2022

District Health Department #10
Healthy People, Healthy Communities

LAKE
Community Data

DHD#10 Chartbooks provide a brief overview 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. Information is collected about poverty, access to preventive care, promotion of healthy lifestyle and behavior, and creation and maintenance of healthy communities.

2022 Community Data Lake

The 2022 Chartbooks provide a health profile for Lake County. In certain sections, this information is compared to the overall health status of counties within District Health Department #10. The data includes 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. 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 has completed the Community Health Improvement Plan in 2017. The identified strategic issues included the following:

- Access to Health Care
- Tobacco Use
- Substance Use Disorders
- 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

Demographics

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

Population

	Lake	Michigan
Total Population	12,096	10,077,331
Population per square mile	20.3	174.8
Persons under 5 years	4.7%	5.7%
Persons under 18 years	16.5%	21.5%
Persons 65 years and over	29.8%	17.7%
Disability, under age 65	20.7%	10.2%
Gender: Females	49.5%	50.7%

Income & Economy

	Lake	Michigan
Persons in poverty	19.2%	12.6%
Median household income	$38,356	$59,234
Per capita income	$22,022	$32,854
Unemployment	10.8%	9.9%

Race, Ethnicity, & Household Characteristics

	Lake	Michigan
White	87.9%	79.2%
Black	8.0%	14.1%
American Indian/Alaska Native	0.9%	0.7%
Asian	0.3%	3.4%
More than one race	3.0%	2.5%
Hispanic	2.5%	5.3%
Language other than English spoken at home	2.6%	9.7%
Persons per household	2.30	2.45
High school graduates	83.0%	91.3%
Bachelor's degree or higher	13.5%	30.0%

Sources

US Census Bureau:

- Population, April 2020
- Age & race, April, 2020
- Language other than English, 2016-2020
- Disability, under 65, 2020
- Education based on persons age 25 and over, 2016-2020
- Female persons, April, 2020
- Persons per household, 2016-2020
- Median household income, 2016-2020
- Persons in poverty, April 2020
- Per capita income in past 12 months, 2016-2020
- Population per square mile, 2010

Bureau of Labor Statistics:

- Average unemployment percentage, 2020

Births

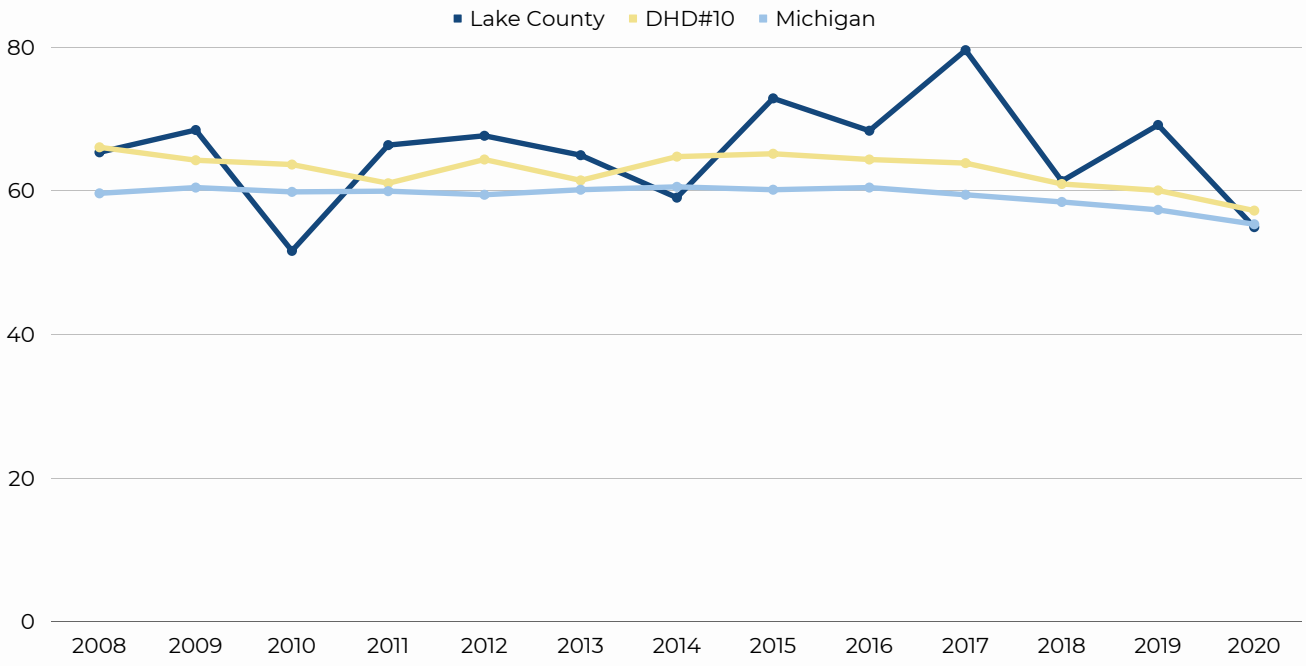
Birth numbers and rates represent growth within a community and offer insight into the future population trends. In this section, births are provided from 2007 to 2020.

Number of Live Births in Lake County, 2007-2020

Year	2007	2008	2009	2010	2011	2012	2013
Births	114	103	106	78	100	99	96

Year	2014	2015	2016	2017	2018	2019	2020
Births	87	110	103	123	91	102	81

Live Birth Rates per 1,000 Female in Lake County, DHD#10, Michigan, 2008-2020



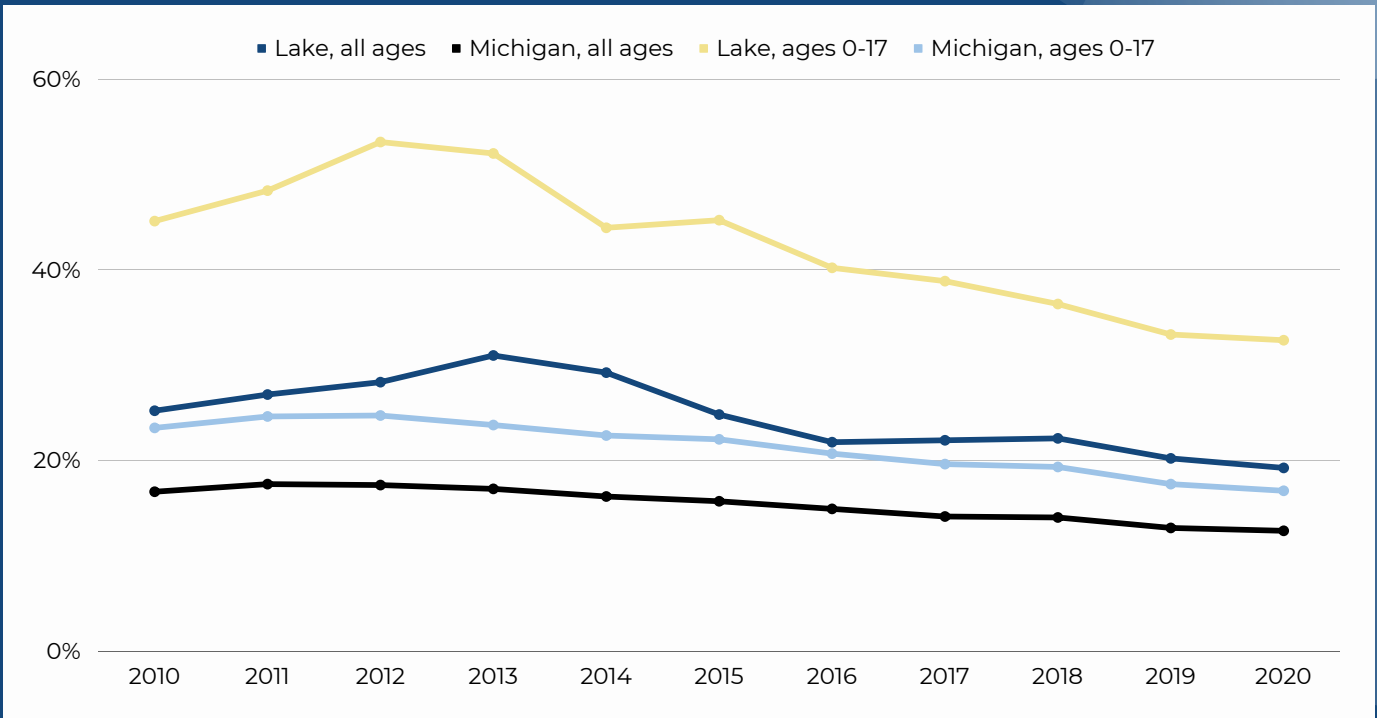
Sources:
Michigan Department of Health and Human Services (MDHHS)

