwaukee City Data: MHD  
Wisconsin State Data: DHS<sup>1</sup>  
U.S. National Data: CDC Surveillance Data<sup>2</sup>

**Reasons for Reporting:** Lead poisoning has been shown to cause many health problems. In children, lead poisoning can cause learning disabilities, attention deficit disorder (ADD) violent behavior, and many other problems, many of which may persist into adulthood.

## Report Methodology

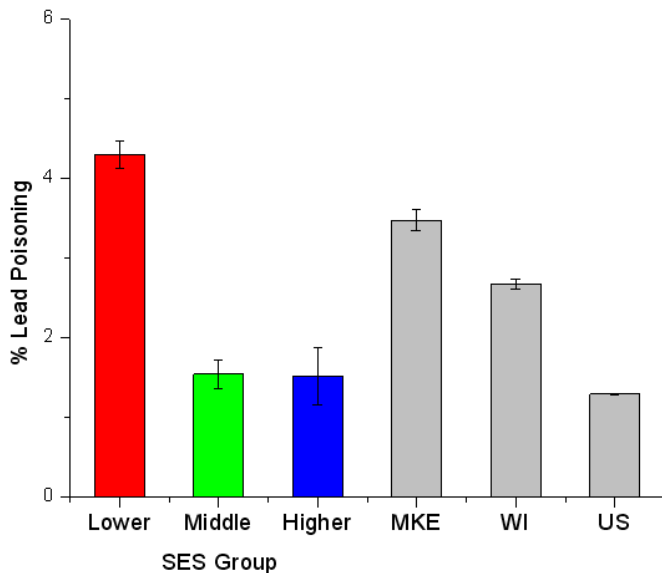
**Summary Measure:** Health Determinants  
Physical Environment

**Years of Data Used:** 2007-2009

## Summary Information

**Overall in Milwaukee:** 3.5 (3.3 – 3.6)  
**Overall in Wisconsin:** 2.7 (2.6 – 2.7)  
**Overall in U.S.:** 1.3 (1.3 – 1.3)

SES Group	# Children Tested	# Lead Poisoning	% Lead Poisoning	95% CI
Lower	53151	2287	4.3	4.1 – 4.5
Middle	18192	281	1.5	1.4 – 1.7
Higher	4552	69	1.5	1.2 – 1.9



## The facts about lead poisoning:

- Children in the cities of Milwaukee and Racine should be tested at ages 12, 18, and 24 months; if a child is enrolled in WIC, Medicaid or uninsured he or she is then tested annually until age 6.<sup>3</sup> For children living outside of the cities of Milwaukee and Racine, targeted screening is done for those who are at high risk of exposure to lead poisoning.
- Factors that put children at greater risk for lead poisoning: Age of Child (lead poisoning is most prevalent among 2-year-old children); Age of Housing (homes built before 1940 present a high risk for lead exposure); Socioeconomic Status (lead poisoning is more prevalent among children who are enrolled in Medicaid or WIC than among those who are not – probably due to higher exposure to lead hazards in low-income neighborhoods).<sup>4</sup>

<sup>1</sup>DHS. Childhood Lead Poisoning Prevention Data. 2005-2007. Available at <http://dhs.wisconsin.gov/lead/Data/database/index.asp>.

<sup>2</sup>CDC. CDC Childhood Lead Poisoning Surveillance. 2005-2007. Available at <http://www.cdc.gov/nceh/lead/data/national.htm>.

<sup>3</sup>DHS. Wisconsin Blood Lead Screening Recommendations. Available at <http://dhs.wisconsin.gov/lead/BloodTest.htm>.

<sup>4</sup>DHS. Childhood Lead Poisoning Surveillance in Wisconsin. Available at <http://dhs.wisconsin.gov/lead/Data/lpsurveillance>.

# NO ACCESS TO HEALTHY FOOD

## About the Measure

What It Is:	No Access to Healthy Foods is measured as the percent of non-healthy food outlets, defined as a grocery store or produce stand/farmers' market with less than 5 employees.
Where It Comes from:	Milwaukee City Data: CENSUS <sup>1</sup> Wisconsin State Data: CENSUS <sup>2</sup> U.S. National Data: CENSUS <sup>2</sup>
Reasons for Reporting:	Studies have linked the food environment to consumption of healthy food, which is in turn linked to overall health outcomes.

