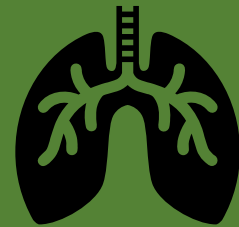




# Health Profile 2018



*Lake County*



***District Health  
Department #10***  
*Healthy People, Healthy Communities*



# 2018 Health Profile

## Lake County

The 2018 Chartbooks provide a snapshot of the health status of the District Health Department #10 jurisdiction. Information is presented by county and when available, comparisons are made to the jurisdiction, to Michigan, and to Healthy People 2020 Objectives.

Data include population, education, race, births and deaths, incidence of disease, injuries, and immunizations. Last year, a Behavioral Risk Factor Survey was conducted in the entire 10 county jurisdiction by an independent research and evaluation firm. This random telephone survey reached between 350 to 622 residents in each county for a total number of respondents of 4,699. A wide range of health behaviors were included:

- Health status indicators, such as perception of general health, satisfaction with life, weight (BMI), and levels of high blood pressure.
- Health risk behaviors, such as smoking, drinking, diet, and physical activity
- Clinical preventative measures, such as routine physical checkups, cancer screenings, oral health, and immunizations
- Chronic conditions, such as diabetes, asthma, and cancer

In addition, DHD#10 is completed the Community Health Improvement Plan in 2017. The identified strategic issues are:

- Access to Health Care
- Tobacco Use
- Substance Abuse
- Healthy Lifestyles
- Health Disparities
- Maternal, Infant & Child Health
- Mental Health
- Chronic Disease

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After the data are presented in this Chartbook, the last section will summarize some of the conclusions from the Behavioral Risk Factor Survey and examples of progress completed toward the CHIP goals.

*If you have any questions or data requests, please e-mail [data@dhd10.org](mailto:data@dhd10.org)*

# Demographics

Demographics serve as an important indicator which can be used to disaggregate data to gain more detailed on specific sub-populations (i.e. ethnicity, sex, education level, etc.) and better tailor public health interventions.

## Population

	Lake	Michigan
Total Population	11,881	9,962,311
Population per square mile	20.3	174.8
Persons under 5 years	4.4%	5.8%
Persons under 18 years	16.1%	22.1%
Persons 65 years and over	27.4%	16.2%
Disability, under age 65	20.2%	10.4%
Gender: Females	48.5%	50.8%

## Income & Economy

	Lake	Michigan
Persons in poverty	22.1%	15.0%
Median household income	\$32,309	\$50,803
Per capita income	\$18,199	\$27,549
Unemployment	7.3%	4.9%

## Race, Ethnicity, & Household Characteristics

	Lake	Michigan
White	86.5%	79.6%
Black	9.5%	14.2%
American Indian/Alaska Native	1.0%	0.7%
Asian	0.3%	3.1%
More than one race	2.8%	2.4%
Hispanic	2.7%	5.0%
Language other than English spoken at home	2.7%	9.3%
Persons per household	2.48	2.51
High school graduates	82.6%	89.9%
Bachelor's degree or higher	11.4%	27.4%

### Sources

US Census Bureau:

- [Population, July 2017 estimate](#)
- [Age & race, July, 2016](#)
- [Education based on persons age 25 and over, 2012-16](#)
- [Female persons, July, 2016](#)
- [Persons per household, 2012-2016](#)
- [Median household income, July, 2016](#)
- [Persons in poverty, July 2016 estimate](#)
- [Per capita income in past 12 months, 2012-16](#)
- [Population per square mile, 2010](#)

Bureau of Labor Statistics:

- [Average unemployment percentage, 2016](#)

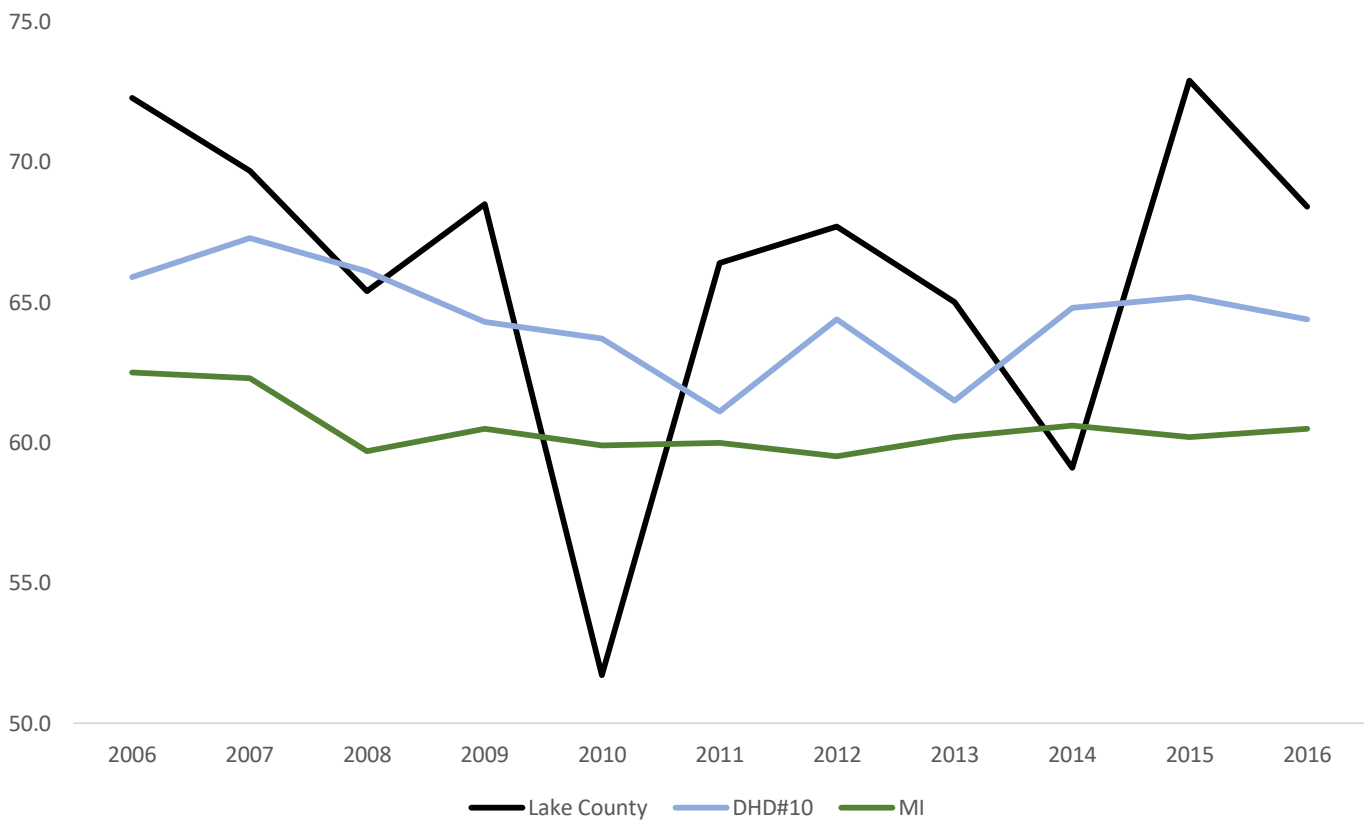
# Births

*Birth numbers and rates represent growth within a community and offer insight into the future population trends.*

## Number of Live Births in Lake County, 2006-16

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
114	103	106	78	100	99	96	87	110	103

## Live Birth Rates per 1,000 Female in Lake County, DHD#10, and MI, 2006-16



**Sources:**

MDHHS

[Live births by county, 2006-16](#); [Live birth rates by county, 2006-16](#); [Live births rates by health jurisdiction, 2006-16](#); [Live births rates by state, 2006-16](#)

# Poverty + Poverty Indicators

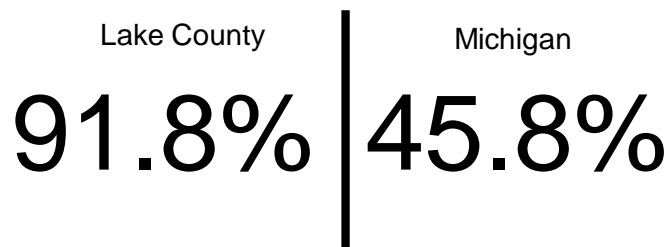
*Poverty is strongly linked to negative health outcomes, keeping track of poverty levels and identifying significant change can suggest a positive or negative change within the community.*

**Percentage of Population (0-17 years and all ages) Living in Poverty in Lake County and MI, 2006-16**



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
--- Lake - childred 0-17	38.0%	35.40%	36.00%	42.50%	45.10%	48.30%	53.40%	52.20%	44.40%	45.20%	40.20%
- - - Michigan - children 0-17	18.3%	19.3%	19.3%	22.2%	23.4%	24.6%	25.7%	23.7%	22.6%	22.2%	20.7%
— Lake - all ages	22.6%	20.30%	20.10%	23.40%	25.20%	26.90%	28.20%	31.00%	29.20%	24.80%	21.90%
— Michigan - all ages	13.5%	13.9%	14.4%	16.1%	16.7%	17.5%	17.4%	17.0%	16.2%	15.7%	14.9%

