

**COMMUNITY HEALTH
NEEDS ASSESSMENT
FOR
HILLSDALE HOSPITAL**



Caring. Commitment. Community.

INTRODUCTION

Hillsdale Hospital is a not-for-profit hospital. Its roots in the community date to 1912 when Dr. & Mrs. Midgley came to Hillsdale with the hope of developing a sanitarium. The first facility was opened in 1915. In 1921, the City of Hillsdale assumed the responsibility for a new hospital located at its present site.

The hospital primarily serves the residents of Hillsdale County.

The hospital has undergone several expansions of its physical facilities over the years and has continually updated laboratory and diagnostic equipment. The hospital currently has:

- 47 acute care beds.
- 39 skilled nursing facility beds.
- A 10-bed psychiatric unit.
- A seven-bed joint replacement unit.
- Four surgical suites.
- An ophthalmology suite.
- A radiology department with a full compliment of imaging services including a 64 slice computed tomography (CT) scanner and open magnetic resonance imaging (MRI) capability.
- High-tech critical care and emergency departments.
- A state-of-the-art laboratory.
- In and Out patient physical therapy facilities.
- A cardiac rehabilitation unit.
- A dialysis unit.

To comply with the Affordable Care Act, nonprofit hospitals are required to complete a community health needs assessment (CHNA) every three years. Assessments were conducted in 2013, 2016 and 2019. This report reflects the findings of the recent 2022 assessment with comparisons, where possible, to the results of the previous assessments.

The 2022 CHNA included a survey of county residents, consultation with county leaders and a comprehensive review of primary and secondary data as detailed in this document.

The CHNA was used to create an updated strategic plan for the hospital that can best address the health needs of county residents and create partnerships with other organizations where necessary to address identified unmet needs.

HILLSDALE HOSPITAL REVENUE AND COMMUNITY BENEFITS

As a nonprofit hospital, Hillsdale Hospital operates on a tight budget.

The operating budget for its fiscal year ending June, 2021 shows:

- Operating revenue for in and out patient care: \$144,960,132
- Revenue deductions including contractual obligations, bad debts and charity: \$83,059,916
- Net revenue: \$62,600,215
- Operating Expenses for salaries, supplies and building maintenance: \$62,600,215

A comparison of the 2021 to the 2018 operating budgets shows a pattern of growth.

	2018	2021
Operating Revenue	\$137,186,000	\$144,960,132
Revenue Deductions	\$79,323,000	\$83,059,916
Net Revenue	\$57,853,000	\$62,600,215
Operating Expenses	\$57,862,000	\$62,600,215

Source: Hillsdale Hospital FY Reports, 2021

Nonprofit hospitals have traditionally offered programs and services that address identified health-related community needs. Many of these services are available without payment, or at a lower cost, and serve to improve the health access and the health status of the community.

A comparison of Hillsdale Hospital's revenue shows an increase in the percent of net revenue devoted to charitable endeavors from FY 2016 to FY 2020.

Hillsdale Hospital Net Revenue Dedicated to Charity				
	2016	2017	2019	2020
Charity Care	580,432	404,220	167,260	174,508
Medicaid			3,116,315	337,708
Health Professions Education	47,857	(189,221)	(131,121)	166,237
Subsidized Health Services	1,615,245	2,544,486	1,762,722	5,055,993
Community Health Services & Cash Contributions			43,573	18,154
Total Community Benefits	15,450	19,500	4,958,749	5,752,600
Percent of Net Revenue	3.93%	5.01%	7.61%	9.28%

Source: Hillsdale Hospital FY Reports, 2016, 2017, 2019 and 2020

In addition to the direct reduction in revenue from charitable endeavors, the staff of Hillsdale Hospital provides hours of volunteer service to the local community.

In staff members gave over 3,000 hours of community service including:

- A winter clothing drive and Toys for Tots program in November 2018.
- Participated in Colors for Cancer 5K run/Relay for Life and raised \$8,800 in June 2019.

THE COMMUNITY HEALTH ASSESSMENT SURVEY AND DATA COLLECTION

Hillsdale Hospital partnered with the Hillsdale County Human Services Network (HSN) to create a comprehensive community-based health needs assessment.

The HSN is the state-recognized community collaborative for Hillsdale County. It is a coalition of public and private non-profit health and human service organizations serving the county. The HSN has met on a monthly basis since 1986 to address issues of common interest. A list of HSN members can be found in Appendix A.

Part of the health assessment plan was to distribute an assessment survey to the general population, gather secondary supportive data, and engage the HSN members in an open discussion of how best to meet the needs revealed by the process.

The hospital hired an independent contractor to help design the survey, analyze the data, facilitate discussions, and create the final report.

A list of the expert individuals consulted, and the qualifications of the contractor can be found in Appendix B of this report.

Primary Data Collection

Primary data is data collected directly from first-hand experiences or opinions. The primary data for this assessment consisted of a health survey of the general county population and an open forum discussion of HSN members.

The health survey questionnaire was designed to create a profile of the respondents, their health needs and views on community health-related issues.

All residents of the county were invited to participate in the survey through a wide-reaching informational campaign.

- Paper forms of the survey were sent to Jackson College Hillsdale Campus, Hillsdale Health and Wellness and Hillsdale Hospital OB.
- Hospital volunteers approached patients awaiting treatment or lab work at the hospital and asked them if they would complete the survey. Anyone over 18 who accompanied the patient was also asked to participate.
- The survey was posted on an internet survey site, Survey Monkey, and was accessible to the community from December 3, 2020 to March 6, 2022. Links to the on-line survey were displayed on the Hillsdale Hospital Facebook page and the hospital website www.hillsdalehospital.com
- The link to the on-line survey was provided to members of the HSN for posting on their individual websites.

The paper surveys were collected from the various sites and the responses recorded on the surveys were manually added to the online survey tool for analysis.

As a result of this campaign, 723 individuals completed the health survey questionnaire, compared to 1200 in 2019, 1110 in 2016 and 983 in 2013. The number of respondents was lower than previously due to Covid restrictions at survey sites which limited client participation.

At the completion of the survey period, this primary survey data was analyzed to identify the specific health concerns of the respondents. An analysis of the respondents to the survey revealed:

- **The sampled population was predominantly female.** 75% were female and 25% were male. Women have outnumbered men in the past three community assessment surveys. Females represented 73% of respondents in 2019, 69% of respondents in 2016 and 75% in the 2013 survey. In contrast, the population of Hillsdale County is approximately 50% male and 50% female.
- **Respondents age 65 or over accounted for 28.2% of the survey sample compared to their 20.2% presence in the general population.** This is consistent with the results of previous assessment surveys. Respondents age 65 or older represented 30.4% of the survey samples in 2019 and 32.5% in both 2016 and 2013.
- **Not all respondents answered every question.** The data was analyzed based on the number who responded to each question.
- **621 respondents (90.8%) identified themselves as county residents. 63 respondents (9.2%) said they were not residents of the county. 39 did not answer this question so could not be identified as either residents or non-residents.** The responses of all who took the survey were included in the analysis.

Although the survey respondents were more likely to be female and older than the general population, the results may reflect the thoughts of a population more likely to need and utilize medical services. It may also reflect the distribution of the paper surveys which, though accessible to the general population, were only available at selective sites.

Secondary Data Collection

Secondary data is data gathered from outside reliable sources. This data is generally reported in forms such as:

- Actual or estimated numbers in a population.
- A percentage of a sampled population.
- Rates, or the number of people in a sample population compared to a similar population.