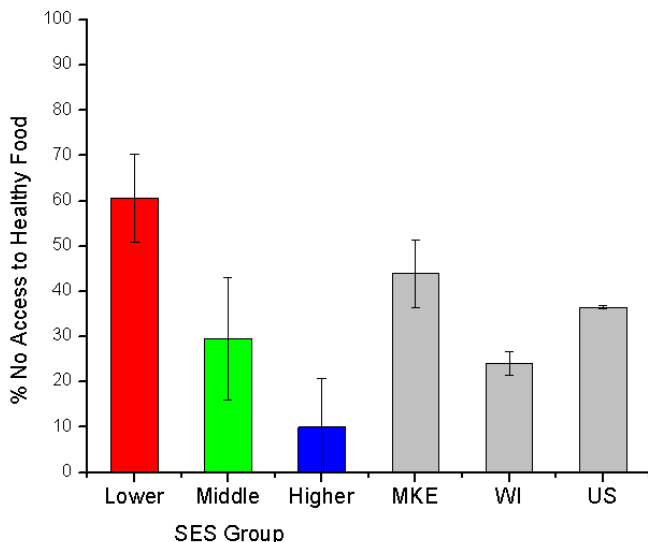
## Report Methodology

Summary Measure:	Health Determinants Physical Environment
Years of Data Used:	2008

## Summary Information

Overall in Milwaukee:	43.9 (36.5 – 51.3)
Overall in Wisconsin:	24.0 (21.4 – 26.7)
Overall in U.S.:	36.5 (36.1 – 36.9)

SES Group	# Total Food Market/Store	# Food Market/Store (<5 employees)	% Food Market/Store (<5 employees)	95% CI
Lower	99	60	60.6	51.0 – 70.2
Middle	44	13	29.5	16.1 – 40.3
Higher	30	3	10.0	-0.7 – 20.7



The facts about access to healthy food:

- There is strong evidence that a diet with a sufficient level of fruits and vegetables can lower the risk of heart disease, cancer, and stroke.<sup>6</sup>
- There is strong evidence that access to supermarkets rather than smaller grocery/convenience stores correlates with lower prevalence of overweight, obesity, and hypertension.<sup>4,5</sup>
- Household fruit and vegetable use among Food Stamp Program participants increased when there was easy access to supermarket shopping.<sup>6</sup>

<sup>1</sup>U.S. Census Bureau. 2008 ZIP Code Business Patterns (ZBP)

<sup>2</sup>U.S. Census Bureau. 2008 County Business Patterns (CBP)

<sup>3</sup>US Department of Health and Human Services, US Department of Agriculture. Dietary guidelines for Americans, 2005. 6th ed. Washington, DC: US Government Printing Office; 2005. Available at <http://www.health.gov/dietaryguidelines>.

<sup>4</sup>Lovasi GS, Hutson MA, Guerra M, Neckerman KM. Built environments and obesity in disadvantaged populations. Epidemiol Rev. 2009;31:7-20.

<sup>5</sup>Morland KB, Evenson KR. Obesity prevalence and the local food environment. Health Place. 2009;15:491-495..

<sup>6</sup>Rose D, Richards R. Food store access and household fruit and vegetable use among participants in the US Food Stamp Program. Public Health Nutr. 2004;7:1081-1088.