## % of Students Eligible for Free or Reduced Lunch, 2016



**Sources:**

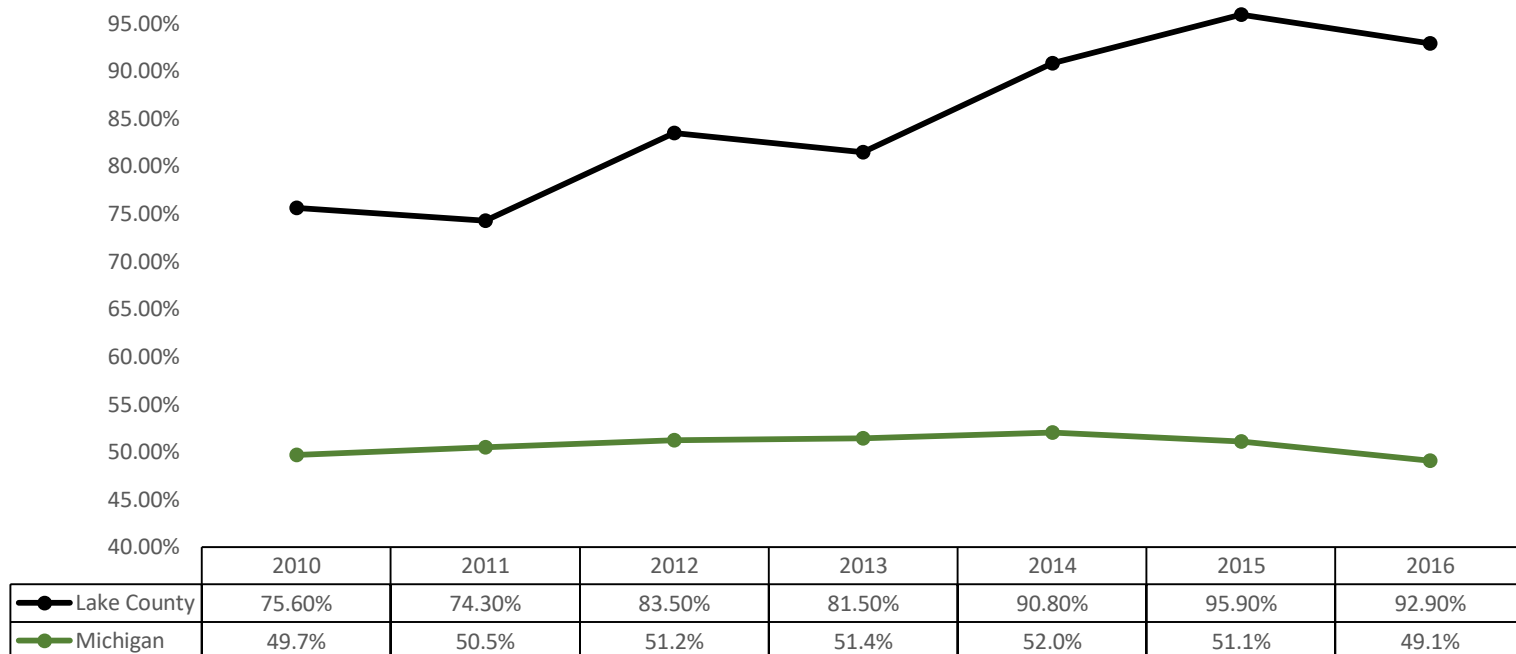
Michigan League for Public Policy

[Poverty, 0-17 years, by county & state 2006-16](#); [Poverty, all ages, by county & state, 2006-16](#);

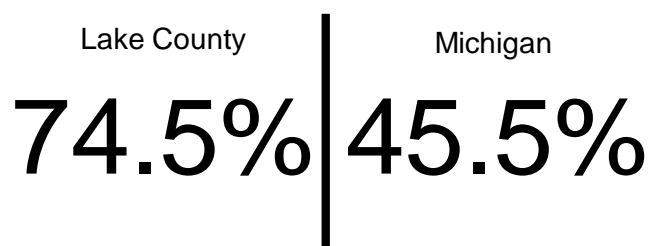
[Percentage of student eligible for free/reduced lunch, 2016](#)

# Poverty + Poverty Indicators

**Percentage of Children (0-4) Who Receive Women, Infant, and Children (WIC) Benefits in Lake County and MI, 2006-16**



**% of Live Births Paid by Medicaid, 2015**



**Sources:**

Michigan League for Public Policy

[Children \(0-4\) who Receive WIC Benefits by County & State, 2006-16;](#)

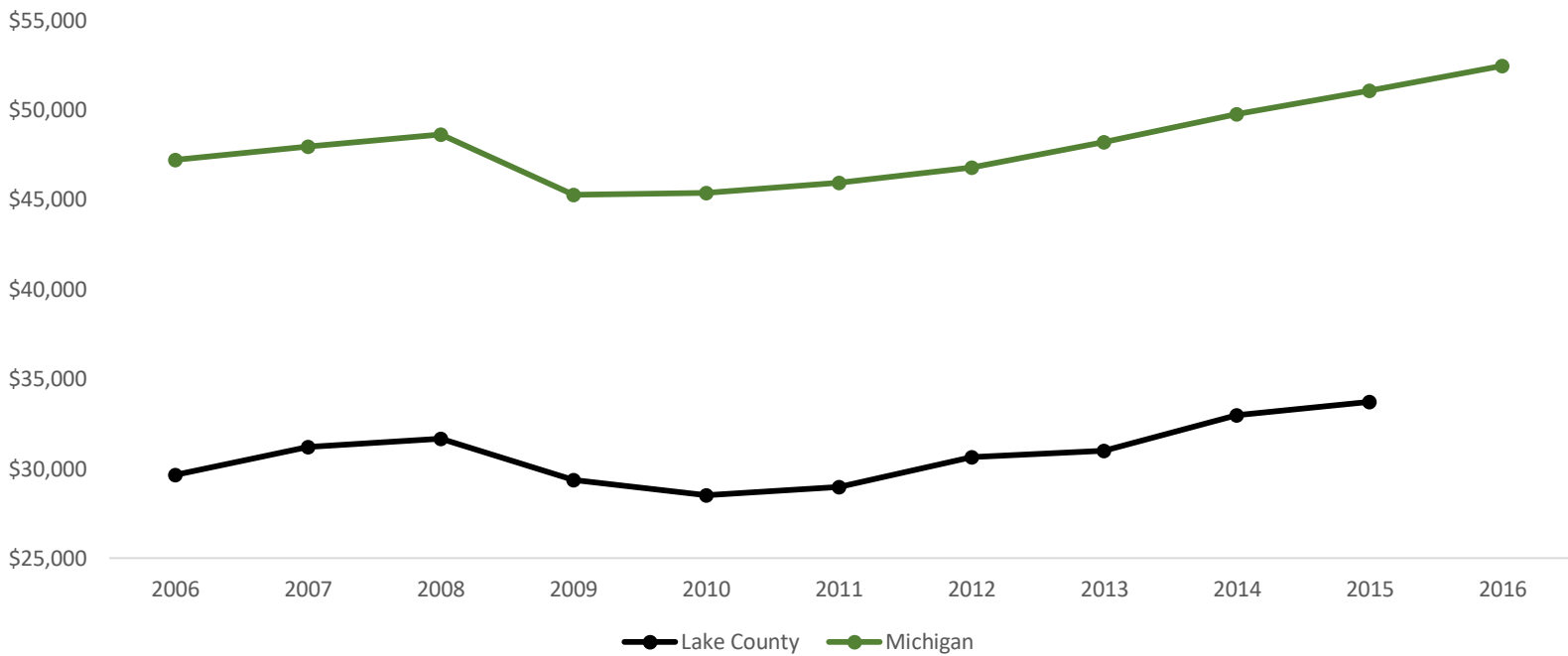
[Percentage of Live Births Paid by Medicaid by County & State, 2015](#)

# Economic Wellbeing

*Economic wellbeing is a quick hint into the health of a community by providing indicators that focus on economic hardships. Studies have shown that those who live in poverty are at a higher risk for both acute and chronic diseases.*

	Percentage of Adults who are Unemployed		Percentage of Children (0-5) with All Parents in the Labor Force	
	Lake County	Michigan	Lake County	Michigan
2010	15.5%	12.5%	61.2%	66.0%
2016	7.3%	4.9%	49.0%	66.4%

**Median Household Income in Lake County and MI, 2006-16**



**Sources:**

Michigan League for Public Policy

[Median Household Income by County & State, 2006-16](#); [Percentage of Adults who are Unemployed, 2010 & 2016](#); [Percentage of Children \(0-5\) with All Parents in the Labor Force, 2010 & 2016](#)

# Leading Causes of Death

Rates per 100,000, 2016; \*Too small to calculate

	Lake	DHD#10	Michigan
Heart Disease	243.5	181.9	200.8
Cancer	180.3	187.2	167.1
Chronic Lower Respiratory	*	75.1	44.7
Stroke	*	45.3	39.1
Accidents	*	49.1	50.8
Diabetes	*	17.1	21.5
Alzheimer's Disease	*	43.6	33.8
Suicide	*	18.5	13.4
Pneumonia/Influenza	*	10.8	13.7
Kidney Disease	*	12.3	14.5

# Years of Potential Life Lost

Rates per 100,000 under 75 years of age, 2016; \*Too small to calculate

The number of years of potential life lost are rates calculated as the number of years between the age at death and 75 years of age for persons dying before their 75<sup>th</sup> year.

	Lake	DHD#10	Michigan
Heart Disease	2,653.6	1,368.0	1,374.3
Cancer	2,514.0	1,861.0	1,604.7
Chronic Lower Respiratory	*	392.0	255.4
Homicide	*	*	280.3
Accidents	*	1,189.9	1,356.9
Diabetes	*	139.7	195.8
Pneumonia/Influenza	*	271.1	99.8
Suicide	*	542.2	427.3
Drug-induced	*	527.6	953.0
Alcohol-induced	*	354.5	205.6

## Sources:

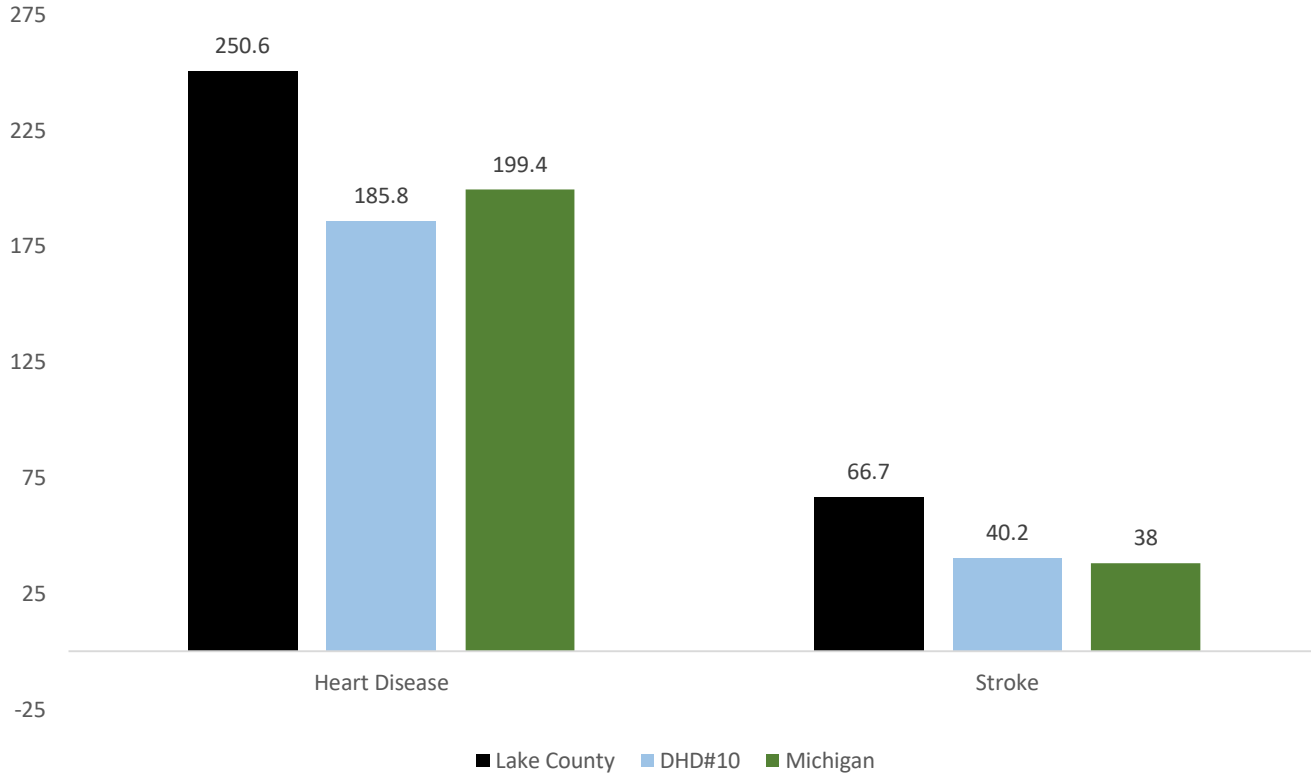
Michigan Department of Health & Human Services