Secondary data for this assessment was collected from a variety of county, state and federal sources to create a more complete profile of the population and current health needs. This report strived to use the most recent, complete, yearly data available.

The secondary data in this report came from sources such as:

- U.S. Census Bureau.
- Michigan Behavior Risk Factor Survey (MiBRFS). This data is gathered by an annual, statewide telephone survey of Michigan residents age 18 or older. The survey provides estimates of several behaviors, medical conditions, and health care practices for state residents.
- Kids Count in Michigan.
- State of Michigan Labor and Education Departments.
- State of Michigan, Department of Vital Statistics.
- Centers for Disease Control and Prevention (CDC).
- Center for Educational Performance and Information, HDE.
- DATA USA, Hillsdale County, MI, 2019.
- Henry J. Kaiser Family Foundation.

The Branch-Hillsdale-St. Joseph Health Department (BHSJ) was instrumental in providing reliable secondary data.

Presentation of Data

Highlights of the primary and secondary data were incorporated into a PowerPoint presentation that was shown at a meeting of the membership of the HSN on [April 12, 2022](#). [The presentation can be found in Appendix B of this report.](#)

During the presentation, network members were free to comment on individual issues and their input was actively solicited on the main issues.

Their suggestions were incorporated into the appropriate sections of this report and presented to the Hillsdale Hospital board of directors to create a strategic plan to address concerns.

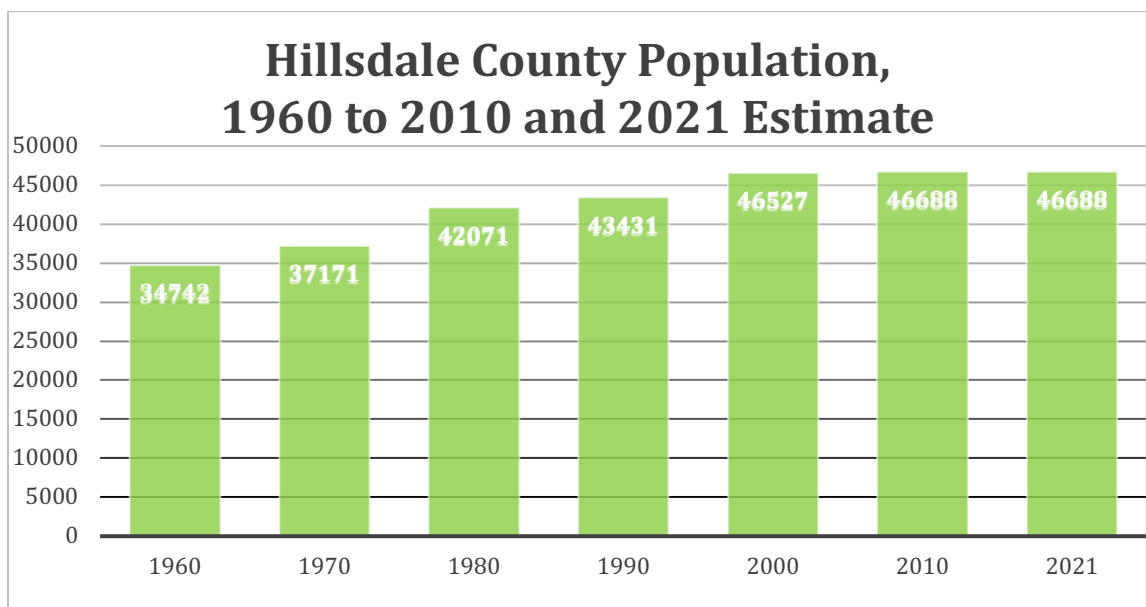
COMMUNITY PROFILE

Hillsdale Hospital primarily serves the residents of Hillsdale County.

Hillsdale County is located in south-central Michigan and covers a land area of approximately 598 square miles. It is a rural community with a population density of 78 residents per square mile, compared to an average of 87.4 in Michigan, according to the 2021 U.S. Census estimates.

Population Trends

The estimated July, 2021 population of Hillsdale County was 46,688; this is same as the census population count reported in 2010. Overall, the county population has remained relatively stable over the last three decades.



Source: U.S. Census Bureau, 1960 to 2010 and U.S. Census Bureau July 2021 Population Estimate.

Respondents and County Residence

A question on the survey asked about county residence. Of the 723 respondents:

- 63 said they were not county residents.
- 39 did not identify as either county or non-county residents.
- 621 identified as county residents.

The 621 respondents who said they were county residents represent 1.3% of the county population according to the 2021 Census estimates. Previous CHNA surveys had a county participation rate of slightly more than 2%.

Racial and Ethnic Data

Census data of the county by race reveals Hillsdale residents are primarily white.

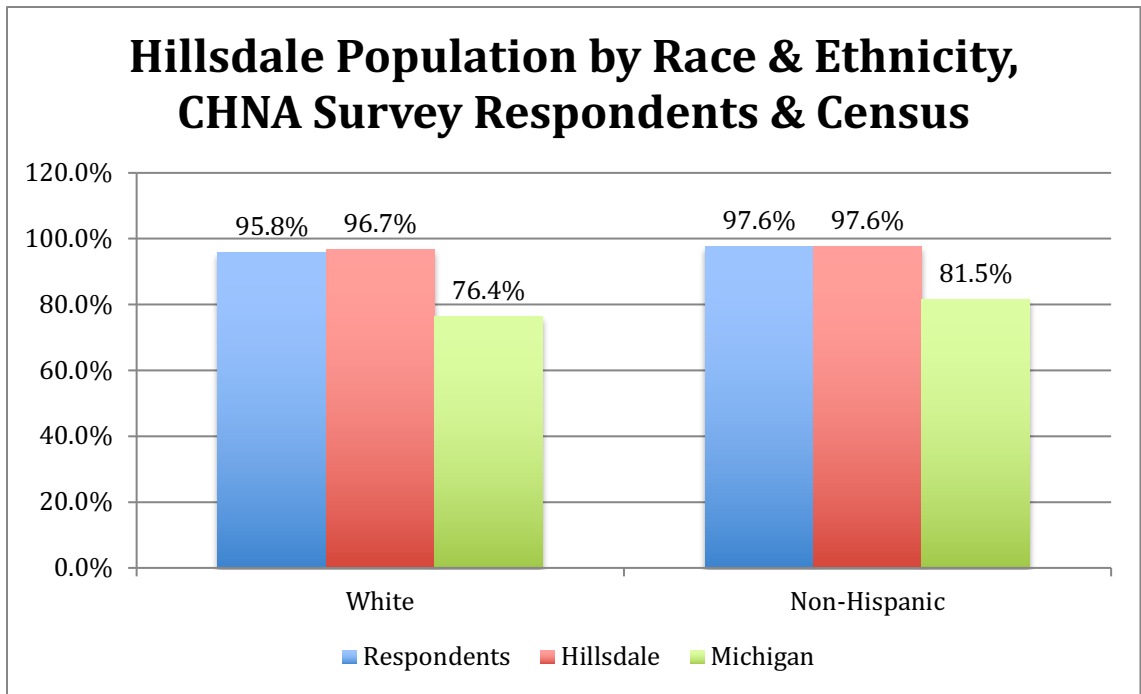
Population by Race & Hispanic Origin		
	Hillsdale	Michigan
White	96.7%	76.3% *
Black/African American	0.7%	13.4%
American Indian/Alaska Native	0.6%	1.3%
Asian	0.5%	5.9%
Native Hawaiian/Pacific Islander	<0.1%	0.2%
Two or More Races	1.5%	2.8%
Hispanic or Latino	2.4%	18.5%
White Alone, not Hispanic/Latino*	94.5%	60.1%

Source: U.S. Census Bureau, American Community Survey, 2021 Population Estimate

* Of the 76.3% of the Michigan population who identified as White, 16.2% also identified as Hispanic.