# LIQUOR LICENSE DENSITY

## About the Measure

What It Is:	Liquor License Density is represented as the number of liquor licenses per 10,000 population. The data represent currently valid licenses (April, 2011).
Where It Comes from:	Milwaukee City Data: COMPASS Wisconsin State Data: N/A U.S.: N/A
Reasons for Reporting:	Researchers have documented a variety of problems associated with the physical availability of alcohol including assaultive violence, motor vehicle accidents, drinking and driving, riding with a drinking driver, high mortality rates due to liver cirrhosis, and binge drinking. <sup>1-2</sup>

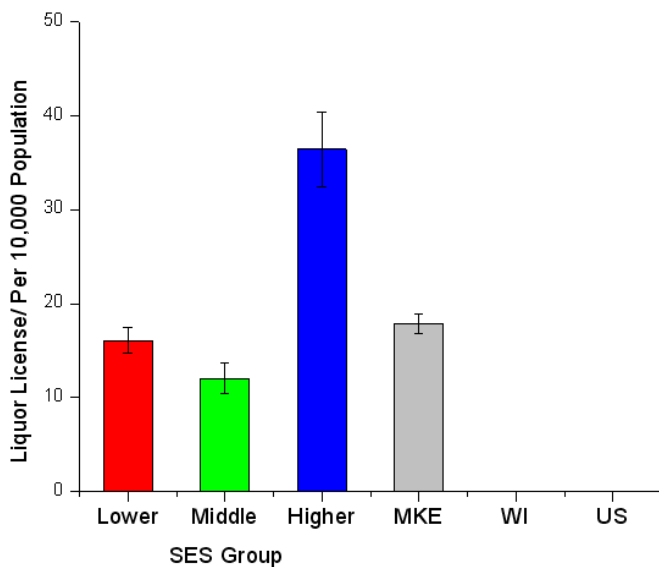
## Report Methodology

Summary Measure:	Health Determinants Physical Environment
Years of Data Used:	2011

## Summary Information

Overall in Milwaukee:	17.9 (16.8 – 18.9)
Overall in Wisconsin:	N/A
Overall in U.S.:	N/A

SES Group	# Population	# Liquor License	Liquor License /per 10,000 population	95% CI
Lower	331,069	532	16.1	14.7– 17.4
Middle	182,551	220	12.1	10.5 – 13.6
Higher	89,304	325	36.4	32.4 – 40.3



The facts about liquor license density:

- Research shows that as alcohol outlet density increases, the risk for drinking and driving, riding with a drinking driver, liver cirrhosis, binge drinking, and partner violence increases.<sup>2,3,4</sup>
- An analysis of census tracts within Baltimore, MD revealed that liquor stores are disproportionately located in predominantly African-American census tracts, even after controlling for census tract socioeconomic status.<sup>3</sup>
- Liquor license density can be controlled through zoning policy.

<sup>1</sup>Treno AJ, Johnson FW, Remer LG, Gruenewald PJ. The impact of outlet densities on alcohol-related crashes: A spatial panel approach. *Accid Anal Prev.* 2007;39:894-901.

<sup>2</sup>Branas CC, Elliott MR, Richmond TS, Culhane DP, Wiebe DJ. Alcohol consumption, alcohol outlets, and the risk of being assaulted with a gun. *Alcoholism.* 2009;33:906-915.

<sup>3</sup>LaVeist TA, Wallace JM. Health risk and inequitable distribution of liquor stores in African American neighborhood. *Soc Sci Med.* 2000;51:613-617.

<sup>4</sup>McKinney CM, Caetano R, Harris TR, Ebama MS. Alcohol availability and intimate partner violence among U.S. couples. *Alcohol Clin Exp Res.* 2009;33:169-176.

# SUMMARY

## Lower SES

## Middle SES

Better than  
Higher SES

- % of homes tested that report radon levels greater than 10 pCi/L at the basement level (0.3)
- The number of liquor licenses per 10,000 population (0.4)
- % of people reporting binge drinking (0.7)
- % of people reporting that they feel they are in poor or fair health (0.9)
- Average days people reporting that their physical health was not good (0.9)

- The number of liquor licenses per 10,000 population (0.3)
- % of houses that were built before the year of 1940 (0.7)
- % of people reporting that they feel they are in poor or fair health (0.7)
- Average days people reporting that their physical health was not good (0.7)

Worse than  
Higher SES

- % of respondents reporting that they didn't have a routine health checkup within the past 2 years (1.1)
- Premature Death (Years of Potential Life Lost)(1.1)
- % of people reporting that they consume less than 5 servings of fruits and/or vegetables per day (1.1)
- % of people reporting that they currently smoke. (1.3)
- % of live births born less than 37 completed weeks of gestation (1.3)
- % of live births for which the infant weighed less than 2,500 grams (1.4)