[Leading Causes of Death, 2016; Years of Potential Life Lost, 2016](#)

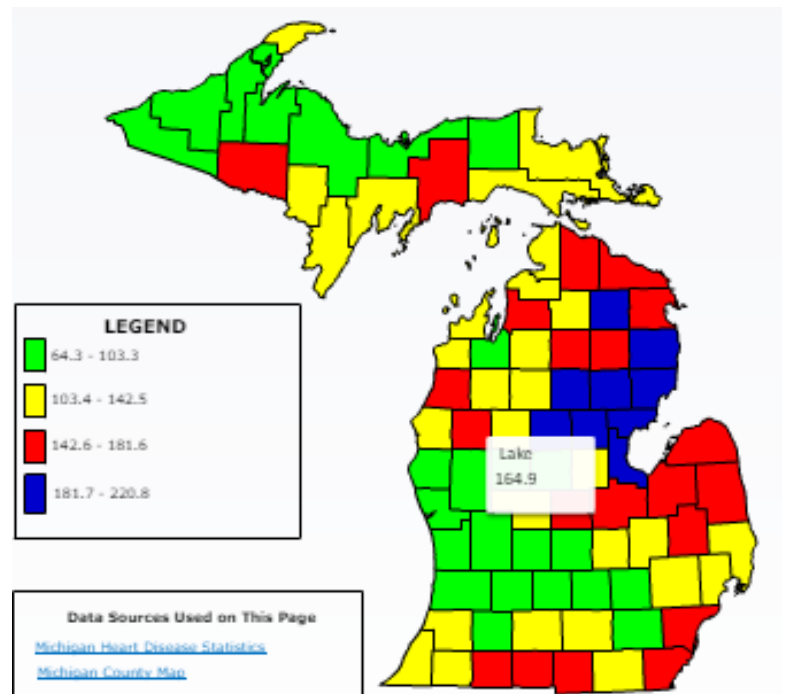
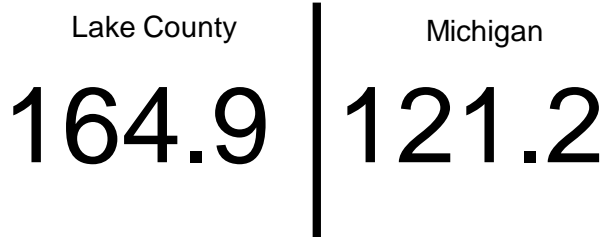


# Cardiovascular Disease Snapshot

## Cardiovascular age-adjusted mortality rates by type, 2014-16



## Cardiovascular disease hospitalization rates per 10,000, 2014

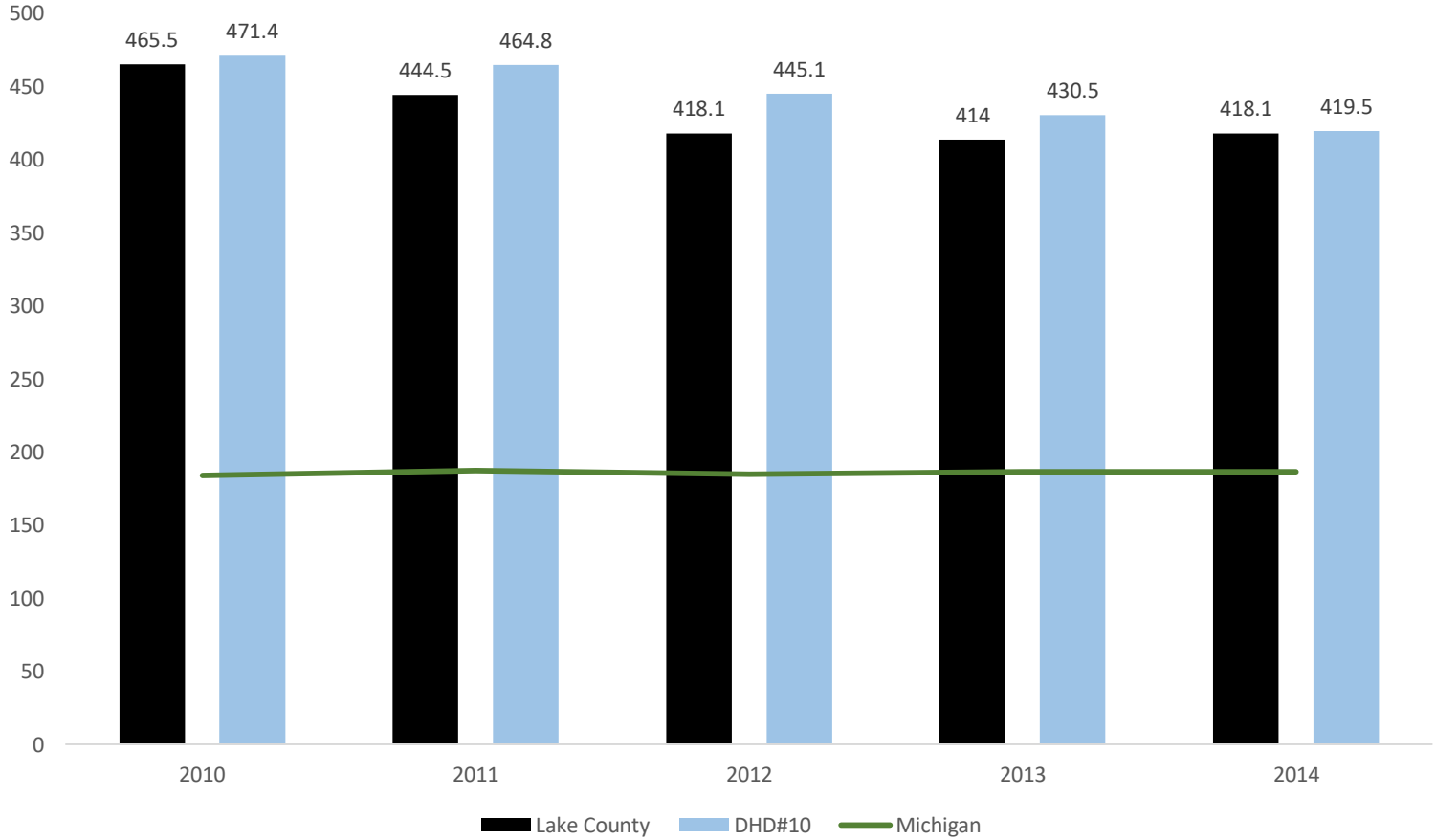


### Sources:

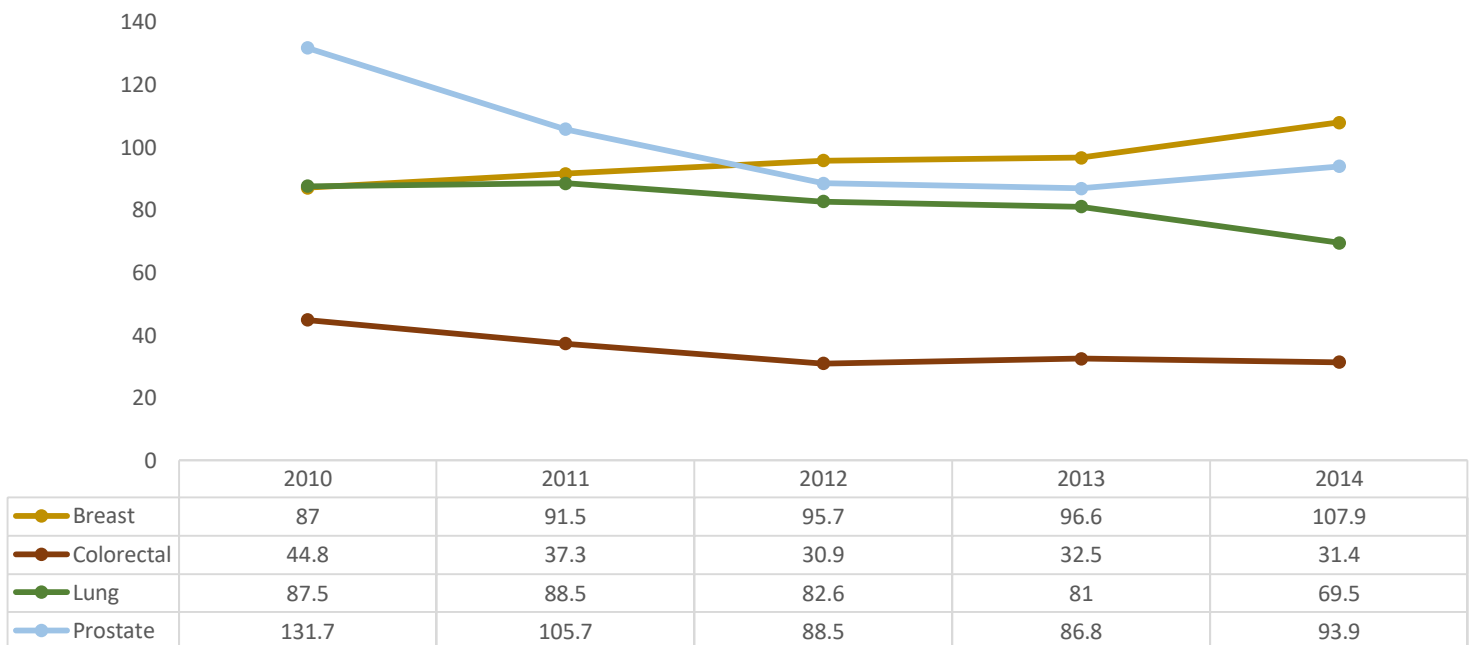
Michigan Department of Health & Human Services  
[Mortality Trends by Type, County, Health District, State, 2014-16](#); [Cardiovascular Hospitalization Rates, 2014](#);