The racial and ethnic profile of the 2022 survey respondents mirrored this data:

- 684 (95.8%) of the respondents said they were white.
- 671 (97.6%) of the respondents said they non-Hispanic.



Source: CHNA Survey, 2022 and U.S. Census American Community Survey, 2021 Population Estimate

Population by Sex

The 2021 population estimate for Hillsdale County indicates the county is 50.1% female and 49.9% male. Of the 711 respondents in the 2022 CHNA survey who identified their gender:

- 534 (75.1%) of the respondents said they were female.
- 177 (24.9%) were male.

Women have outnumbered men in the past three community assessment surveys. Females represented 73.1% of respondents in 2019, 69% in 2016 and 75% in the 2013 survey.

This may reflect the fact that women were more likely to use the health services where the surveys were prominently available.

Population by Age

The median age of Hillsdale residents is 42.3 years, compared to Michigan's 39.7 years and 38.1 years for the United States as a whole.

Median Age of Residents of Hillsdale County, Michigan and the U. S.			
	Hillsdale	Michigan	United States
Median Age	42.3	39.7	38.1

Source: U.S. Census Bureau, American Community Survey 2019, Five Year Estimate

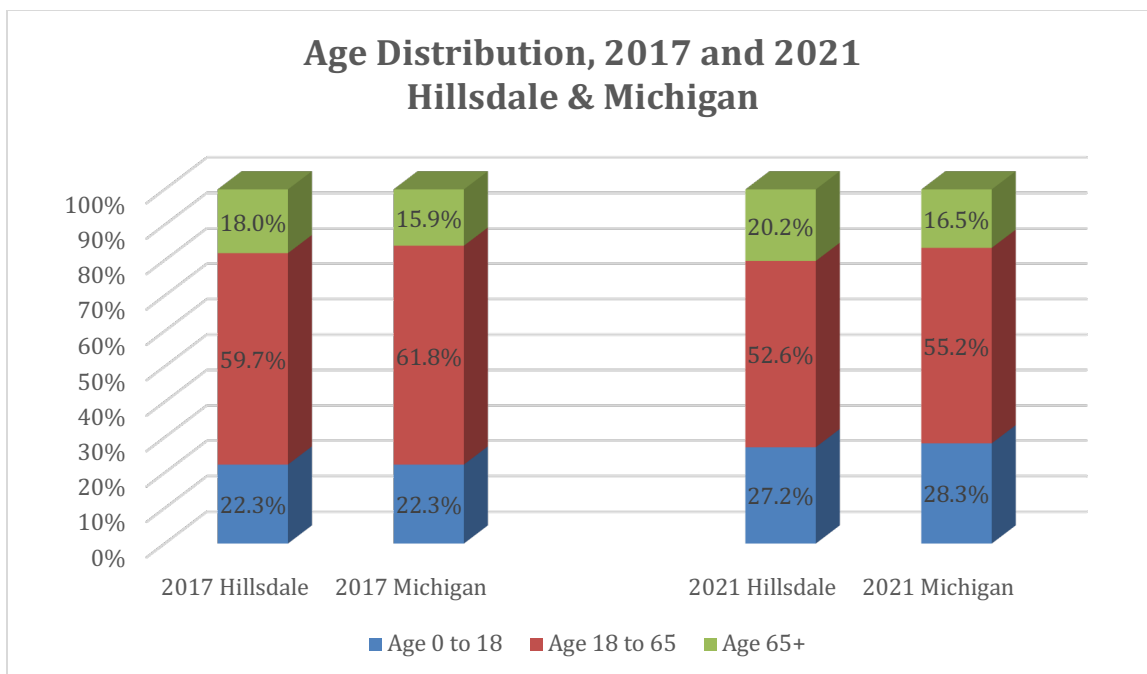
Hillsdale County has a slightly higher proportion of residents age 65 and over than Michigan.

Percentage of Hillsdale County Population by Age Compared to Michigan		
	Hillsdale	Michigan
Age 0 to 18	27.2%	28.3%
Age 18 to 65	52.6%	55.2%
Age 65+	20.2%	16.5%

Source: U.S. Census Bureau, American Community Survey, 2021 Estimate

A comparison of population estimates for Hillsdale and Michigan by age groups reveals:

- The age group 0 to 18 has been increasing.
- The age group 18 to 65 has been decreasing.
- The age group 65+ has been increasing.

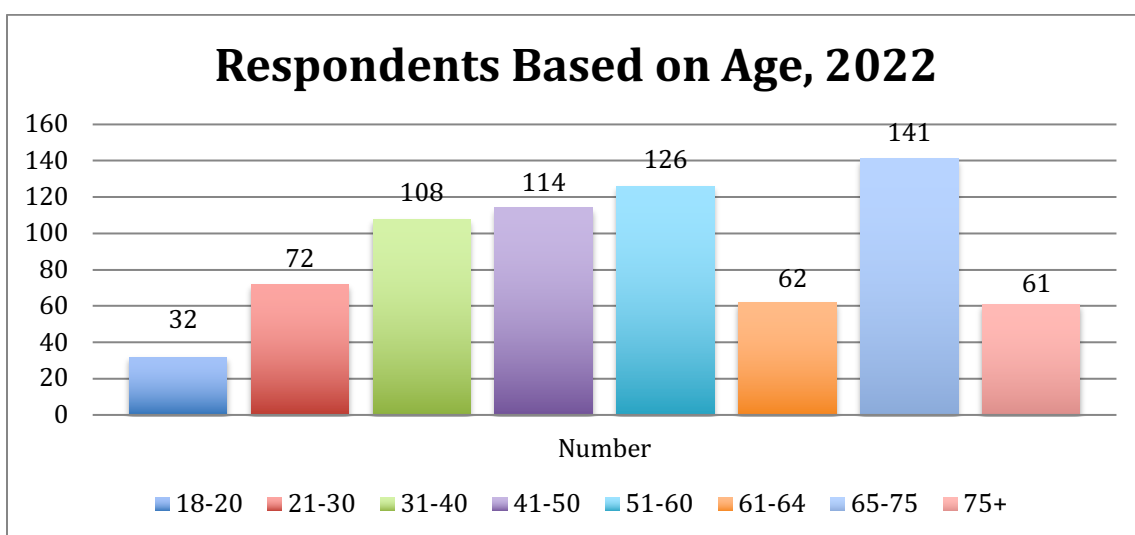


Source: U.S. Census Bureau, American Community Survey, 2017 and 2021 Estimates

This trend, if it continues, will have an impact on the health and economic needs of the community.