- Live births by county, 2007-2020
- Live birth rates by county, 2008-2020
- Live births rates by health jurisdiction, 2008-2020
- Live births rates by state, 2008-2020

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 Michigan, 2010-2020



% of Students Eligible for Free or Reduced Lunch, 2020

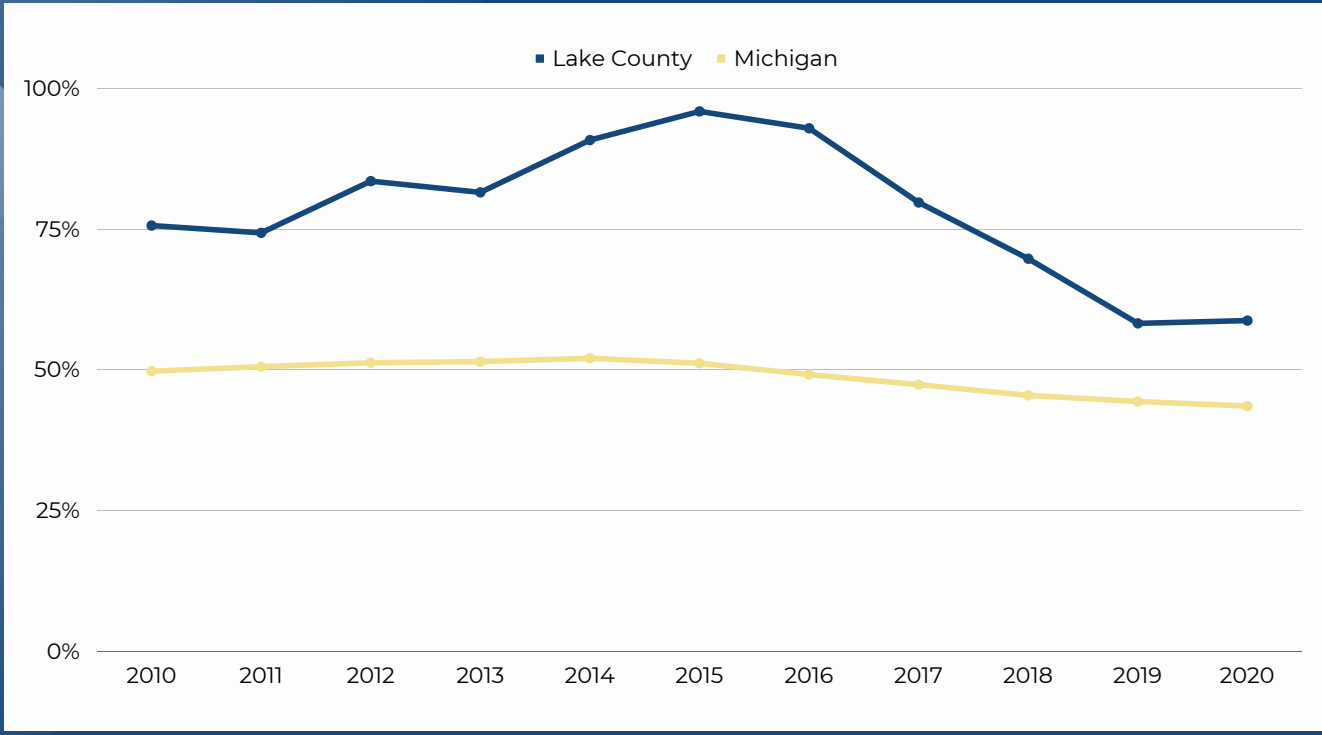
LAKE COUNTY	MICHIGAN
97.6%	**50.5%**

Sources:
Michigan League for Public Policy

- Poverty, 0-17 years, by county & state 2010-2020
- Poverty, all ages, by county & state, 2010-2020
- Percentage of student eligible for free/reduced lunch, 2020

Poverty & Poverty Indicators

Percentage of Children (0-4) Who Receive Women, Infant, and Children (WIC) Benefits in Lake County and Michigan, 2010-2020



% of Live Births Paid by Medicaid, 2020

LAKE COUNTY	MICHIGAN
58.0%	**39.9%**

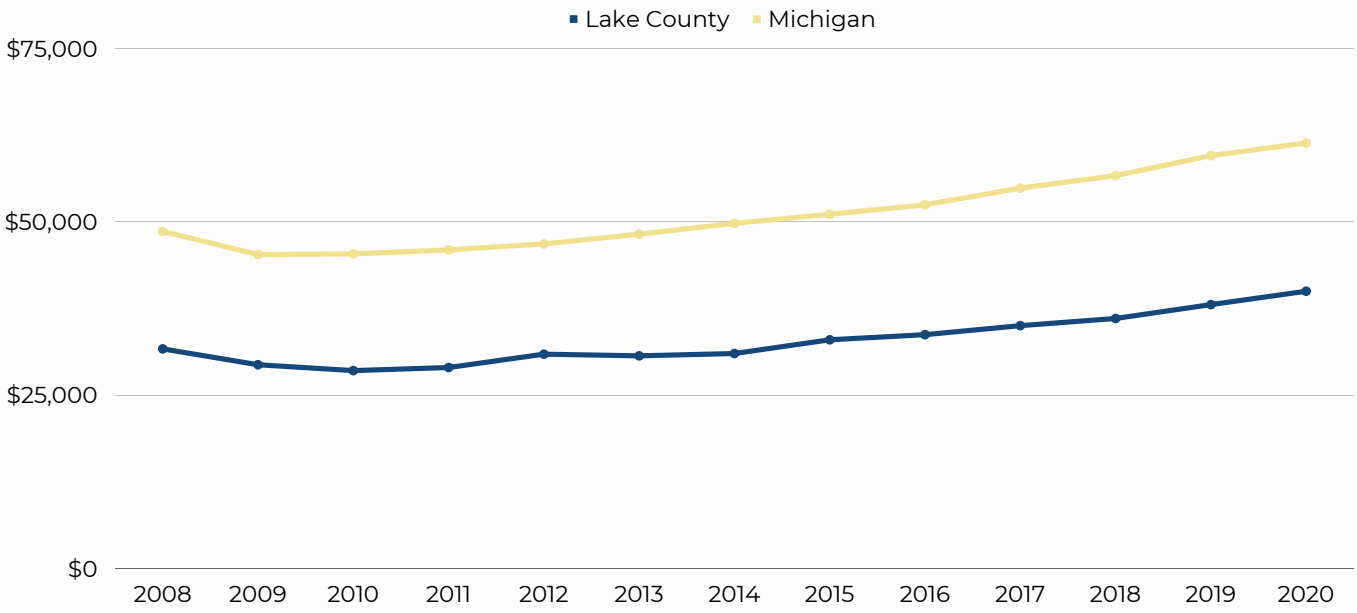
Sources:
Michigan League for Public Policy

- Children (0-4) who Receive WIC Benefits by County & State, 2010-2020
- Percentage of Live Births Paid by Medicaid by County & State, 2020

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.