# Cancer Incidence

## Five-year Average Age-adjusted Invasive Cancer Incidence per 100,000, 2010-14



## Five-year Average Age-adjusted Invasive Cancer Incidence by Location per 100,000, Lake County, 2010-14



### Sources:

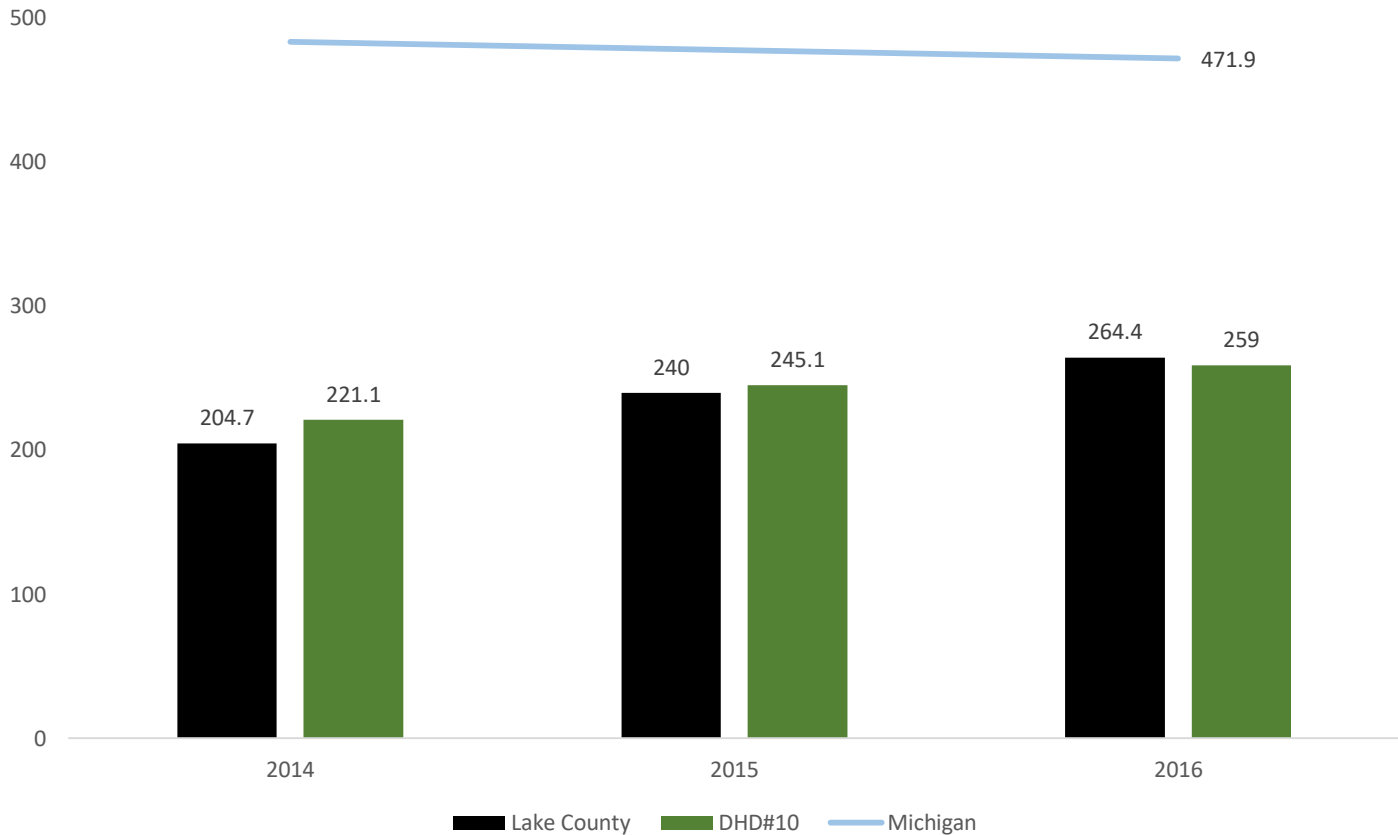
Michigan Department of Health & Human Services

[Five-year Average Age-adjusted Invasive Cancer Incidence per 100,000, 2010-14;](#)

[Five-year Average Age-adjusted Invasive Cancer Incidence by Location per 100,000, Lake County, 2010-14](#)

# Sexual Health

## Five-year Average Rate of Chlamydia Cases per 100,000, 2014-16



## # of Gonorrhea Cases, 2017

Lake County

4

DHD#10

67

## # of Women aged 13-44 in Need of Publicly Funded Contraceptive Services & Supplies, 2014

Lake County

550

### Sources:

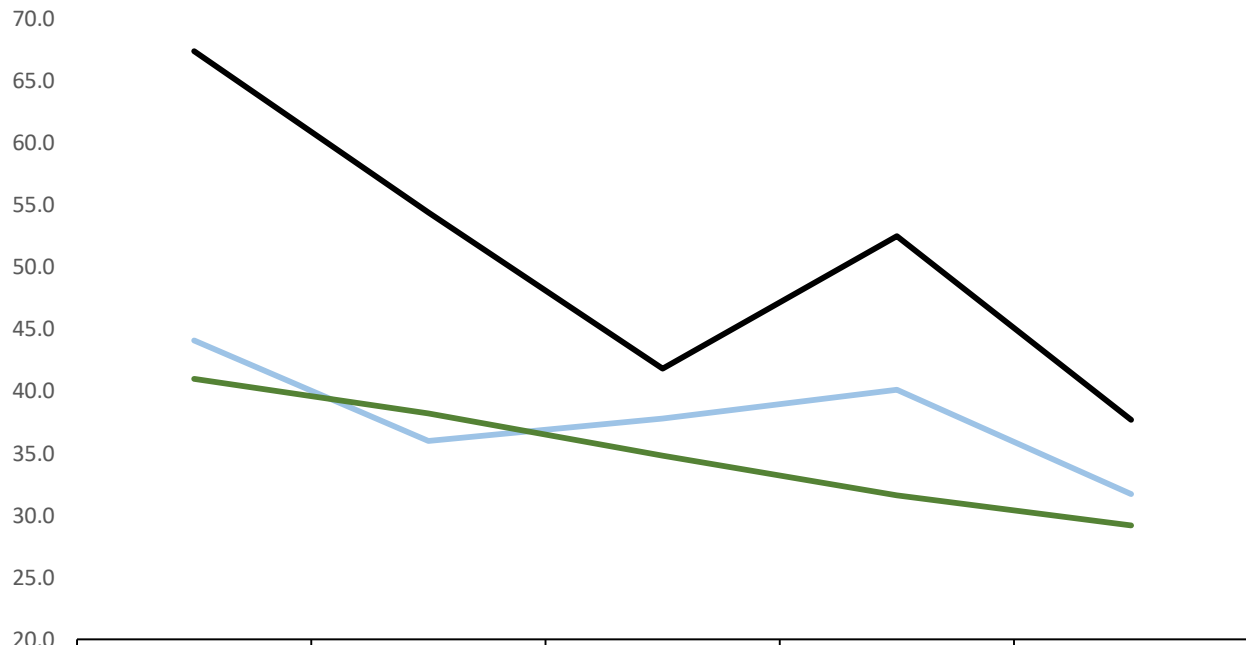
Michigan Department of Health & Human Services

[Five-year Average Rate of Chlamydia Cases per 100,000, 2014-16](#); [Number of Gonorrhea Cases, 2017](#)

[Number of Women in Need of Publicly Funded Contraceptive Services & Supplies, 2014](#)

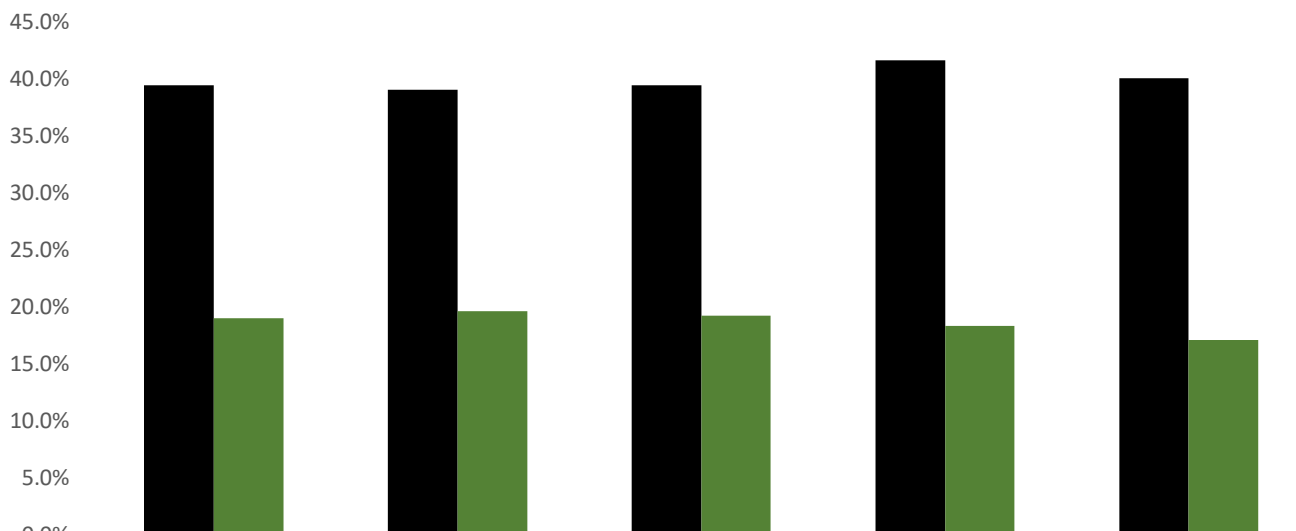
# Pregnancy & Birth Related Trends

## Teen (15-19 years of age) Pregnancy Rate per 1,000, 2012-16



	2012	2013	2014	2015	2016
— Lake County	67.4	54.4	41.8	52.5	37.7
— DHD#10	44.1	36.0	37.8	40.1	31.7
— Michigan	41.0	38.2	34.8	31.6	29.2

## Percentage of Mothers Who Smoked During Pregnancy, 2012-16



	2012	2013	2014	2015	2016
■ Lake County	39.4%	39.0%	39.4%	41.6%	40.0%
■ Michigan	19.0%	19.6%	19.2%	18.3%	17.1%