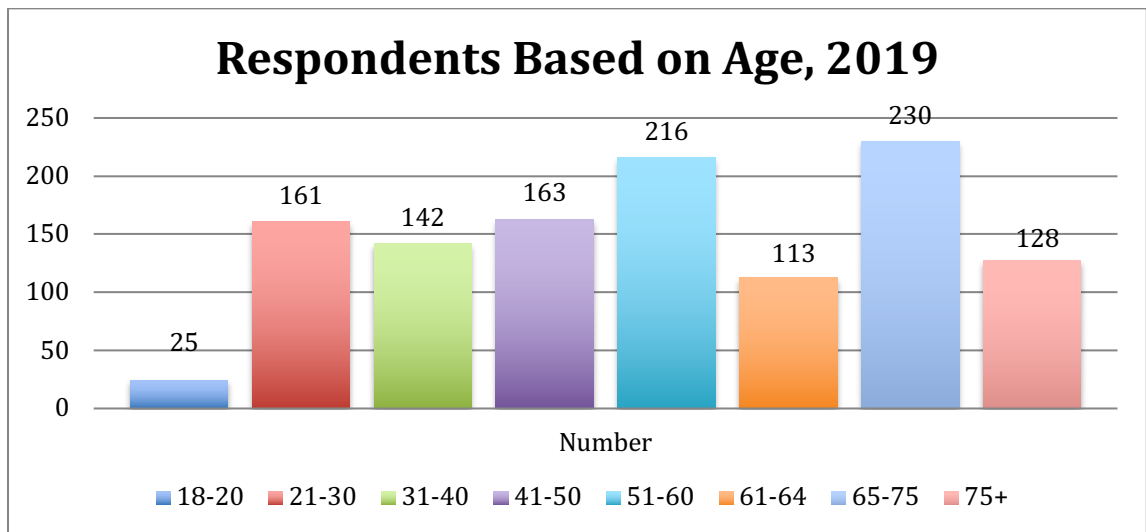
According to the American Association of Retired Persons (AARP), the number of people in the US age 65 is more than 43 million. This number is expected to grow to 83 million over the next four decades. If a comparable increase occurs in Hillsdale County, this would have a serious impact on the local healthcare system.

Respondents to the 2022 CHNA survey were age 18 and older.



Source: CHNA Survey, 2022

This is similar to what was found in 2019.

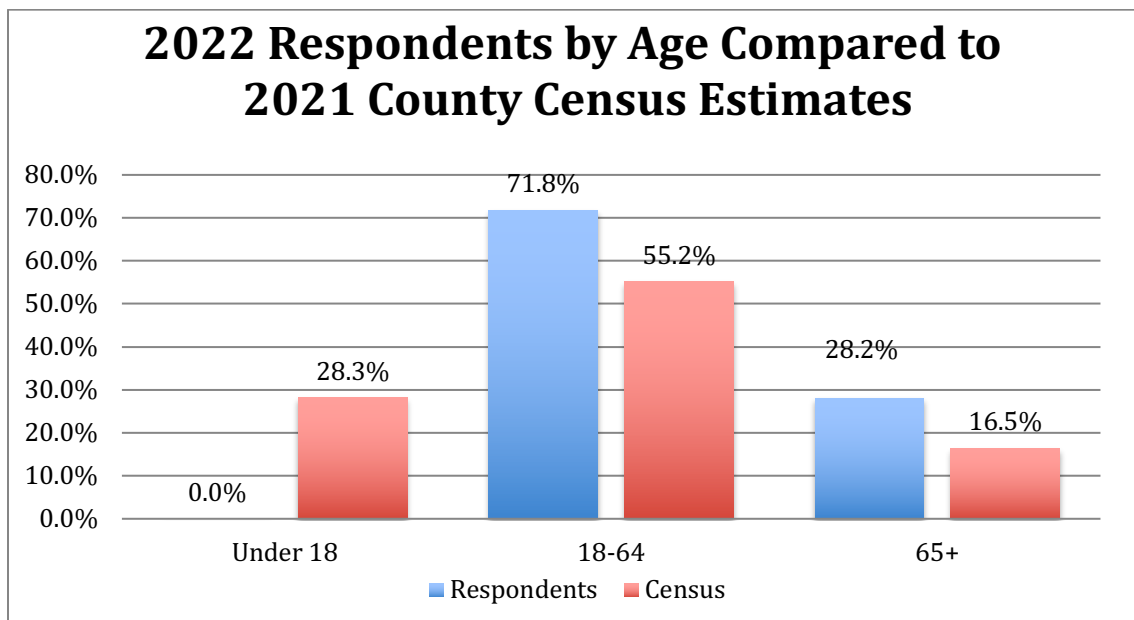


Source: CHNA Survey, 2019

The 2022 CHNA survey was limited to those age 18 or older although three surveys were accepted for age 17. The survey had a higher percentage of respondents that were 65 or older than the general population.

202 (28.2%) of respondents identified themselves as in this age group compared to an estimate of 16.5% in the general population.

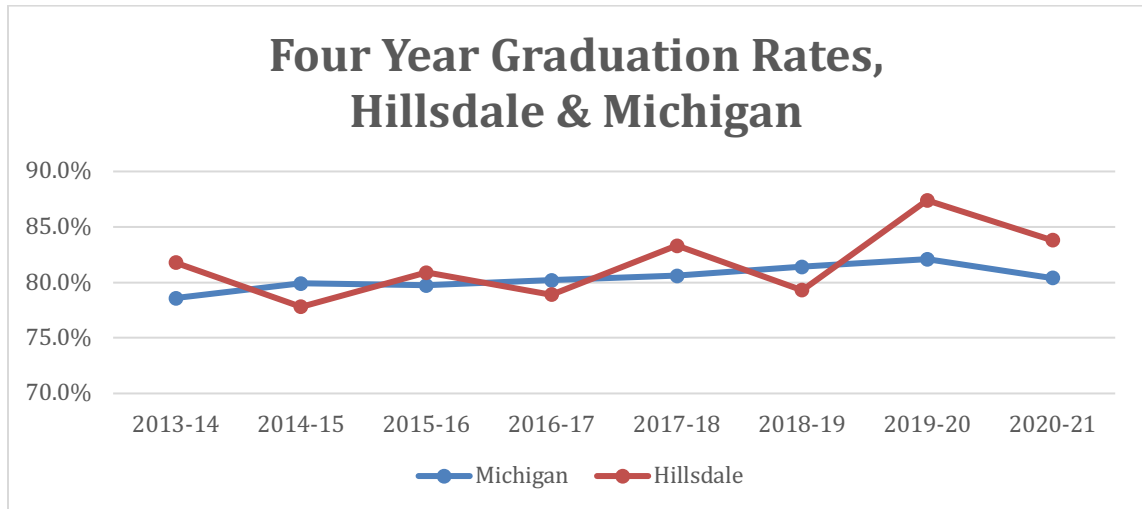
This is slightly less than previous surveys. 30.4% of respondents in 2019 as well as 32.5% of respondent in the 2016 and 2013 surveys were in this age group.