Median Household Income in Lake County and Michigan, 2008-2020



	Percentage of Adults who are Unemployed		Percentage of Children (0-5) with All Parents in the Labor Force	
	Lake County	Michigan	Lake County	Michigan
2018	6.9%	4.1%	53.6%	66.4%
2020	10.8%	9.9%	67.6%	67.1%

Sources:
Michigan League for Public Policy

- Median Household Income by County & State, 2008-2020
- Percentage of Adults who are Unemployed, 2018 & 2020
- Percentage of Children (0-5) with All Parents in the Labor Force, 2018 & 2020

Leading Causes of Death

*Age-adjusted Mortality Rates per 100,000, 2020; *Too small to calculate*

	Lake	DHD#10	Michigan
Heart Disease	197.9	192.4	206.0
Cancer	236.2	180.9	158.8
COVID-19	*	43.0	86.5
Unintentional Injury	*	69.7	56.2
Stroke	*	54.0	44.8
Chronic Lower Respiratory	*	63.5	42.4
Alzheimer's Disease	*	46.9	37.0
Diabetes	*	23.9	26.3
Kidney Disease	*	9.5	14.8
Pneumonia/Influenza	*	9.9	14.4

Years of Potential Life Lost

*Rates per 100,000 under 75 years of age, 2020; *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 75th year.*

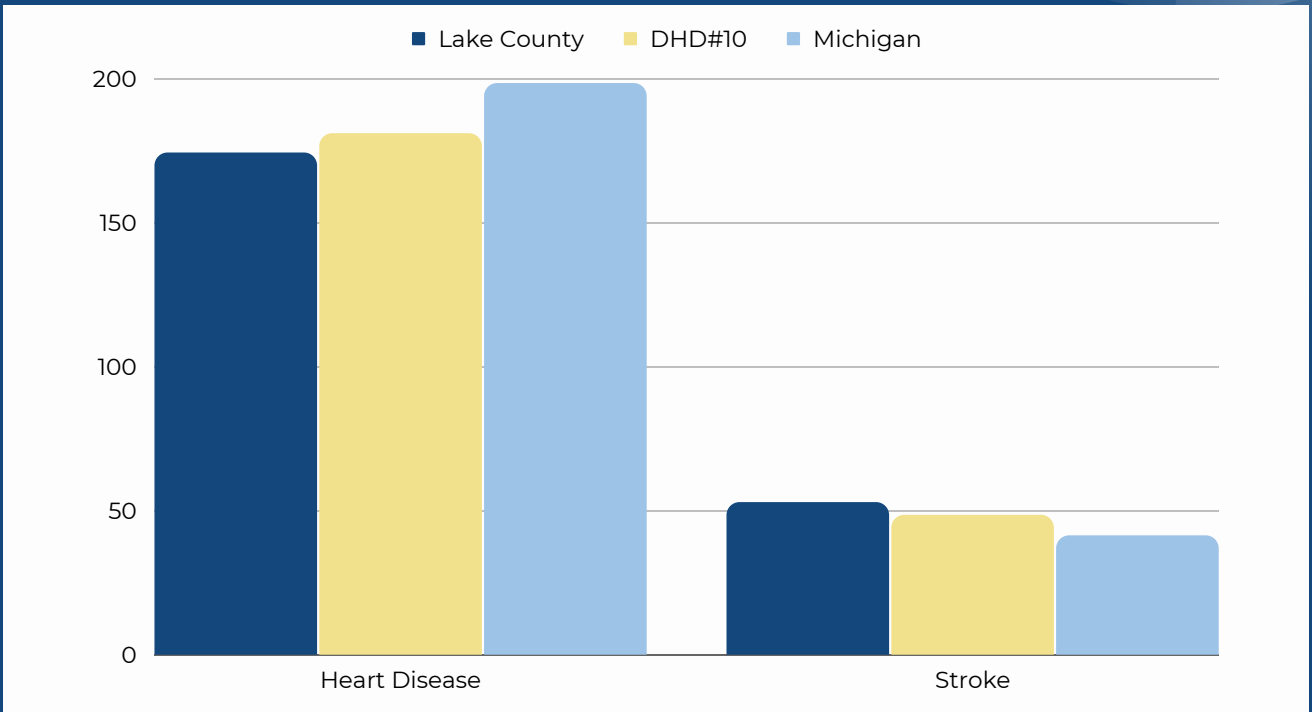
	Lake	DHD#10	Michigan
Cancer	2,950.4	1,855.9	1,495.9
Heart Disease	2,417.4	1,447.2	1,443.0
Unintentional Injury	*	1,715.7	1,438.3
COVID-19	*	310.2	567.9
Suicide	*	530.3	430.0
Homicide	0	*	352.5
Birth-related Conditions	0	*	291.3
Chronic Liver Disease	*	279.2	281.8
Drug-induced Death	0	848.3	977.0
Injury by Firearms	*	359.8	509.0
Alcohol-induced Death	*	469.5	322.0

Sources: MDHHS

- Leading Causes of Death, 2020
- Years of Potential Life Lost, 2020

Cardiovascular Disease

Age-adjusted Mortality Rates for Cardiovascular Disease by Category, 2018-2020



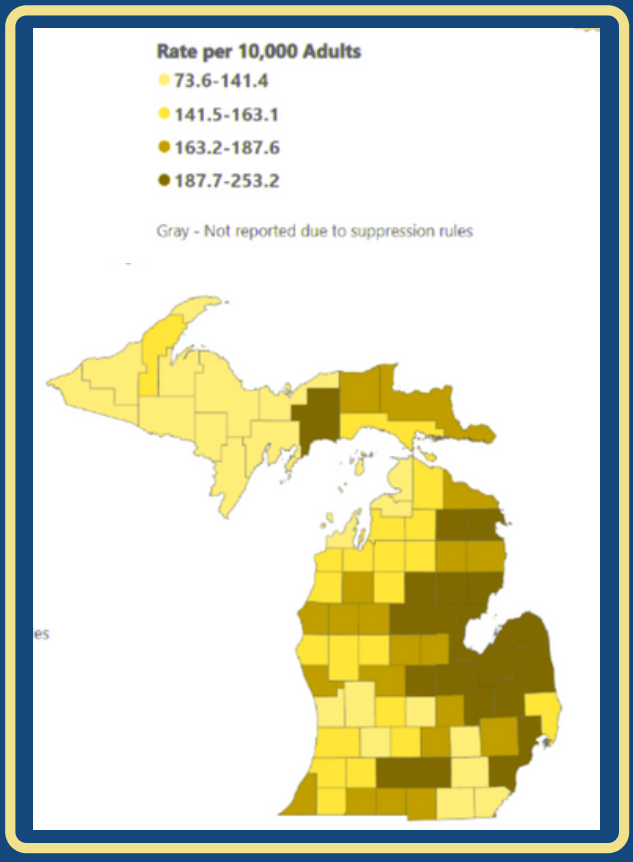
Cardiovascular Disease Hospitalization 2016-2019, rates per 10,000