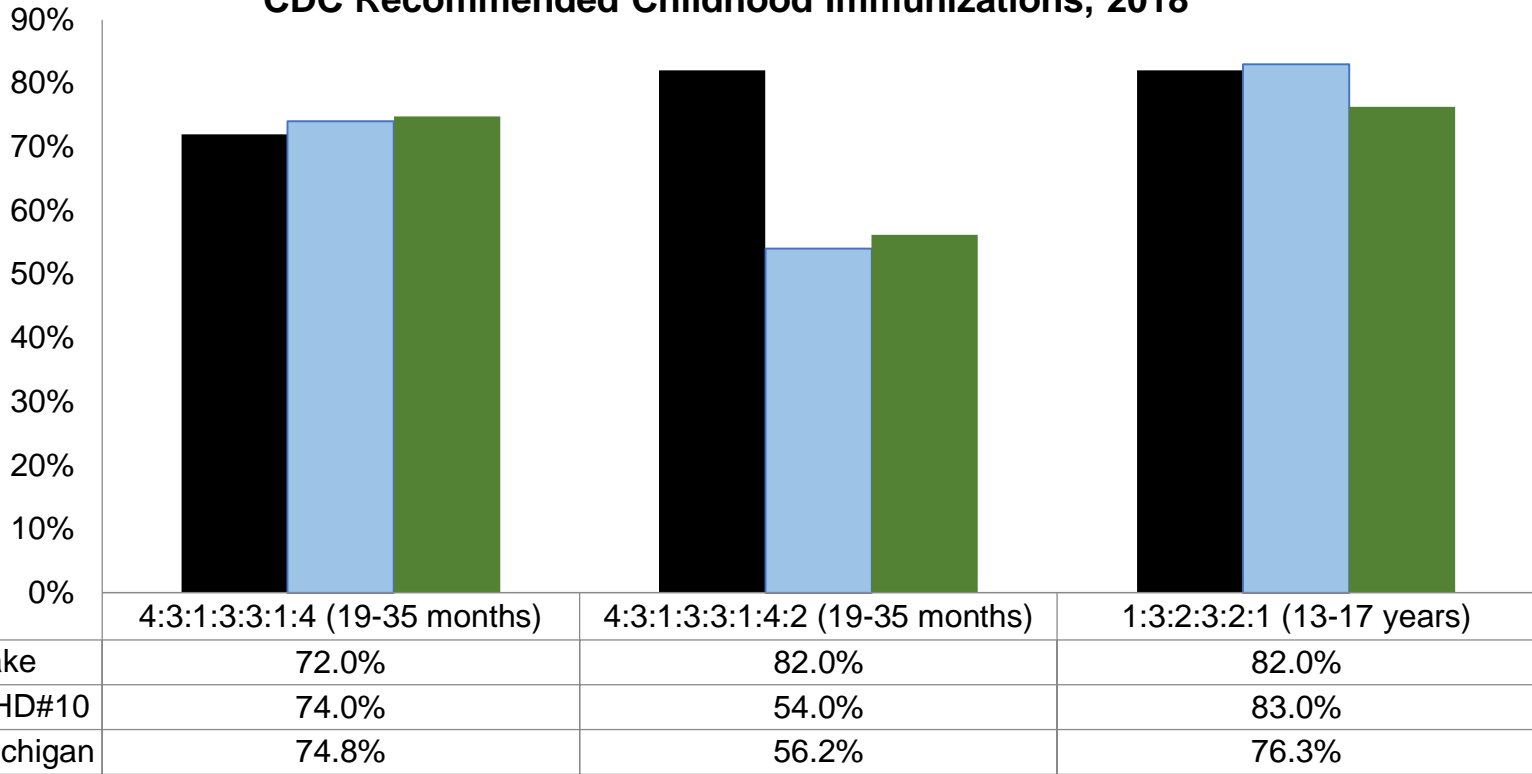
### Sources:

Michigan Department of Health & Human Services  
[Teen \(15-19 years of age\) Pregnancy Rate per 1,000, 2012-16;](#)  
[Percentage of Mothers Who Smoked During Pregnancy, 2012-16](#)

# Immunization Snapshot

Immunization compliance is one of public health's greatest defenses against many communicable diseases. Our Immunization nurses work tirelessly providing education and vaccines from infants to the senior population.

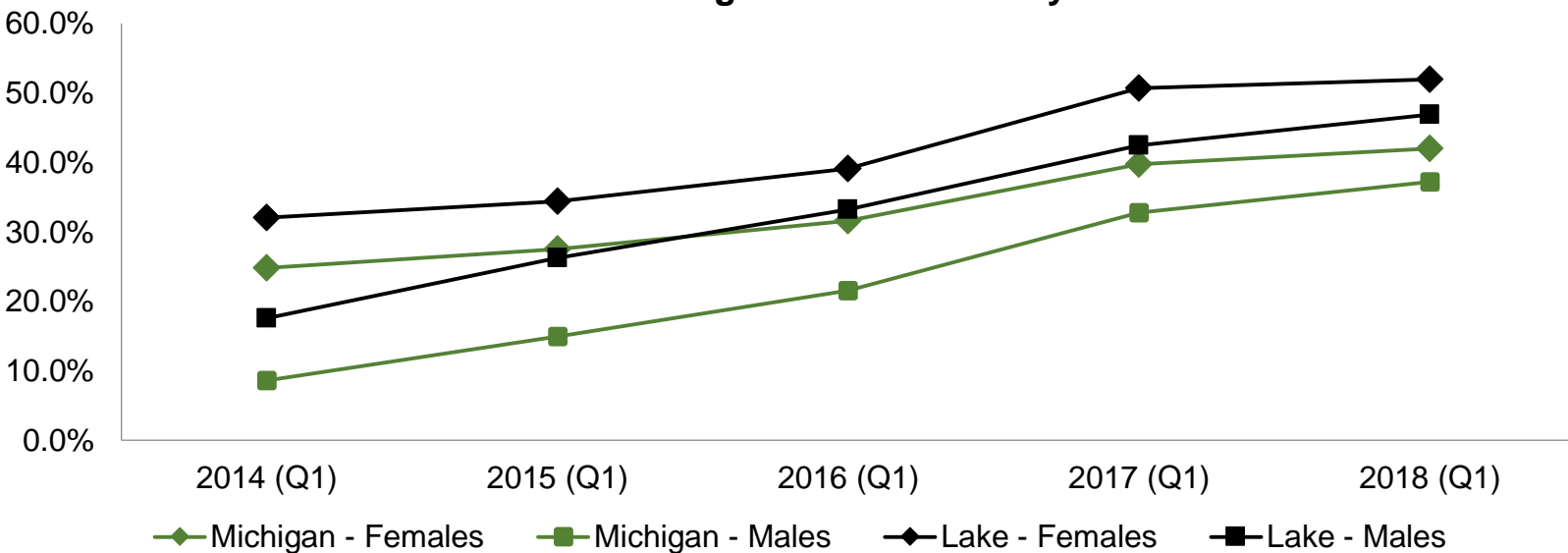
### CDC Recommended Childhood Immunizations, 2018



### Immunizations Key

- 4:3:1:3:3:1:4 includes 4 doses of DTaP, 3 polio, 1 MMR, 3Hib, 3 Hepatitis B, 1 varicella, and 4 PCV7/13. This is the percent of 19-35-month-old children who have received these immunizations.
- 4:3:1:3:3:1:4:2 includes the above vaccines with the addition of 2 doses of Hepatitis A. This is the percent of 19-35-month-old children who have received these immunizations.
- 1:3:2:3:2:1 includes 1 Tdap, 3 IPV, 2 MMR, 3 HepB, 2 Varicella, and 1 Meningococcal. This is the percent of 13-17-year olds who have received these immunizations.

### Percentage of HPV Vaccination Completion by Sex (13-17 Years of Age), Michigan vs. Lake County



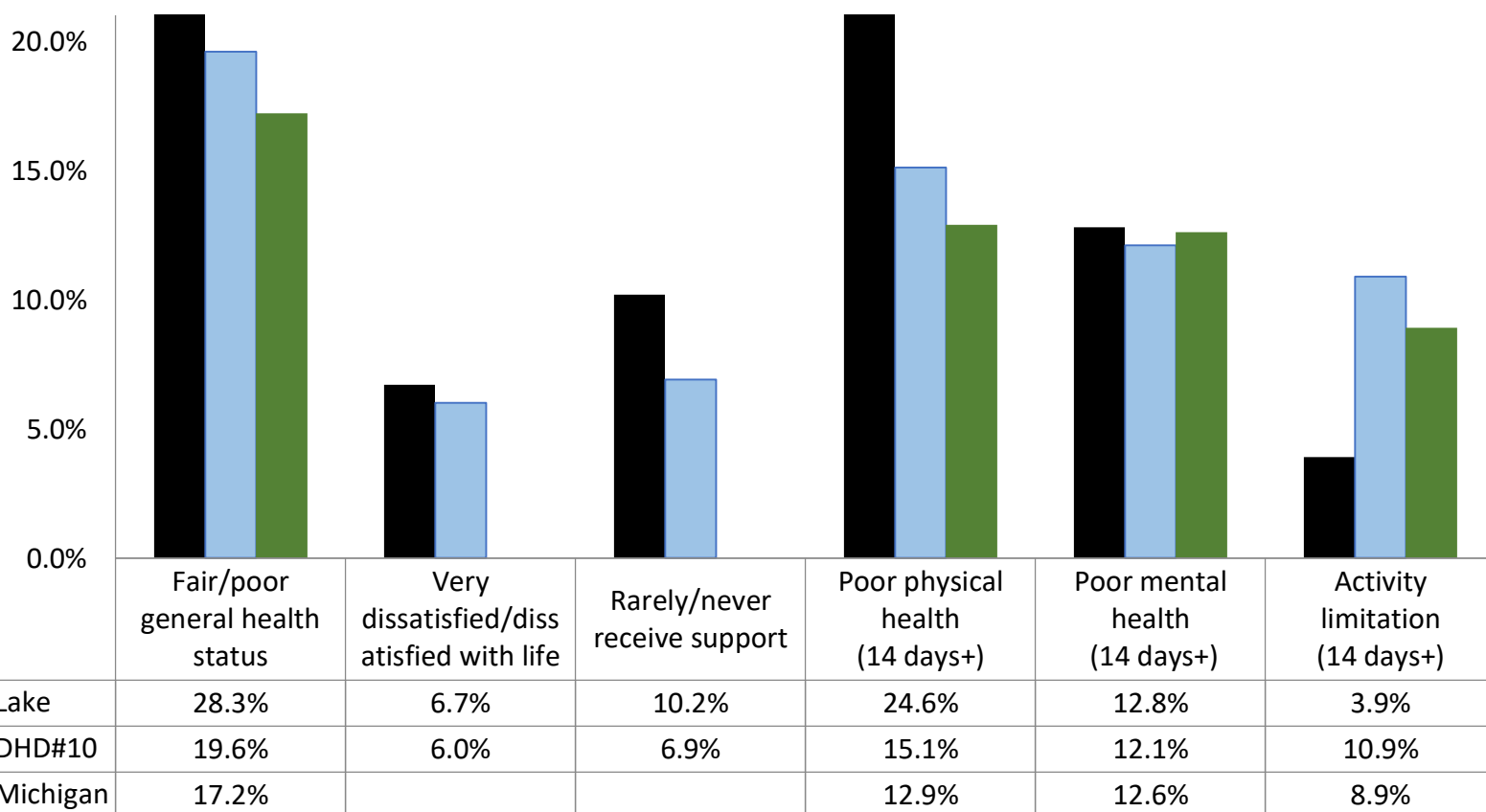
**Sources:**  
Michigan Care Improvement Registry

# Behavioral Risk Factor Survey Snapshot

In 2013, DHD#10 hired an independent research and evaluation firm to conduct a regional Behavioral Risk Factor Survey to bolster our survey response rates to increase validity and to obtain comprehensive and inclusive survey results. The following geographic areas will be presented: DHD#10 Region, County Level, & Michigan. There will be some data sets with no Michigan comparison – this is due to DHD#10 adding customized questions to the BRFS.

The Michigan Behavior Risk Factor Survey is completed annually through randomized telephone surveys for Michigan residents 18+. The most recent Michigan Behavioral Risk Factor Survey Annual Table (2016) can be accessed [here](#).