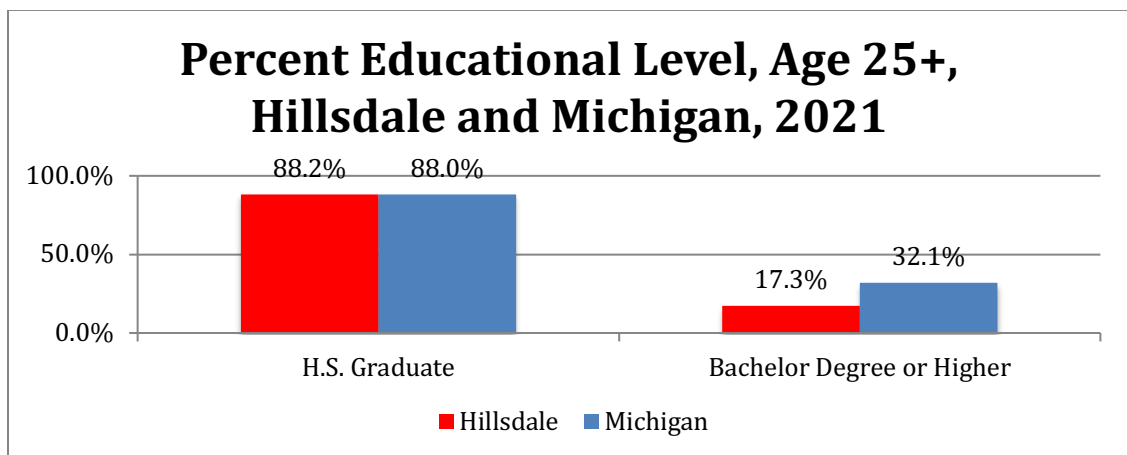
Source: CHNA Survey, 2022 and U.S. Census Bureau, American Community Survey, 2021 Estimate

Population by Educational Level

The percentage of adults, age 25 and older, with a high school diploma is comparable in Hillsdale County and Michigan, but fewer county residents have degrees beyond high school.



Source: Michigan School Data, 2013-2021



U.S. Census Bureau, American Community Survey, 2021 Estimate

The members of the Human Services Network (HSN) clarified that some children complete their education with a “certificate of completion” which is not equivalent to a diploma or GED. This affects primarily physically and mentally challenged students.

HSN members were concerned about the high percentage of undereducated in the county and identified it as the major reason some residents live in poverty.

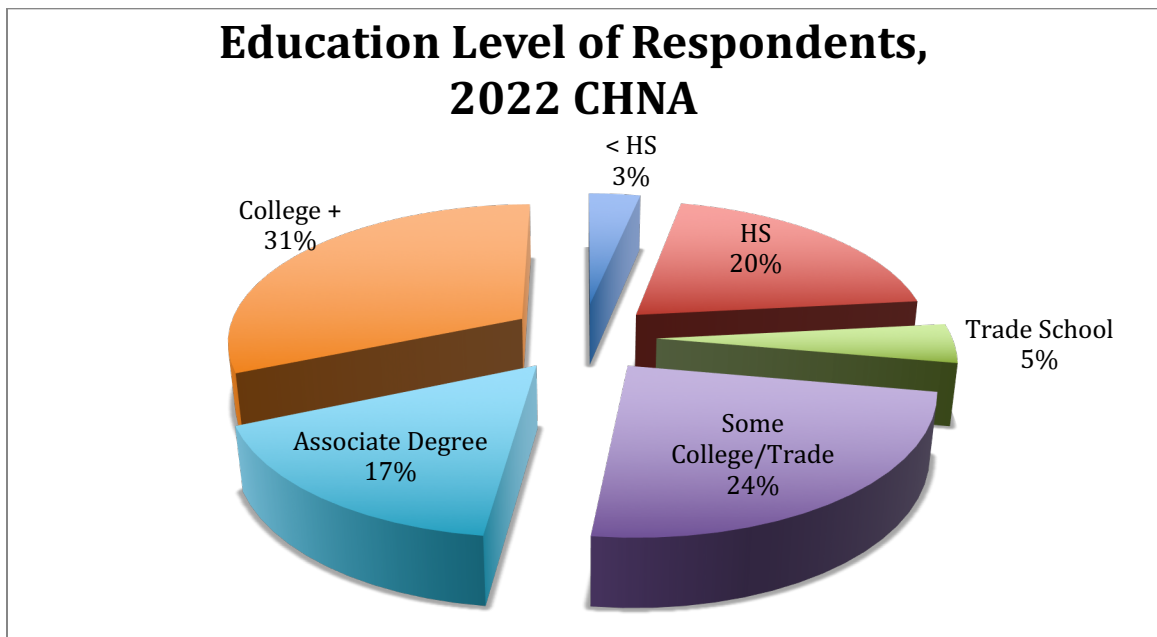
Many reports indicate the lack of the educational on-site learning experience due to the Covid 19 lockdowns has caused developmental delays in the children. The long term impact of this experience is unknown.

Educational Level of CHNA Respondents

The 2022 CHNA survey asked respondents about their educational status.

Of the 719 respondents who indicated their educational status:

- 695 (96.7%) of them had at least a high school diploma. This is slightly higher than found on previous surveys where 94.8% of respondents in 2019, 93% in 2016 and 90% in 2013 were high school graduates.
- 226 (31.4%) had a college or advanced degree. This is also higher than the 19.5% of respondents in 2019, 20% in 2016 and 23% in 2013 with a college degree.



Source: CHNA Survey, 2022

Based on the education data available, the respondents to the 2022 survey as well as those on the previous 2019, 2016 and 2013 CHNA surveys were better educated than the general population.

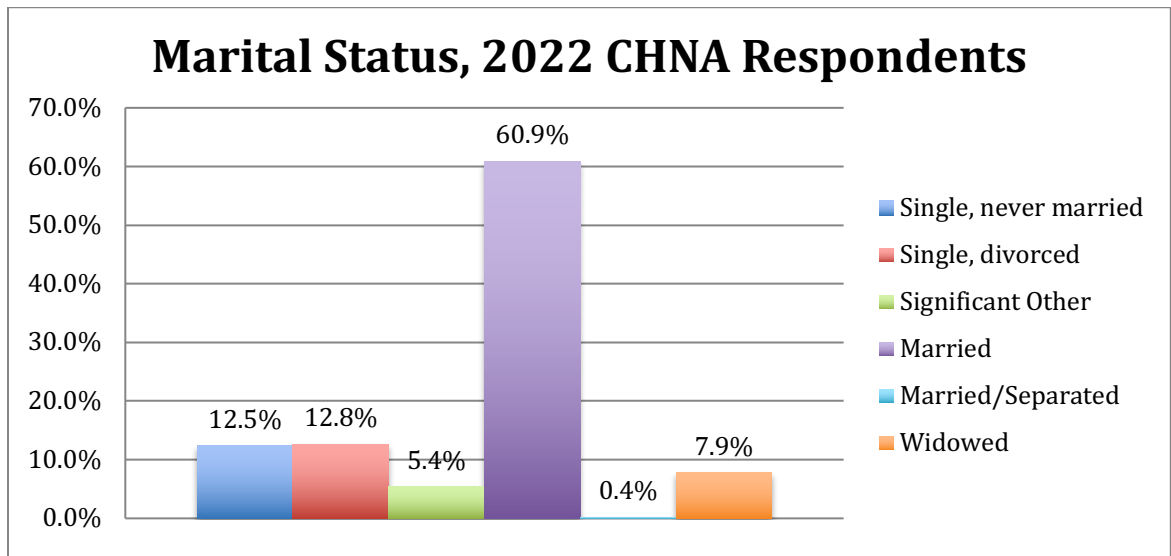
The respondents in the 2022 survey had a higher percentage of individuals with college or advanced degrees than the general Hillsdale County population, but less than the percentage in Michigan.

Many of those with college or advanced degrees in the community are associated with Hillsdale College, an independent four-year liberal arts college with a national reputation. The college was established in 1844 with a current undergraduate enrollment of 1,466 students in the fall of 2020. The students, staff and faculty have a significant impact on the social and economic life of the local community.