LAKE COUNTY

176.3

MICHIGAN

181.8

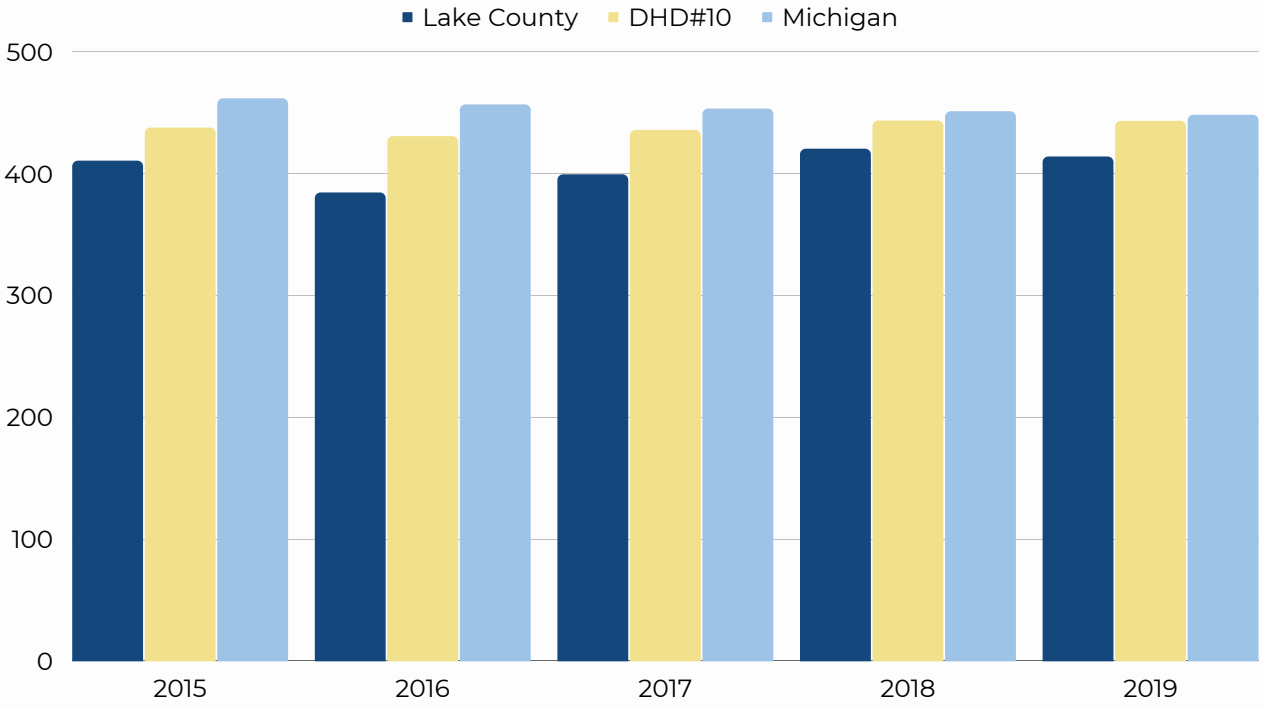


Sources: MDHHS

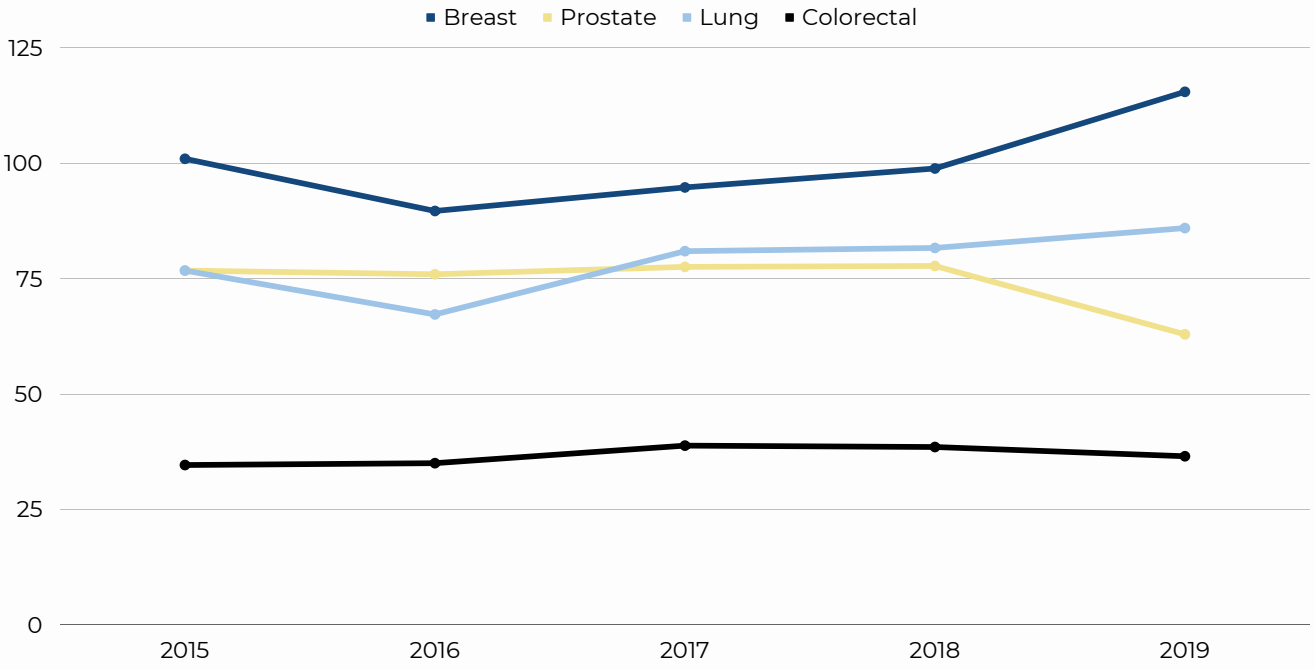
- Mortality Trends by Type, County, Health District, State, 2018-2020
- Cardiovascular Hospitalization Rates, 2016-2019

Cancer Incidence

Five-year Average Age-adjusted Rates for Invasive Cancer Incidence per 100,000, 2015-2019



Five-year Average Age-adjusted Rates for Invasive Cancer Incidence by Location per 100,000, Lake County, 2015-2019

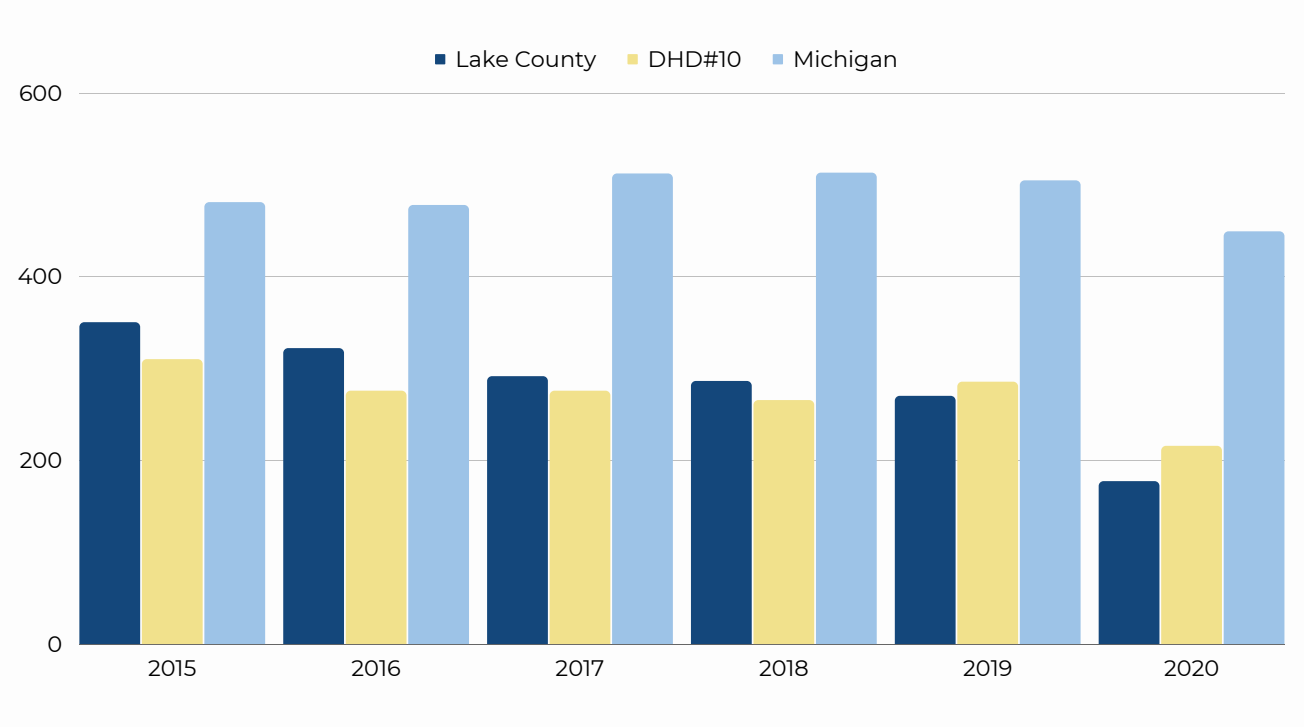


Sources: MDHHS

- Five-year Average Age-adjusted Invasive Cancer Incidence per 100,000, 2015-19
- Five-year Average Age-adjusted Invasive Cancer Incidence by Location per 100,000, Lake County, 2015-2019