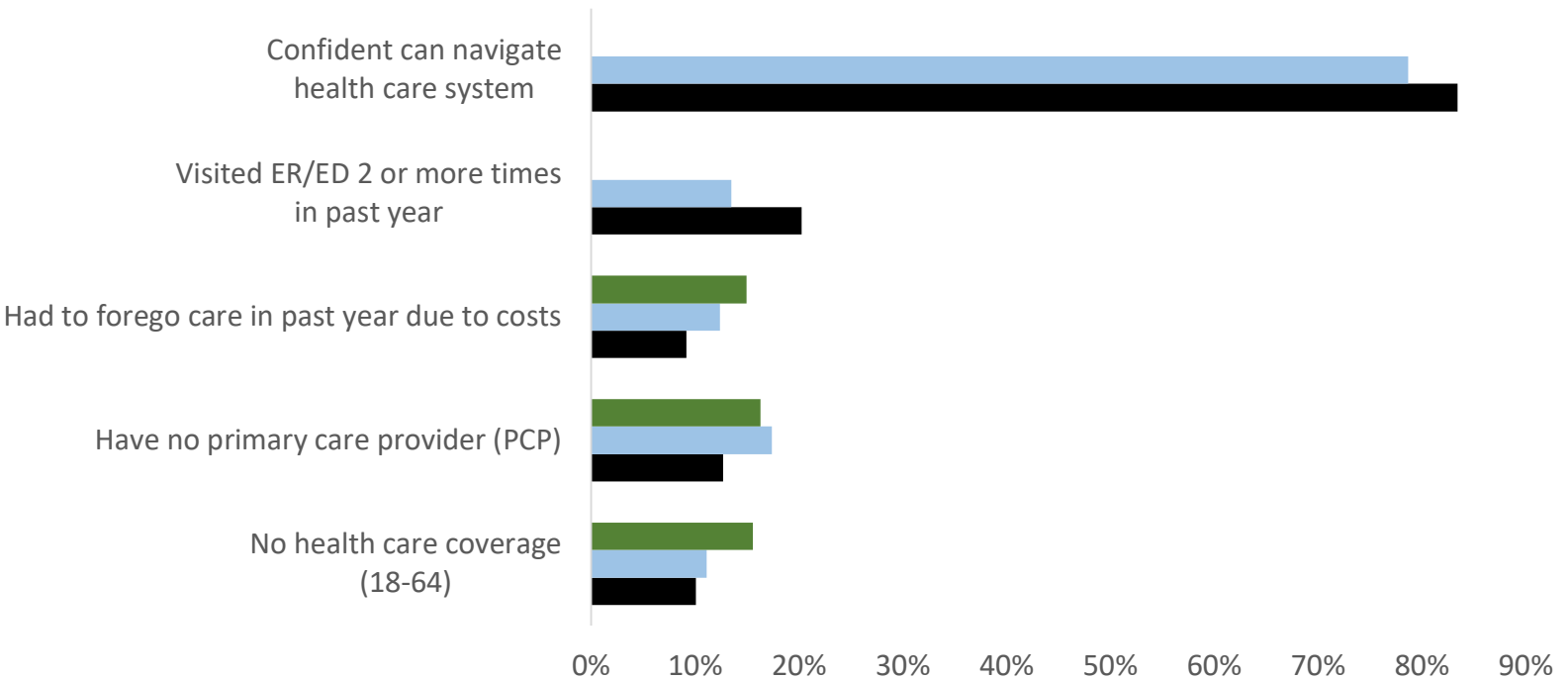
## Self-Reported Health Status Indicators



### Sources:

District Health Department #10  
 Behavioral Risk Factor Survey, 2014-2015 (County and District results)  
 Michigan Department of Health & Human Services  
[Michigan Behavioral Risk Factor Surveillance System, 2014;](#)

## Access to Healthcare



	No health care coverage (18-64)	Have no primary care provider (PCP)	Had to forego care in past year due to costs	Visited ER/ED 2 or more times in past year	Confident can navigate health care system
■ MI	15.6%	16.3%	15.0%		
■ DHD#10	11.1%	17.4%	12.4%	13.5%	78.7%
■ Lake	10.1%	12.7%	9.2%	20.3%	83.5%

## Provider Snapshot

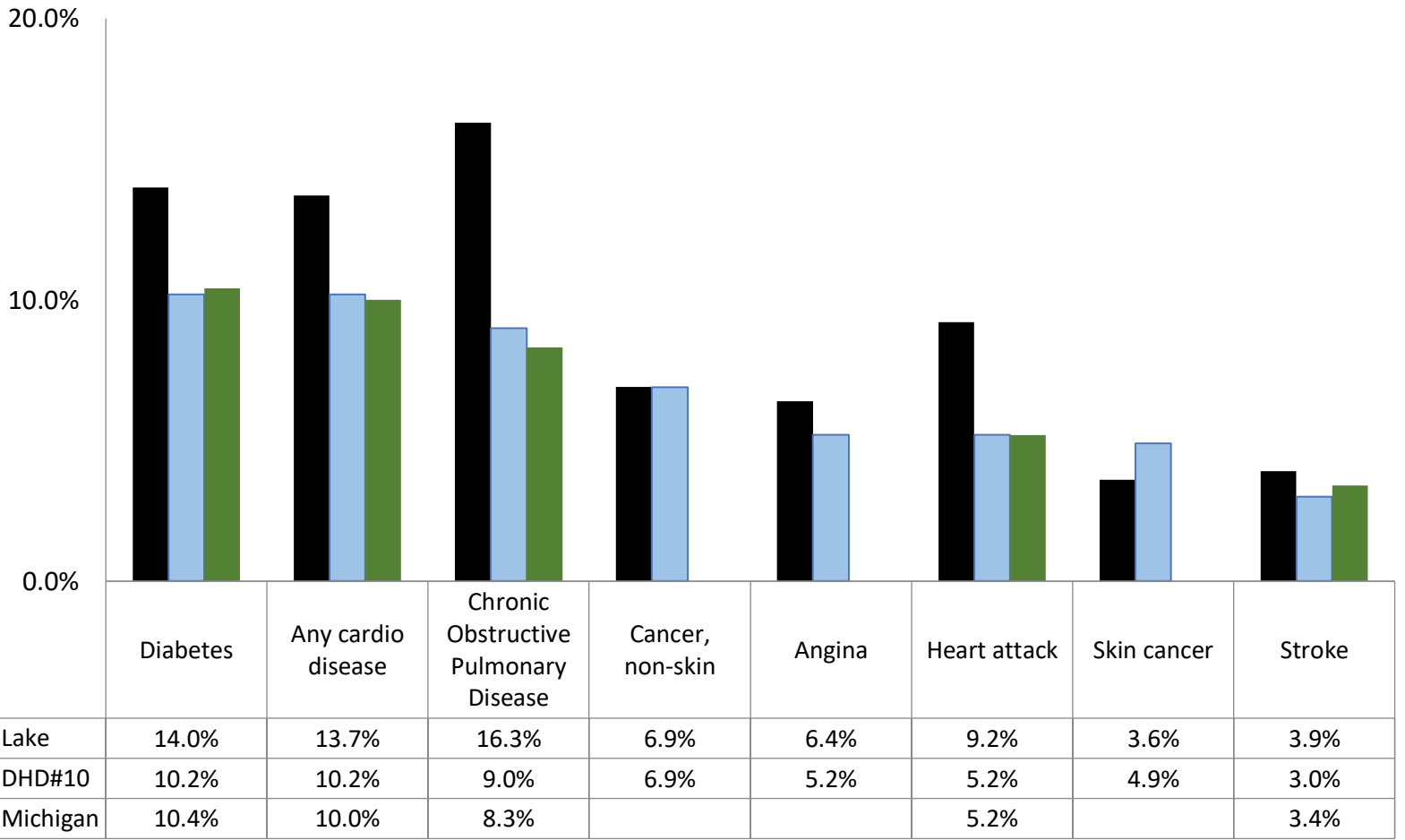
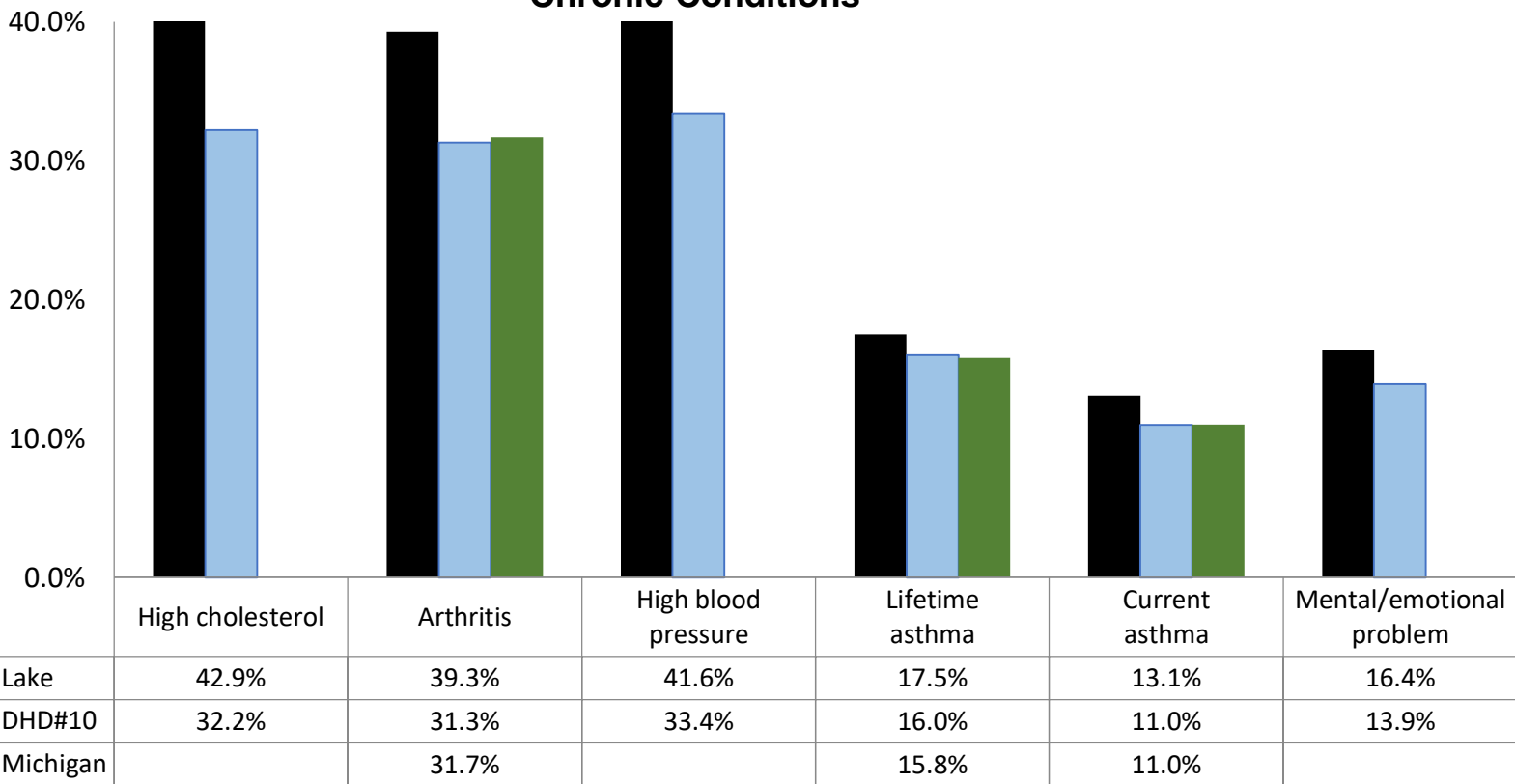
Number of Residents per Health Care Provider (2014)		
	Lake	Michigan
Primary Care Physician	11,340:1	1,240:1
Dentist	1,630:1	1,420:1
Mental Health Provider*	2,280:1	460:1

\*Mental health providers include psychiatrists, clinical psychologists, clinical social workers, psychiatric nurse specialists, and marriage and family therapists who meet certain qualifications and certifications.