Population by Marital Status

Respondents in the 2022 CHNA were asked to describe their marital status. Of the 719 who answered this question:

- 90 (12.5%) were single, never married.
- 92 (12.8%) were single, divorced.
- 39 (5.4%) were living with a significant other.
- 438 (60.9%) were married.
- 3 (0.4%) were married but separated.
- 57 (7.9%) were widowed.



Source: CHNA Survey, 2022

This is consistent with the 2019, 2016 and 2013 surveys where 65.9%, 63.5% and 59.4%, respectfully, were married. But it is slightly lower than the marital status estimates from the 2019 American Community Survey published by the US Census Bureau.

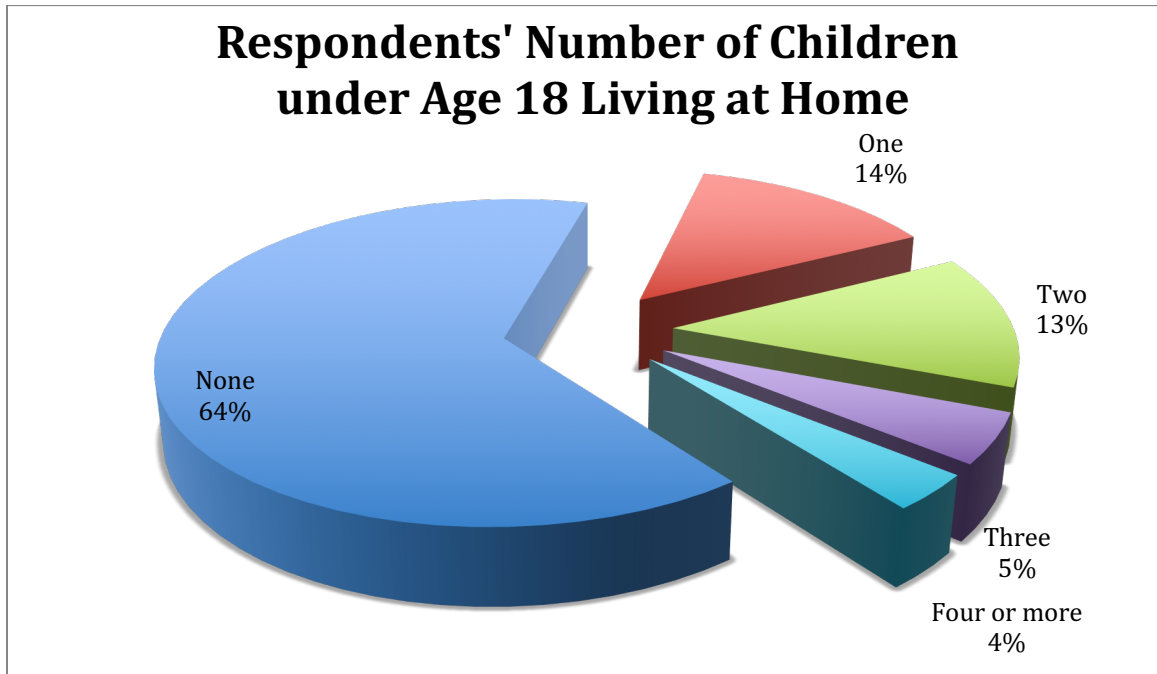
Marital Status by Percent, Males & Females, Hillsdale & Michigan, 2015-19				
	Males		Females	
	Hillsdale	Michigan	Hillsdale	Michigan
Never Married	30	36.4	23.0	30.3
Married	53.7	49.3	52.6	46.8
Separated	1.0	1.1	1.4	1.3
Widowed	2.6	2.8	10.4	9.0
Divorced	12.7	10.5	12.6	12.6

Source: U.S. Census Bureau, American Community Survey 2019, Five Year Estimate

Children Living at Home

Respondents were asked how many children under the age of 18 were living in their home. The majority (64.4%) of the 720 people who answered this question had no children at home. This is nearly identical to 2019 survey results when 65.5% said they had no children at home and 2016 survey results when 65.2% said the same. This probably reflects the fact that a large number of the survey respondents were 65 and older.

Some of the respondents in the younger cohort living with their parents most likely included their siblings when asked this question, since the question did not specify to count only biological or adopted children.



Source: CHNA Survey, 2022

In comparison, according to the U.S. Census Bureau, American Community Survey 2019, Five Year Estimates, the percentage of all family households with children under 18 living at home was:

- 24.9% for Hillsdale County
- 25.8% for Michigan residents.

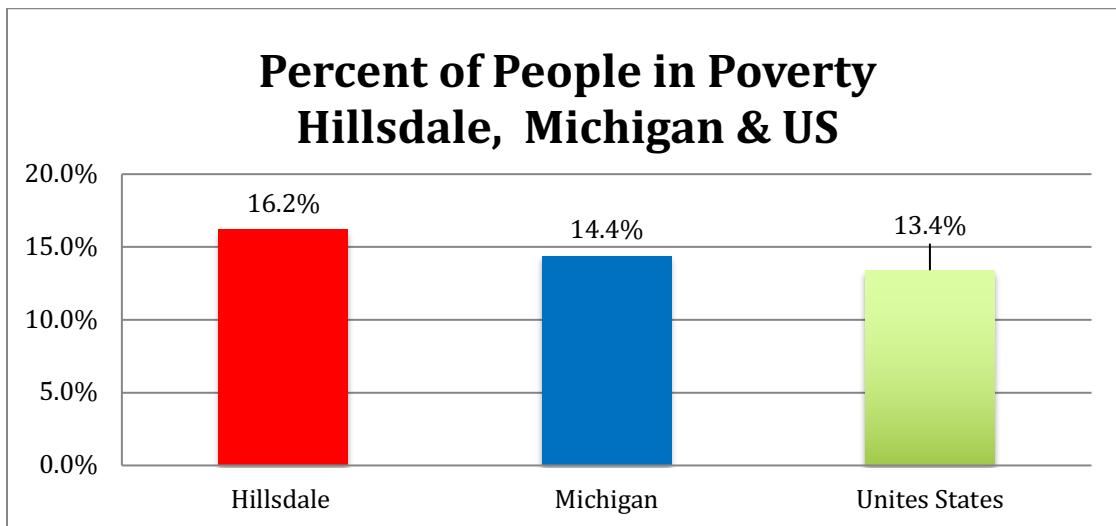
Population by Poverty Level

Hillsdale County has a large number of people living at or near poverty level, and the number is growing.

A poverty level of 100% in the U.S. was defined in 2021 as an annual income of:

- \$14,097 for one person under age 65.
- \$12,996 for one person aged 65 or older.
- \$27,479 for a family of two adults and two children.

Hillsdale County has a higher percentage of people below poverty level than Michigan or the United States.



Source: U.S. Census Bureau, American Community Survey, Five Year Estimate, 2021

Poverty affects all ages, but children age 18 and under are more likely to live below poverty than other age groups, especially in Hillsdale County.