Sexual Health

Rate of Chlamydia Cases for all age and sex, per 100,000, 2015-2020



# of Gonorrhea Cases, 2020

LAKE COUNTY

6

DHD#10

151

# of new HIV Cases, 2020

MICHIGAN

522

# of individuals living with HIV, 2020

MICHIGAN

17,348

# of Women younger than 20 in Need of Publicly Funded Contraceptive Services & Supplies, 2016

LAKE COUNTY

130

Sources: MDHHS

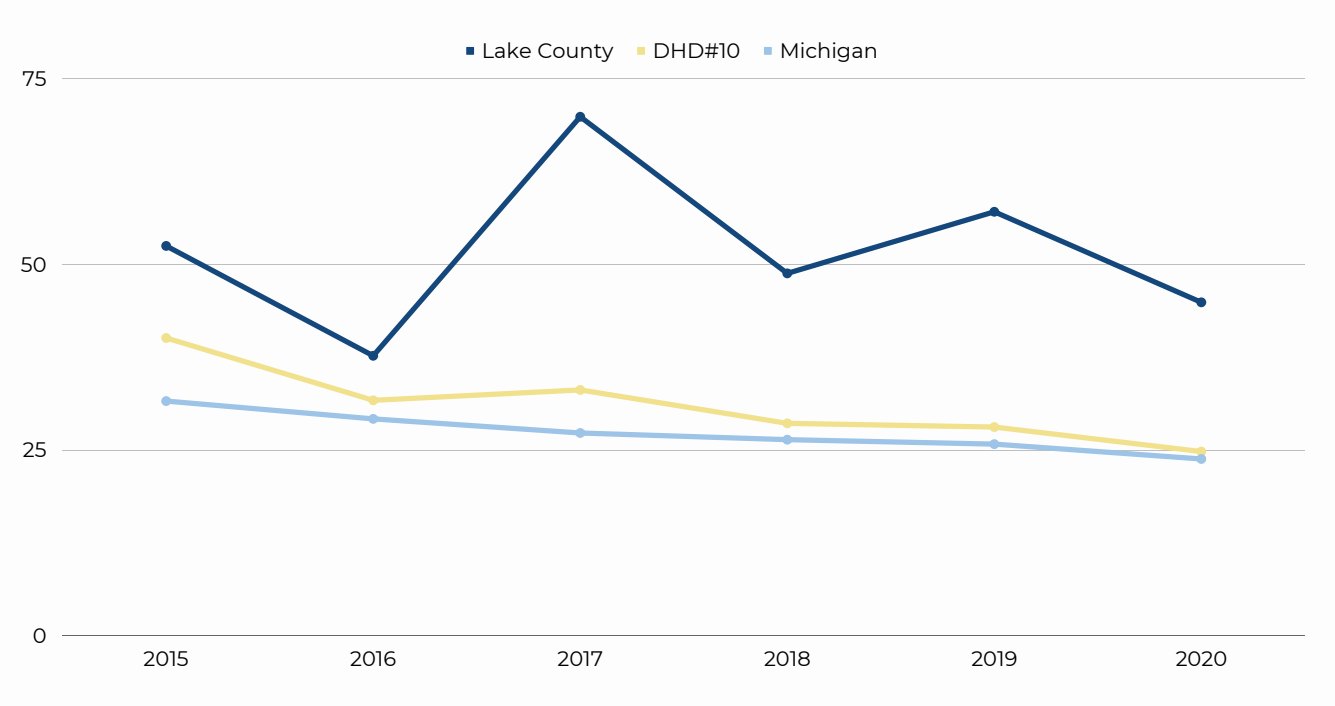
- Five-year Average Rate of Chlamydia Cases per 100,000, 2015-2020
- Number of Gonorrhea Cases, 2020
- Number of HIV Cases, 2020

Guttmacher Data Center

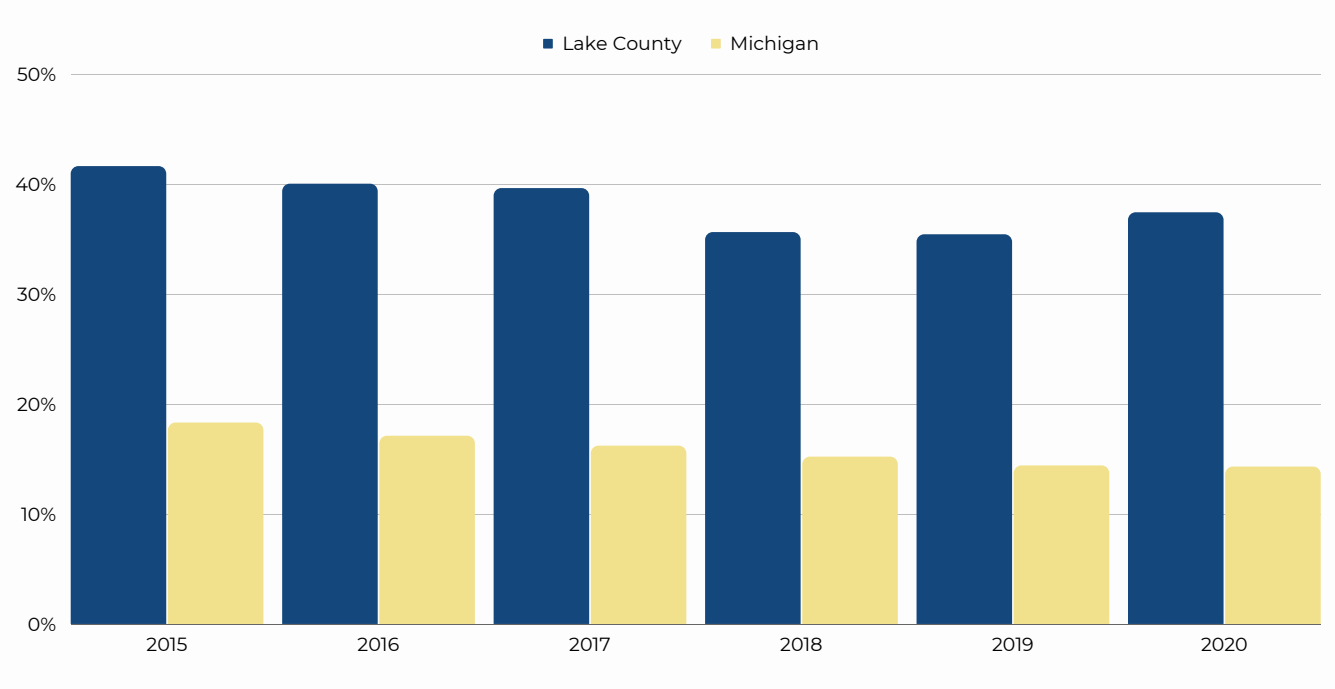
- Number of Women in Need of Publicly Funded Contraceptive Services & Supplies, 2016

Pregnancy & Birth-Related Trends

Teen (15-19 years of age) Pregnancy Rate per 1,000, 2015-2020



Percentage of Mothers Who Smoked During Pregnancy, 2015-2020



Sources: MDHHS

- Teen (15-19 years of age) Pregnancy Rate per 1,000, 2015-2020

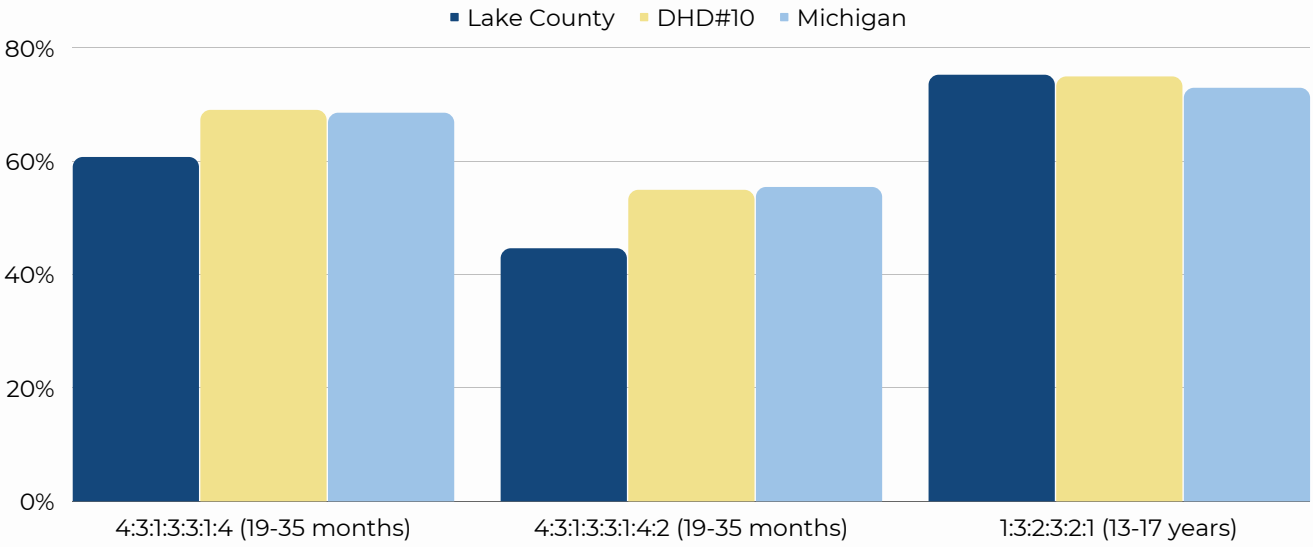
Michigan League of Public Policy

- Percentage of Mothers Who Smoked During Pregnancy, 2015-2020

Immunization

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.