### Sources:

District Health Department #10  
 Behavioral Risk Factor Survey, 2014-2015 (County and District results)  
 Michigan Department of Health & Human Services  
[Michigan Behavioral Risk Factor Surveillance System, 2014](#);  
 County Health Rankings  
[County vs. State Rankings, 2018](#)

## Chronic Conditions

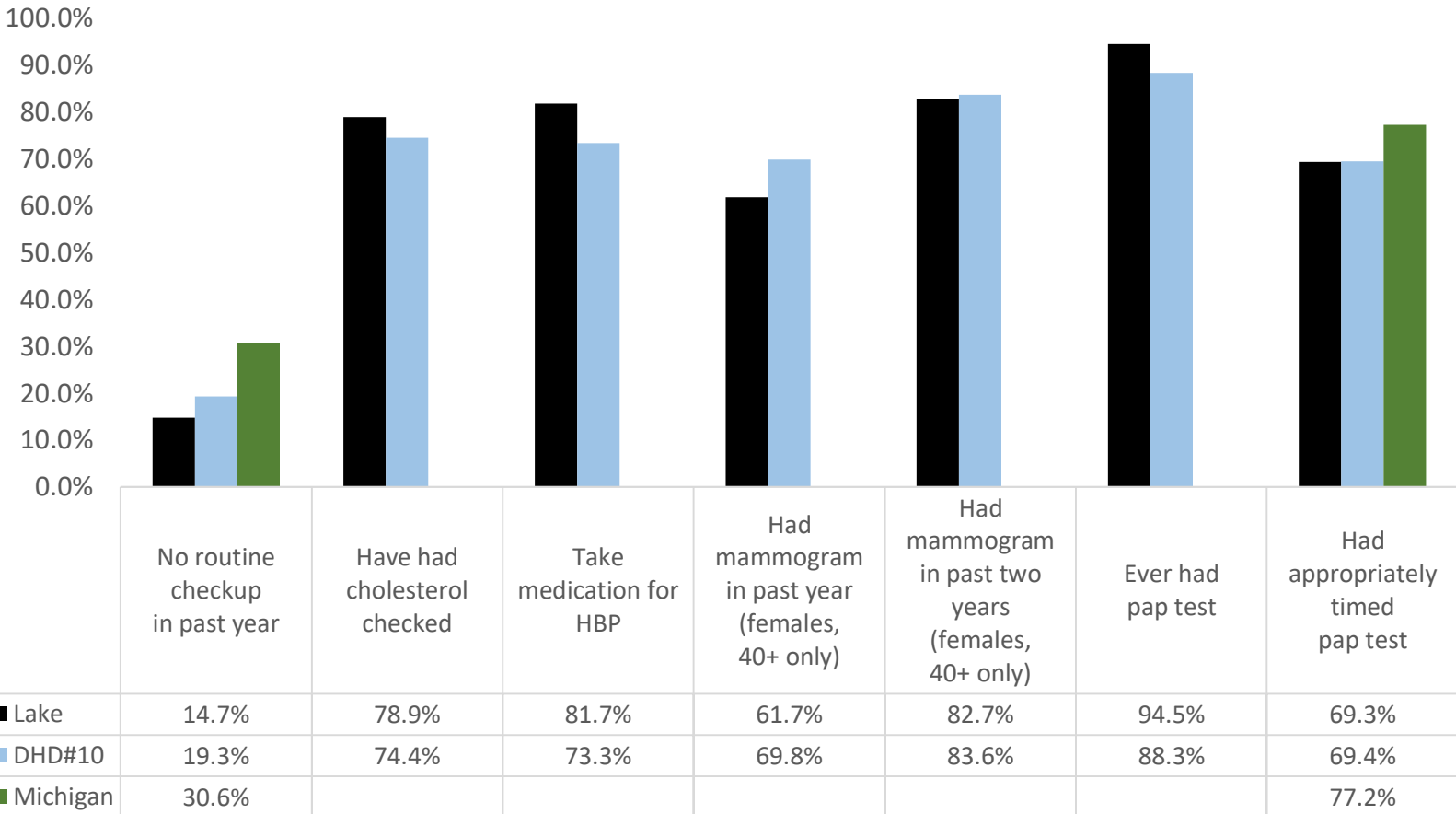
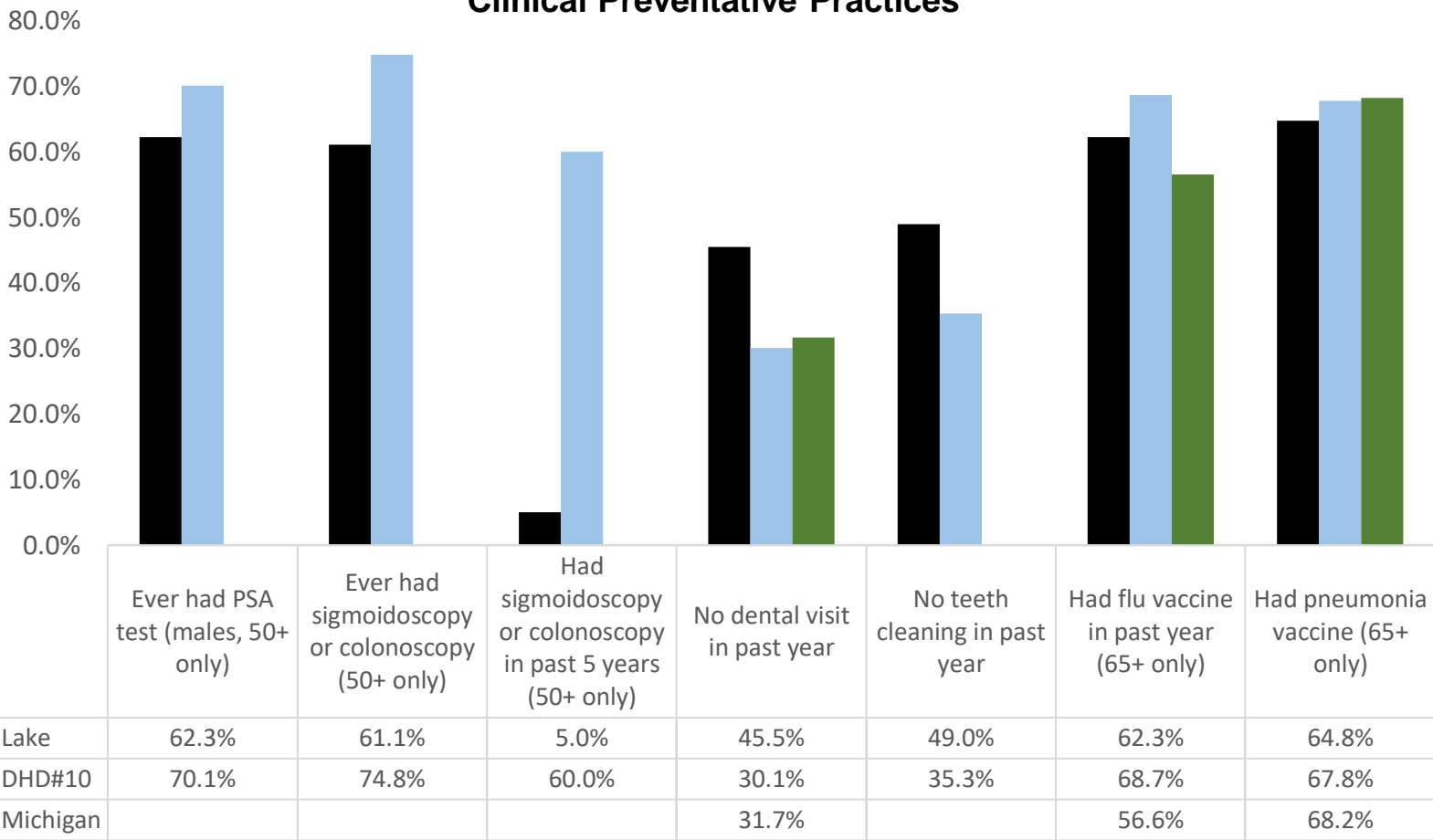


### Sources:

District Health Department #10  
 Behavioral Risk Factor Survey, 2014-2015 (County and District results)  
 Michigan Department of Health & Human Services  
[Michigan Behavioral Risk Factor Surveillance System, 2014;](#)