- % of respondents reporting that they didn't have a routine health checkup within the past 2 years (1.1)
- % of people who are overweight (1.2)
- Average days people reporting that their mental health was not good (1.2)
- % of people reporting levels of activity that do not meet the recommended levels of moderate or vigorous physical activity (1.2)
- % of live births born less than 37 completed weeks of gestation (1.2)
- % of women reporting they did not receive prenatal care in the first trimester of pregnancy (1.3)
- % of live births for which the infant weighed less than 2,500 grams (1.3)
- % of people who are obese (1.4)
- Chlamydia Rate (1.4)
- % of the adults (<65 years) reporting not having health insurance coverage (1.4)
- % of people reporting that in the past 12 months they did not receive health care they thought they needed (1.4)

- average days people reporting that their mental health was not good (1.5)
- % of people who are obese (1.5)
- Infant Mortality (1.5)
- % of houses that were built before the year of 1940 (1.6)
- % of women reporting they did not receive prenatal care in the first trimester of pregnancy (1.7)
- % of women in the population reporting that they smoked during their pregnancy (1.7)
- % of people reporting they always or nearly always do not wear a seat belt while driving or riding in a motor vehicle (1.8)
- % of people reporting they have not had a dental visit in the past year (1.9)
- % of people 65 and above reporting they have not had an influenza vaccination in the past year (1.9)

- % of people reporting they have not had a dental visit in the past year (1.5)
- % of women in the population reporting that they smoked during their pregnancy (1.5)
- % of people reporting they always or nearly always do not wear a seat belt while driving or riding in a motor vehicle (1.9)





- % of the adults (< 65 years) reporting not having health insurance coverage (2.1)
- Chlamydia Rate (2.1)
- % of adults reporting that they "never," "rarely," or "sometimes" get the support they need (2.2)
- % of people reporting that in the past 12 months they did not receive health care they thought they needed (2.5)
- % of women 40 years and older reporting that they did not have a mammogram within the past 2 years (2.6)
- % of reported cases of childhood lead Poisoning (2.9)
- HIV infection rate (2.9)
- % of women reporting they haven't had a Pap test in the past 3 years (4.2)
- % of households run by a single parent (4.6)
- % of non-healthy food outlets (6.1)
- Teen Birth Rate (15-19 years) (7.1)

- % of people 65 and above reporting they have not had an influenza vaccination in the past year (2.0)
- % of women 40 years and older reporting that they did not have a mammogram within the past 2 years (2.1)
- % of adults reporting that they "never," "rarely," or "sometimes" get the support they need (2.1)
- % of households run by a single parent (2.2)
- % of women reporting they haven't had a Pap test in the past 3 years (2.6)
- Teen Birth Rate (15-19 years) (3.6)

### Risk Ratio

A Risk Ratio is presented in parentheses after each measure. The Higher SES group is used as the referent.

### Color Key

- < 1.0 
- 1.1 - 1.4 
- 1.5 - 1.9 
- ≥ 2.0 

\*All Risk Ratios are statistically significant at  $p < 0.05$

### How to Interpret Risk Ratio?

Example: The Lower SES group has 2.3 times higher risk of experiencing infant mortality than the Higher SES group in Milwaukee.

## DISCUSSION

Some brief observations may be made on this Report and on the comparison of this Report to the 2010 Report.

*Some news is good.*

- All three of the SES groups met the Healthy People 2010 goals for recent dental visit and biennial mammography.

*Some news is mixed and/or surprising.*

- The percentage of adults under 65 years without health insurance coverage has increased in the lower and higher SES groups.
- The percentage of cigarette smoking has decreased in the middle SES group since last year's report, but rates of smoking during pregnancy have remained relatively unchanged in all SES groups.
- Liquor license density was highest in the higher SES ZIP code group as in 2010 report, and this is consistent with the finding that binge drinking was highest in the higher SES ZIP code group as well.
- The result for poor physical health days is similar in higher and lower SES groups. This has remained relatively unchanged. But in 2011, the higher SES group has changed from being relatively equal to the lower SES group in 2010, to now having the worst result for poor and fair health.