Percent of Children that received CDC Recommended Childhood Immunizations, 2020-2022



Immunization 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), Lake County vs. Michigan, 2020-22

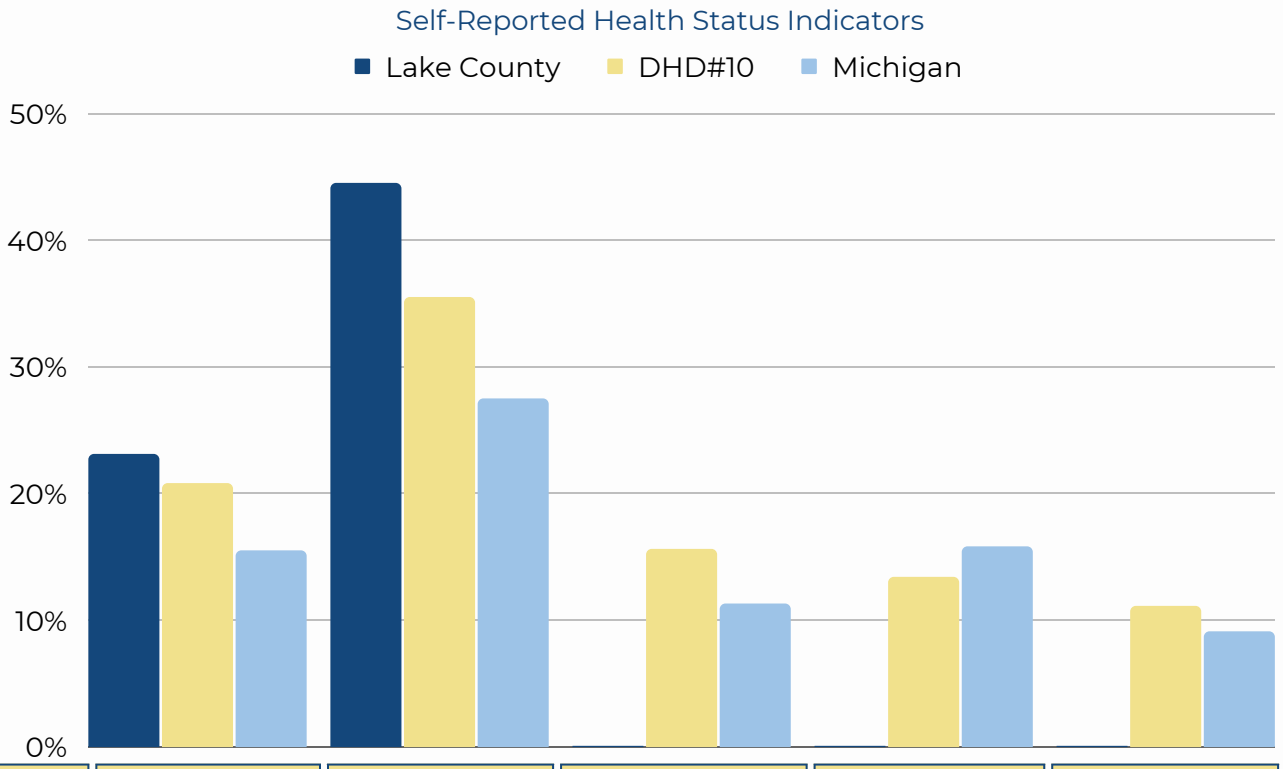
	Lake County	Michigan
Male	47.7%	43.1%
Female	45.8%	45.1%

Sources:
Michigan Care Improvement Registry

Behavioral Risk Factors

In previous years, DHD#10 hired an independent research and evaluation firm to conduct a regional Behavioral Risk Factor Survey (BRFSS) 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 (2020) can be accessed here.

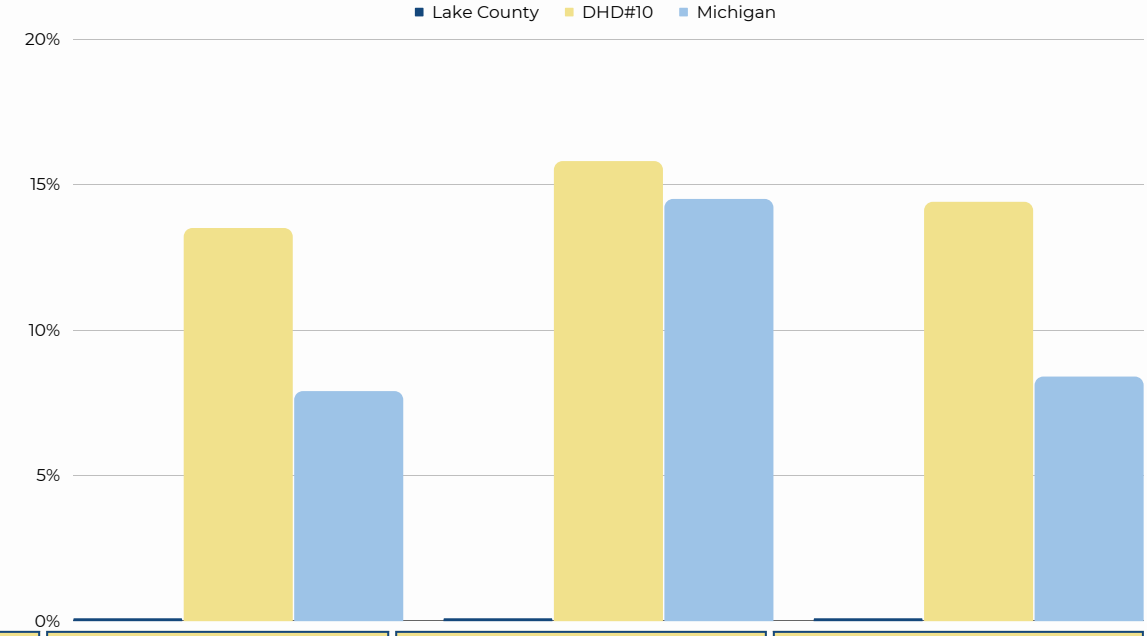


	Fair/Poor General Health Status	Disability	Poor Physical Health (14+ Days)	Poor Mental Health (14+Days)	Activity Limitation (14+ Days)
Lake	23.1%	44.5%	*	*	*
DHD#10	20.8%	35.5%	15.6%	13.4%	11.1%
Michigan	15.5%	27.5%	11.3%	15.8%	9.1%

Sources:
Michigan Department of Health & Human Services

- Michigan Behavioral Risk Factor Surveillance System, 2020

BRFSS: Access to Healthcare



	Had to Forego Care in Past Year Due to Cost	Have No Primary Care Provide (PCP)	No Health Care Coverage (18-64)
Lake	*	*	*
DHD#10	13.5%	15.8%	14.4%
Michigan	7.9%	14.5%	8.4%