Percent below Poverty Level, Past 12 Months, 2015-19				
	Age under 18	18 to 64	65 and older	All Ages
United States	18.5	12.6	9.3	14.7
Michigan	19.9	14.0	8.4	14.4
Hillsdale	24.2	15.7	8.8	16.2

Source: U.S. Census Bureau, American Community Survey, Five Year Estimate, 2019

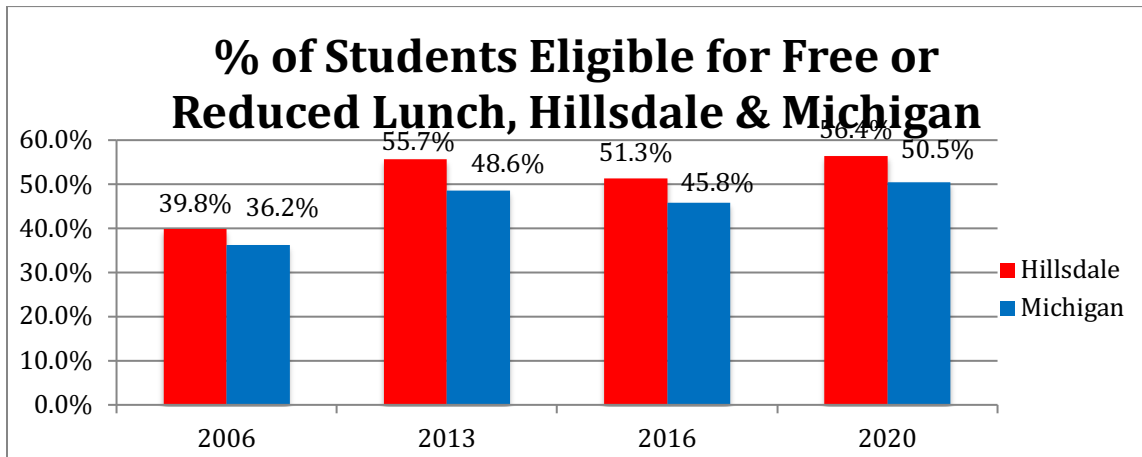
Respondents in the CHNA survey were asked if they were very concerned, moderately concerned, or not at all concerned about poverty in the community. Of the 683 people who answered this question:

- 324 (47.4%) said they were very concerned.
- 290 (42.5%) were moderately concerned.
- 69 (10.1%) were not at all concerned.

Indicator of Poverty: Free Lunch Program

The percentage of Hillsdale students eligible for the free or reduced lunch program is one indicator of poverty among county youth. A comparison of Hillsdale students in grades K through 12 to those throughout Michigan shows 56.4% of Hillsdale students qualified for this program compared to 50.5% in Michigan in 2019.

This has been fairly consistent over several years.



Source: Kids Count in Michigan Profiles, 2020 and previous years.

Indicator of Poverty: Home Ownership

Another indicator of poverty is the percentage of people who own their own home.

Home ownership is slightly higher in Hillsdale County than in Michigan. This may reflect the fact that real estate is less expensive in the county than in some other areas of Michigan even though the median income in the county is less. Home ownership is traditionally higher for households with married couples in both Hillsdale and Michigan. The median property value in Hillsdale County in 2019 was \$120,100 compared to the national average of \$240,500. (Source: Data USA)

Percent of Home Ownership, Hillsdale and Michigan, 2015-19		
	Home Owners	Renters
Hillsdale Households	76.5%	23.5%
Michigan Households	71.2%	28.8%
United States	64.1%	35.9%

Source: U.S. Census Bureau, American Community Survey 2019, Five Year Estimate

These results are similar to what was found in the 2019 CHNA.

The respondents in the CHNA survey were asked about their living situation. Of the 720 who answered this question:

- 598 (83.1%) lived in their own home.
- 85 (11.8%) rented a home or apartment.

- 37 (5.1%) stayed with relatives or others
- 0 said they were homeless.

This is a slight change from the 2019 survey where:

- 907 (76.5%) lived in their own home.
- 185 (15.6%) rented a home or apartment.
- 88 (7.4%) stayed with relatives or others
- 5 (0.4%) said they were homeless.

Homelessness is a concern for the Human Services Network, Hillsdale's collaborative body. Student homelessness is often hidden since they may seek shelter with relatives or friends rather than public areas. The Kids Count in Michigan 2021 reported 403 (7.1%) students in grades K-12 were homeless in Hillsdale compared to 2.1% in Michigan in 2020.

Lack of affordable housing is a major cause of homelessness.

Respondents in the 2022 CHNA survey were asked how concerned they were about affordable housing. Of the 680 who answered this question:

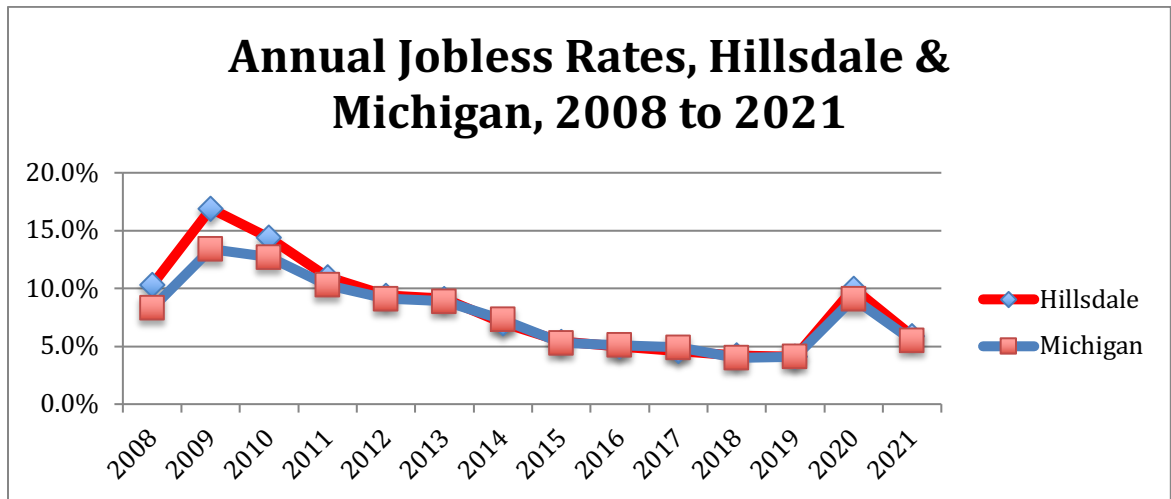
- 304 (44.7%) said they were very concerned.
- 274 (40.3%) were moderately concerned.
- 102 (15.0%) were not at all concerned.

Respondents in the 2019 CHNA survey were asked the same question. Of the 1085 who answered the question: at that time:

- 379 (34.9%) said they were very concerned.
- 441 (40.7%) were moderately concerned.
- 265 (27.8%) were not at all concerned.