*Some news is not good.*

- Overall, as we reported in our initial publication (Vila et al., 2007), and in our 2009 and 2010 Reports, substantial health disparities remain within geographic regions of differing socioeconomic status in Milwaukee.
- In fact, in 26 of the 35 measures in this report, there was a clear gradient by SES, wherein those in the lower SES ZIP code group had the worst scores on health measures, and those in the higher SES ZIP code group had the best scores. There were only 6 measures in which one of the other SES ZIP code groups appeared less healthy than the lower SES ZIP code group and only 2 measures in which the lower SES ZIP code group had the healthiest score.
- There were dramatic socioeconomic disparities in factors related to maternal, infant, and reproductive health, with significant adverse outcomes for the city's lower economic status residents. The lower SES residents experienced high rates of infant mortality as well as having proportionately more low birthweight babies and more preterm births. They reported proportionately higher rates of smoking during pregnancy, having chlamydia and HIV, and had lower reported rates of early prenatal care and having a pap smear. The lower SES ZIP code group also had greater proportions of teen births and single parent households.

*Limitations.*

Like any report, ours has limitations. In particular, we would note the following:

- As compared to census-tract level data, unavoidable heterogeneity of ZIP code level data may result in an underestimation of the actual extent to which the lower SES correlates with poorer health in Milwaukee.

- Some of the data are self-reported, and subject to the limitations inherent with such data, and in a few cases our data are not based on a random sample. In each case, this has been noted on the associated report page.
- It is not appropriate to interpret these population-level data as a proxy for individual level data (i.e., any given individual living in one of the three ZIP code tertiles in Milwaukee may have health outcomes or health behaviors far better – or far worse – than the population-level measures for that tertile.)

## CONCLUSION

Dramatic health disparities by socioeconomic status exist – and persist – within Wisconsin’s largest city. These findings continue to support those of other researchers, including the new National County Health Rankings produced by University of Wisconsin Population Health Institute that socioeconomic status is one of the most powerful drivers of population-level health outcomes. As we noted in our 2007 report (Vila et al., 2007), “widely disparate environmental and socioeconomic contexts mean that not every individual has the same opportunity to initiate or sustain healthy choices.” Furthermore, it is becoming more clear since then that the chronic stress of living with poverty, racism, low educational attainment, and social disruption can affect people’s physiology directly through chronic elevations of stress hormones such as cortisol and adrenaline, which, through their effects on blood pressure, glucose metabolism, and immune system functioning, can predispose individuals to heart disease, stroke, diabetes, cancer, and other chronic diseases (Conroy, Sandel & Zuckerman, 2010).

Our current report continues to call upon all health professionals, elected officials, community stakeholders and policy-makers to “work together to help change public policy so that individuals are more likely to live, work, and interact in environments that facilitate and support healthy behaviors” (Vila et al., 2007) and healthier outcomes. This means attending to governmental and institutional policies that improve the built environment, educational attainment, and social cohesion, and policies that reduce unemployment, racism, and poverty. The Healthiest Wisconsin 2020 Plan (Wisconsin Department of Health Services, 2010) and the UW “What Works” document (Booske, Kindig, Nelson & Remington, 2009) provide additional details, objectives, and recommendations in these regards.

Researchers should consider advancing population and public health research that tests novel, multi-disciplinary, multi-level structural and economical interventions, with the ultimate goal of both contributing to scientific knowledge and improving health outcomes and reducing health disparities in the city. Moreover, it will be important to engage community representatives in the interpretation and dissemination of these data to generate community-driven solutions.

In short, Milwaukee’s large population, poor health outcomes, and large health disparities – many associated with socioeconomic status – continue to have significant impact on the overall health of the state as well as on the economic vibrancy of the city and the state. It seems likely that improvements in the city’s and the state’s health outcomes will require solutions related to their associated upstream, socioeconomic factors.

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Advancing population health research and education to improve the health of urban communities.

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