Health Care Provider

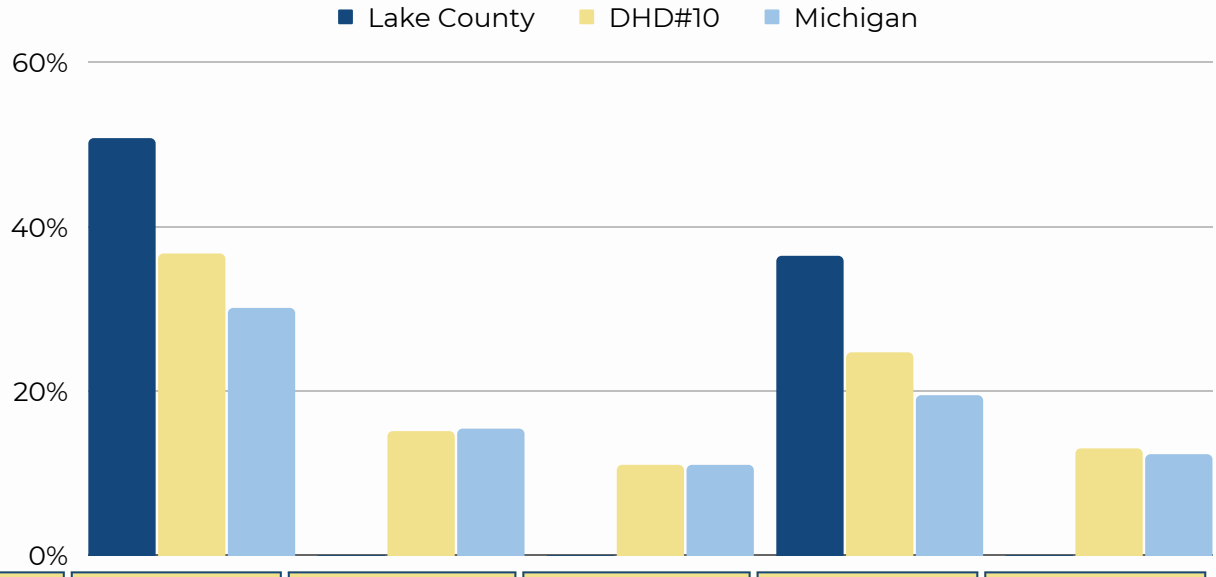
Number of Residents per Health	Care Provider (2020)	
	Lake County	Michigan
Primary Care Physician	12,010:1	1,280:1
Denstist	1,490:1	1,340:1
Mental Health Provider*	1,490:1	370:1

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

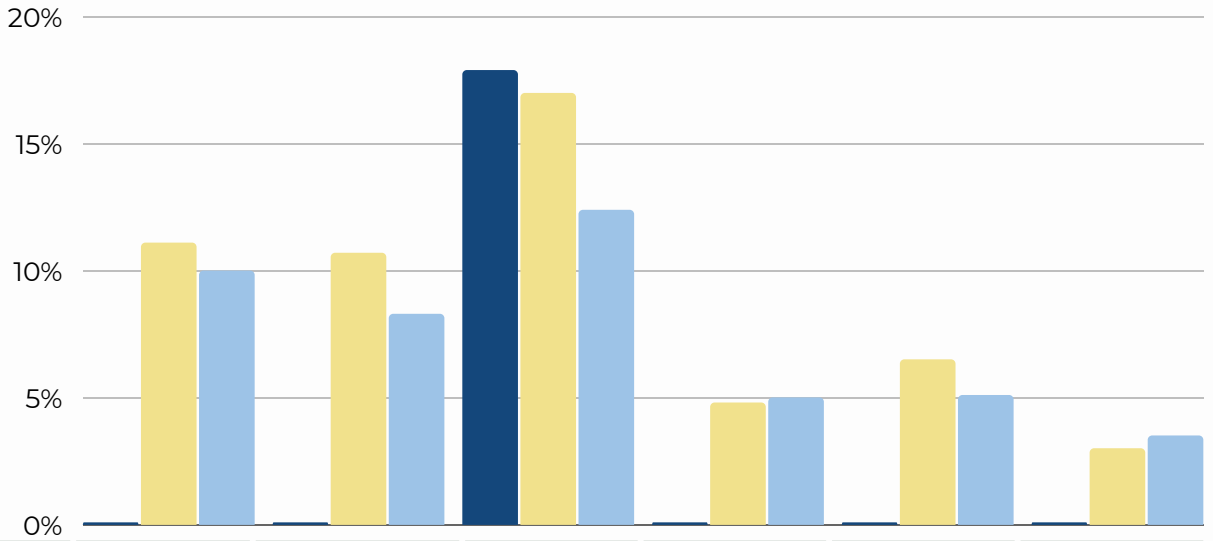
Sources:
Michigan Department of Health & Human Services
- Michigan Behavioral Risk Factor Surveillance System, 2020

County Health Rankings
- County vs. State Rankings, 2020

BRFSS: Chronic Conditions



	Arthritis	Lifetime Asthma	Current Asthma	Depression	Diabetes
Lake	50.7%	*	*	36.4%	*
DHD#10	36.7%	15.1%	11.0%	24.7%	13.0%
Michigan	30.1%	15.4%	11.0%	19.5%	12.3%

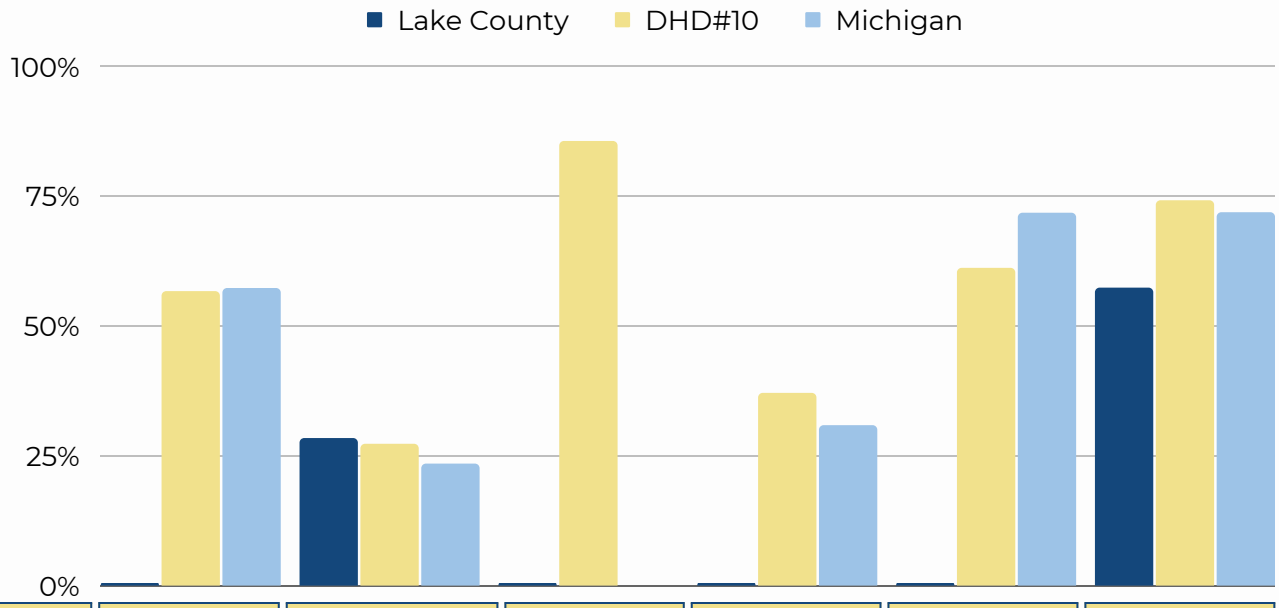


	Any Cardiovascular Disease	COPD (Chronic Obstructive Pulmonary Disease)	Cancer, All types	Angina	Heart Attack	Stroke
Lake	*	*	17.9%	*	*	*
DHD#10	11.1%	10.7%	17.0%	4.8%	6.5%	3.0%
Michigan	10.0%	8.3%	12.4%	5.0%	5.1%	3.5%

Sources:
Michigan Department of Health & Human Services

- Michigan Behavioral Risk Factor Surveillance System, 2020

BRFSS: Clinical Preventative Practices



	Ever had PSA Test (males, 50+ only)	No routine checkup in past year	Have had cholesterol checked	No dental visit in past year	Had flu vaccine in past year (65+ only)	Had pneumonia vaccine (65+ only)
Lake	*	28.3%	*	*	*	57.3%
DHD#10	56.6%	27.2%	85.4%	37.0%	61.1%	74.1%
Michigan	57.2%	23.4%	*	30.8%	71.7%	71.8%

Preventative Practices in Michigan, 2020

Ever had sigmoidoscopy or colonoscopy (50+ only)

79.4%

Had sigmoidoscopy or colonoscopy in past 5 years (50+ only)