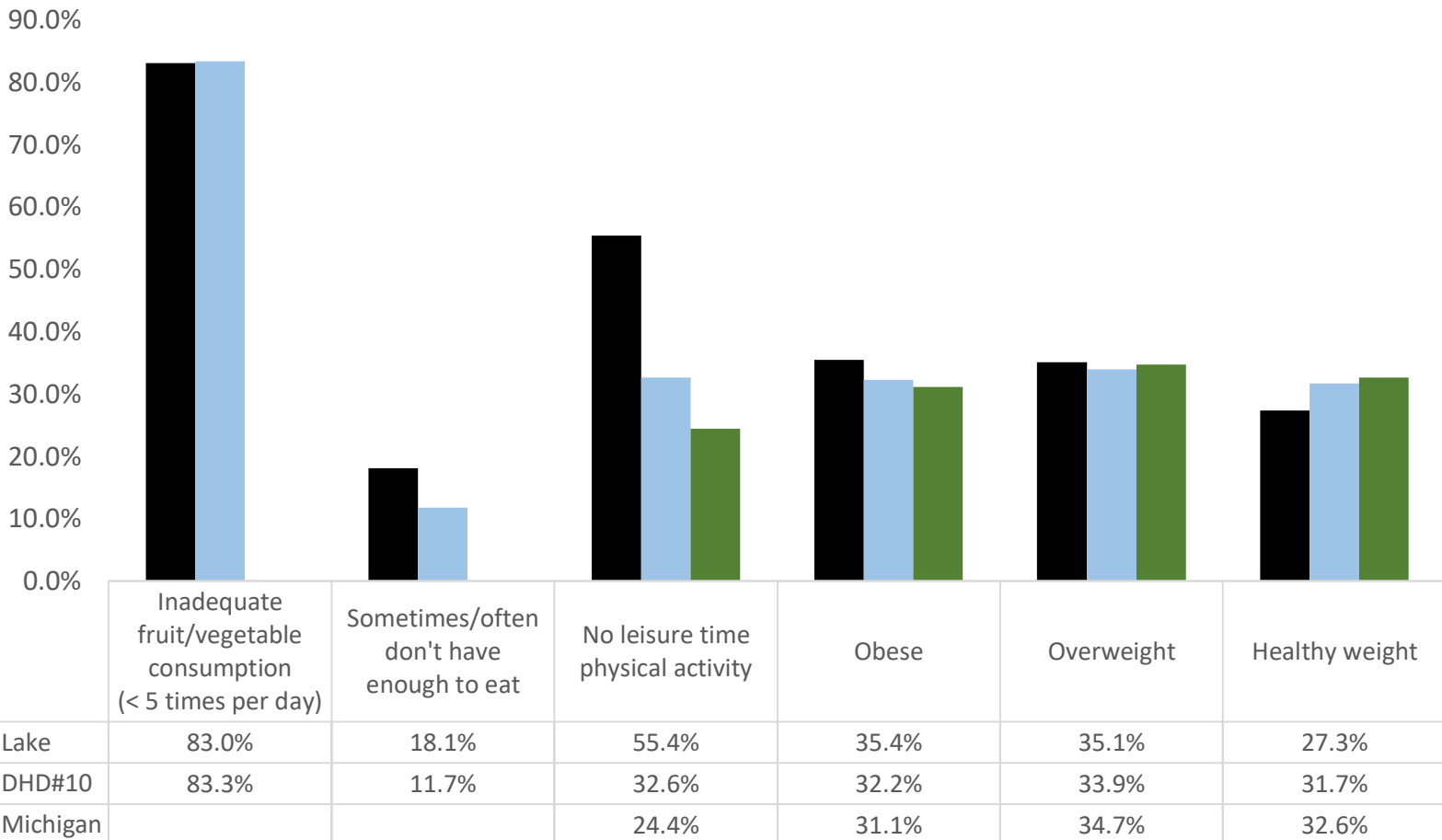
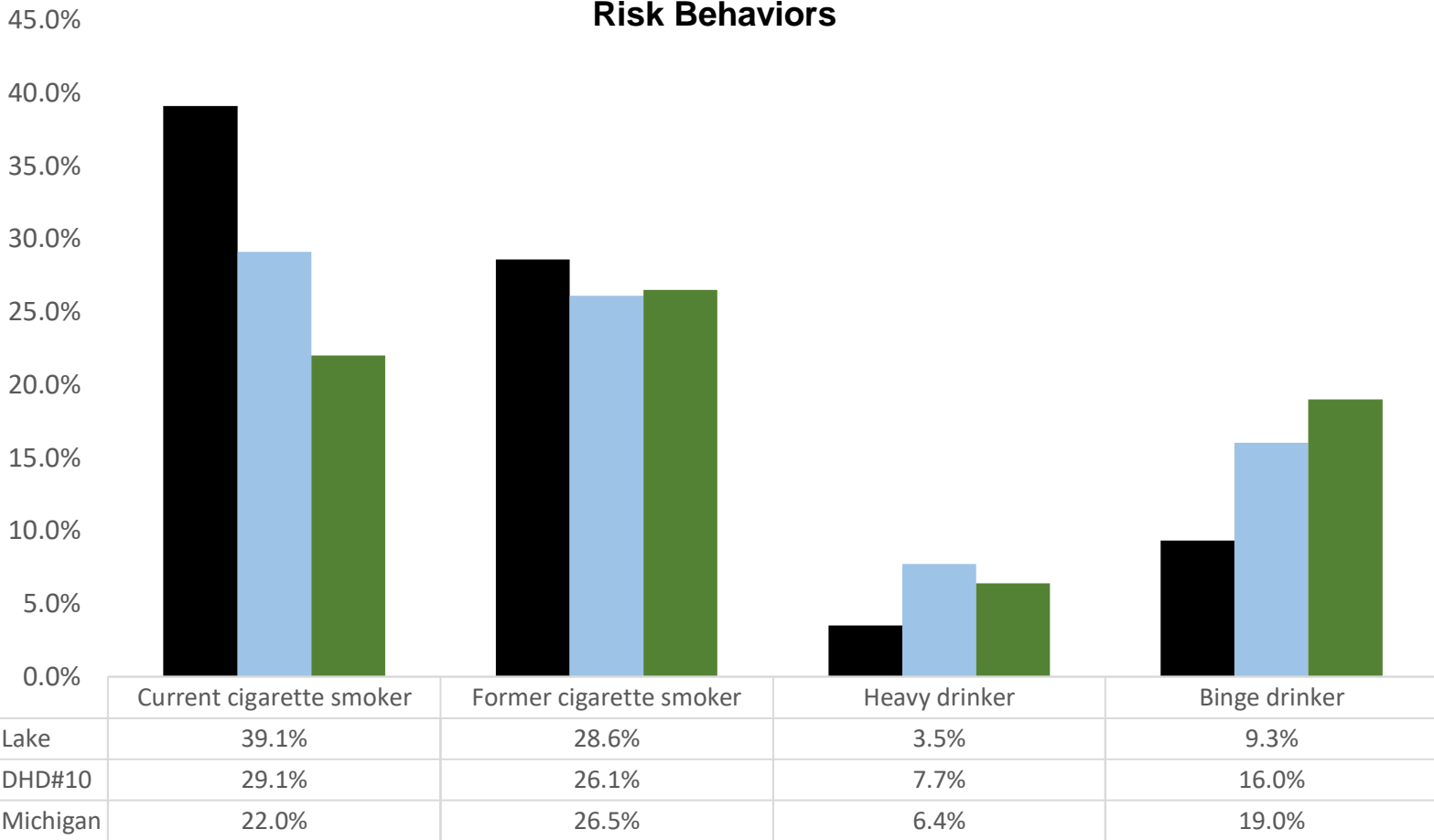
## Clinical Preventative Practices



**Sources:**

District Health Department #10  
 Behavioral Risk Factor Survey, 2014-2015 (County and District results)  
 Michigan Department of Health & Human Services  
[Michigan Behavioral Risk Factor Surveillance System, 2014;](#)

## Risk Behaviors



### Sources:

District Health Department #10  
 Behavioral Risk Factor Survey, 2014-2015 (County and District results)  
 Michigan Department of Health & Human Services  
[Michigan Behavioral Risk Factor Surveillance System, 2014;](#)

# County Health Rankings

County Health Rankings is a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute. The County Health Rankings measure the health of nearly all counties in the nation and rank them within states. Below is an overall snapshot at the county level vs. all ranked counties (**83 in total**).

The most recent County Health Rankings (2019) can be accessed [here](#).

Lake County Health Ranking Snapshot (2018)			Ranking (out of 83 counties)
<b>Health Outcomes</b>			<b>81</b>
<i>Represents how healthy a county is, using factors of how long people live and how healthy they feel while they are alive (quality of life)</i>	<b>Length of Life</b>	Premature death	<b>75</b>
	<b>Quality of Life</b>	Poor or fair health; poor physical health days; poor mental health days; low birth weight	<b>83</b>
<b>Health Factors</b>			<b>81</b>
<i>Represents what influences the health of a county</i>	<b>Health Behaviors</b>	Smoking; obesity; food environment; physical activity; excessive drinking; alcohol impaired driving deaths; sexually transmitted infections; teen births	<b>75</b>
	<b>Clinical Care</b>	Uninsured; ratios of physicians, dentists and mental health providers to population; preventable hospital stays; diabetic monitoring; mammography screening	<b>68</b>
	<b>Social and Economic Factors</b>	Education; unemployment; poverty; children in single-parent households; social associations; violent crime; injury deaths	<b>82</b>
	<b>Physical Environment</b>	Air pollution; drinking water violations; severe housing problems; driving alone to work and long commute	<b>59</b>

**Sources:**  
 County Health Rankings  
[County vs. State Rankings, 2018](#)

# Conclusions: Behavioral Risk Factor Survey

## Behavioral Risk Factor Survey Findings

*The district-wide BRFS findings show both **strengths** and **opportunities** for improvement in the health status of our communities*

### Strengths

- Most enjoy good to excellent general health, physical health, and mental health
- Adequate social and emotional support
- Large majority have health care coverage and a primary care provider (PCP)
- Most have had no problems receiving needed medical care
- Binge drinking lower than Michigan and US
- Most buy fresh fruits/vegetables locally and feel fresh produce is readily available in their community
- Strong majority have routine physical checkups and health screening/tests, such as mammograms
- Vast majority receiving information on how to manage diabetes, heart attack, angina/CHD, COPD
- Majority of adults aged 65+ immunized against pneumonia and flu

### Opportunities for Improvement

- DHD#10 area lags behind Michigan and/or US on most indicators measured
- One in five with fair to poor general health
- Physical health and activity limitation worse than MI
- Nearly one in three obese; one in three overweight but not obese
- Nearly three in ten are current smokers
- Prevalence of heavy drinking higher than MI/US
- Nearly one-third not engaging in leisure time physical activity
- Inadequate fruit/vegetable consumption
- Three in ten have not visited the dentist in past year
- One in three have hypertension
- One in ten have diabetes; one in five over age 55 have diabetes
- Higher prevalence than MI and/or US on chronic conditions such as asthma, heart attacks, heart disease, and cancer
- Nearly one-third have high cholesterol

#### Sources:

District Health Department #10

Behavioral Risk Factor Survey, 2014-2015 (County and District results)

Michigan Department of Health & Human Services

[Michigan Behavioral Risk Factor Surveillance System, 2014;](#)

# Conclusions: Community Health Improvement Plan



## LAKE COUNTY

TOP 3 HEALTH ISSUES Identified by Key Stakeholders



CHRONIC DISEASE



ACCESS TO HEALTH CARE



TOBACCO USE

### Chronic Disease Strategy Progress

Implement evidence-based health education programs



Increase data sharing among service providers



Focus on a month to promote diabetes prevention and self-management



### Access to Health Care Strategy Progress

Implement and promote Telehealth/mobile health



Increase data sharing among service providers



Form a task force aimed at increasing access to care and increasing infrastructure to provide care



Develop a sustainability plan to assure progress on objectives even without outside funding



Introduce potential healthcare professionals to all resources in the area



### Tobacco Use Strategy Progress

Implement a mass media campaign for tobacco use prevention



Implement campaigns to promote nicotine dependence treatment programs



Target youth with prevention education through the Adolescent Health Center



#### Sources:

District Health Department #10

[Community Health Improvement Plan Progress Report, 2018](#)