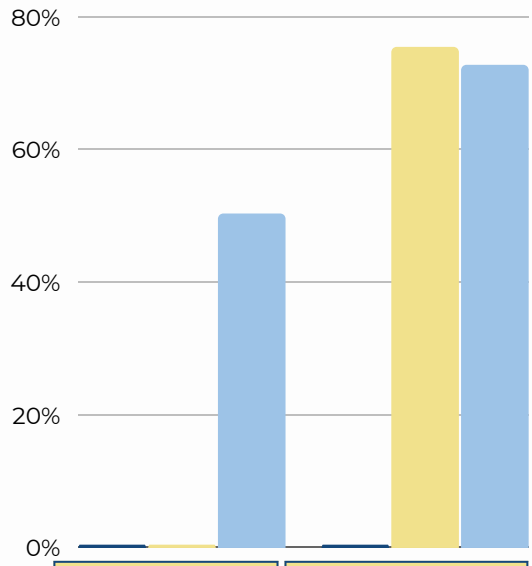
55.6%

Ever had pap test

89.3%

Had appropriately timed pap test

68.7%

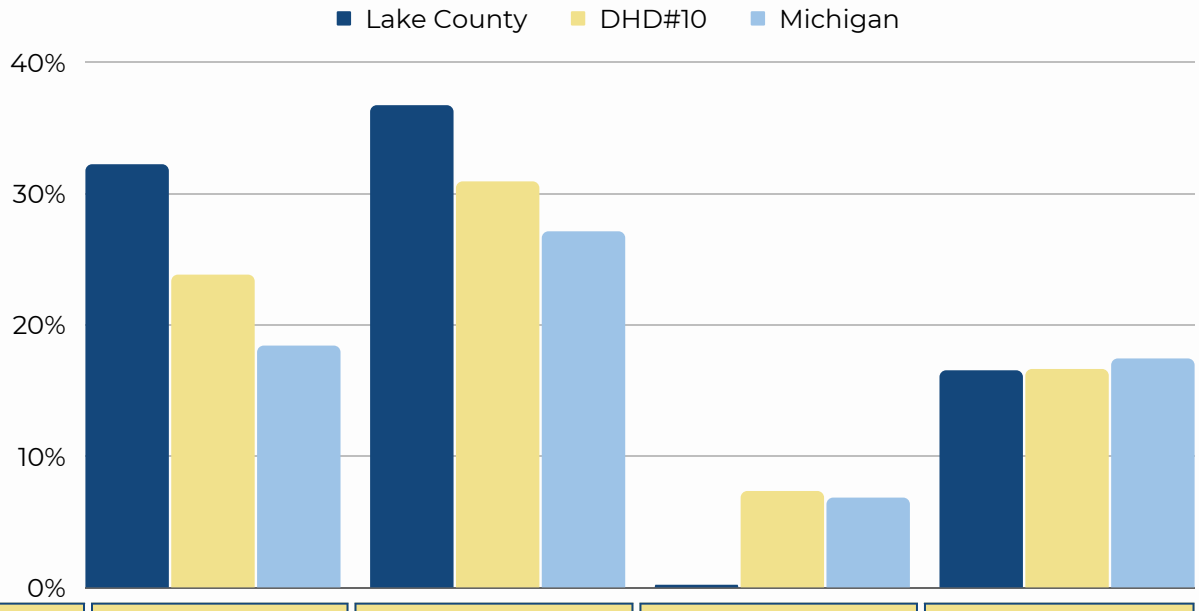


Had mammogram in past year (females, 40+ only)	Had mammogram in past 2 years (females, 40+ only)
*	*
*	75.4%
50.3%	72.7%

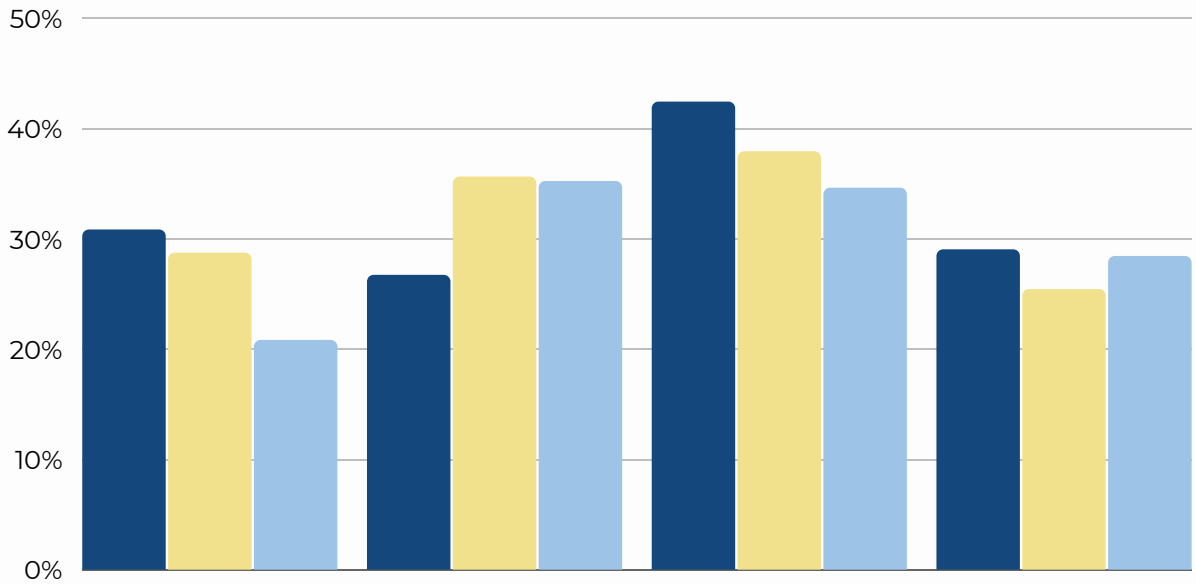
Sources:
Michigan Department of Health & Human Services

- Michigan Behavioral Risk Factor Surveillance System, 2020

BRFS: Risk Behaviors



	Currently Smoke Cigarettes	Formerly Smoke Cigarettes	Drink Heavily	Currently Binge Drink
Lake	32.2%	36.7%	*	16.5%
DHD#10	23.8%	30.9%	7.3%	16.6%
Michigan	18.4%	27.1%	6.8%	17.4%



	No leisure time physical activity	Obese	Overweight	Healthy Weight
Lake	30.8%	26.7%	42.4%	29.0%
DHD#10	28.7%	35.6%	37.9%	25.4%
Michigan	20.8%	35.2%	34.6%	28.4%

Sources:
Michigan Department of Health & Human Services

- Michigan Behavioral Risk Factor Surveillance System, 2020

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 (2020) can be accessed here.

Lake County Health Ranking (2020)			Ranking (out of 83 counties)
Health Outcomes			79
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)	Length of Life	Premature death	52
	Quality of Life	Poor or fair health; poor physical health days; poor mental health days; low birth weight	83
Health Factors			82
Represents what influences the health of a county	Health Behaviors	Smoking; obesity; food environment; physical activity; excessive drinking; alcohol impaired driving deaths; sexually transmitted infections; teen births	70
	Clinical Care	Uninsured; ratios of physicians, dentists and mental health providers to population; preventable hospital stays; diabetic monitoring; mammography screening	82
	Social and Economic Factors	Education; unemployment; poverty; children in single-parent households; social associations; violent crime; injury deaths	83
	Physical Environment	Air pollution; drinking water violations; severe housing problems; driving alone to work and long commute	50

Sources:
County Health Rankings

- County vs. State Rankings, 2020

Conclusions:
Community Health Improvement Plan

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 Teleheath/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, 2019

District Health Department #10
Healthy People, Healthy Communities

Thank You!

We appreciate you taking the time to read about the health status of Lake County within District Health Department #10's ten-county jurisdiction. If you have any questions, please feel free to reach out via email at info@dhd10.org.

Additional Information

District Health Department #10:
https://www.dhd10.org

North Michigan CHIR MiThrive:
https://northernmichiganchir.org/mithrive/

Michigan Department of Health and Human Services:
https://www.michigan.gov/mdhhs

Community Health Ranking:
https://www.countyhealthrankings.org

Behavioral Risk Factor Survey:
https://www.cdc.gov/brfss

Michigan League for Public Policy:
https://mlpp.org