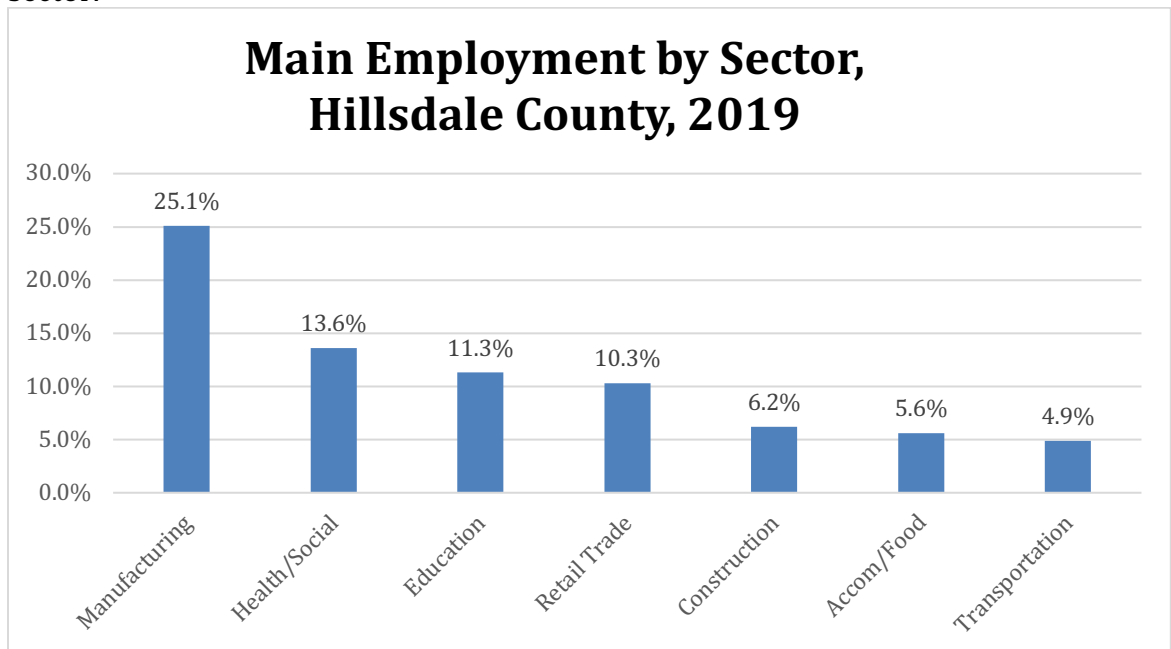
Employment

Hillsdale County's jobless rate parallels that of the state. The spike in 2020 reflects the Covid 19 lockdowns.



Source: Michigan Department of Technology, Management & Budget, Labor Market Information, 2021

The most common jobs in Hillsdale County are in the manufacturing & production sector.

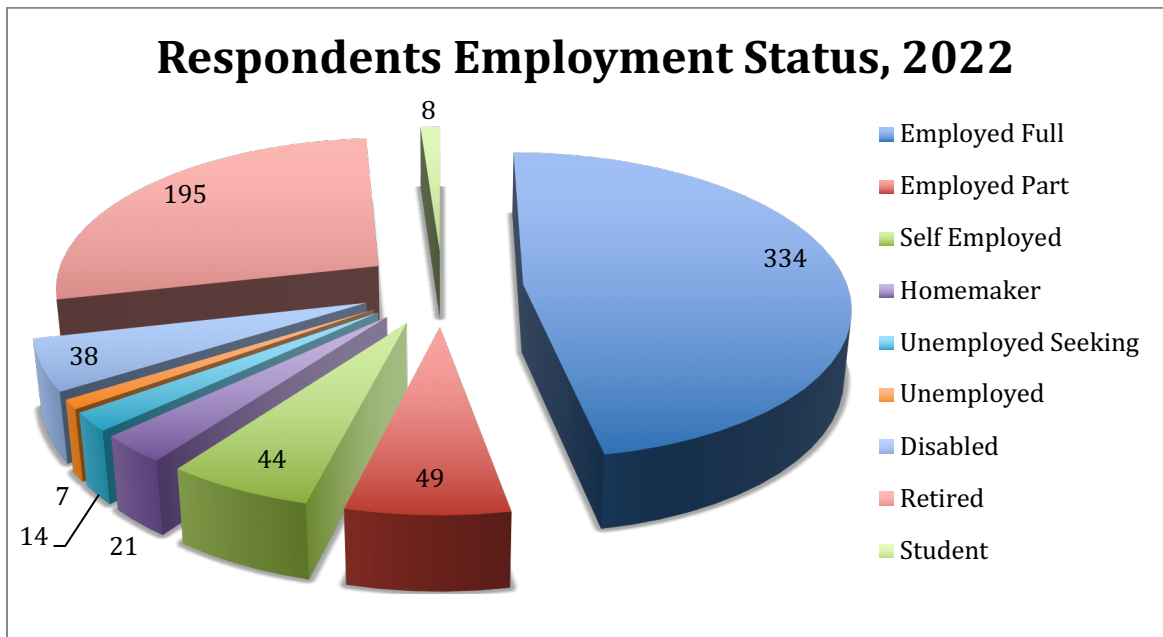


Source: DATA USA, Hillsdale County, MI, 2019

Respondents were asked in the CHNA survey about their employment status. Of the 719 who answered this question:

- 17 (2.4%) were students or too young to be employed.
- 334 (46.5%) were employed full time by a company.
- 49 (6.8%) worked part time or seasonally.
- 44 (6.1%) were self-employed.
- 14 (2.0%) were unemployed but seeking work.
- 7 (1.0%) were unemployed but not seeking work.
- 38 (5.3%) were permanently disabled.
- 195 (27.1%) were retired.
- 21 (2.9%) were homemakers.

It was noted when entering data from the paper surveys that some respondents checked more than one box for this question. This was more likely to be true for those age 65 or older who were retired. This may reflect that fact that some retirees remain active in the work force on a part time or occasional basis.



Source: CHNA Survey, 2022

Income

No personal income questions were asked in the CHNA survey.

The median and mean household income for the past 12 months for residents in Hillsdale County was less than Michigan.

Median and Mean Income, Hillsdale and Michigan		
	Hillsdale	Michigan
Median Income	\$49,622	\$57,144
Mean Income	\$63,636	\$78,400

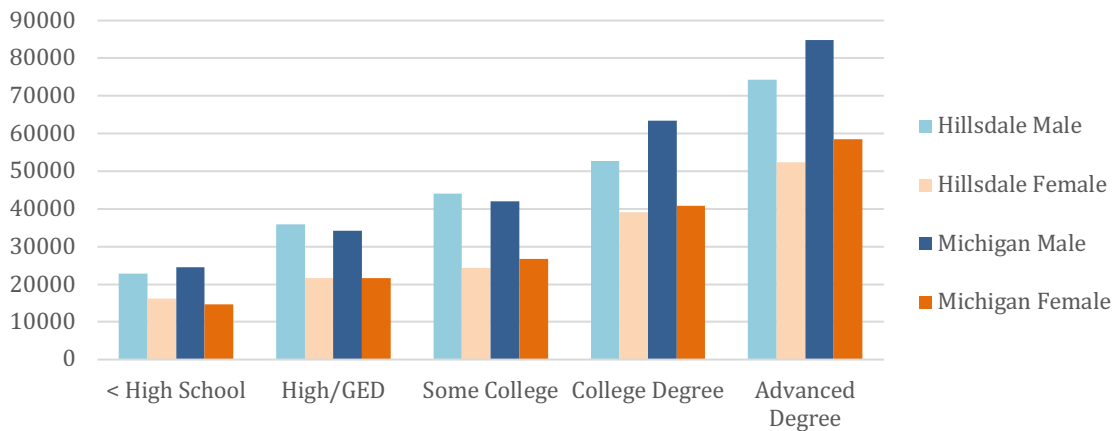
Source: U.S. Census Bureau, American Community Survey 2019, Five Year Estimate

Income is often a reflection of education and sex.

According to the U.S. Census Bureau, American Community Survey 2019, Five Year Estimates, the average wage in Michigan in 2019 is:

- \$67,777 for males.
- \$49,622 for females.

Hillsdale & Michigan Salary Estimates by Education & Sex



Undereducated residents in can impact local employment opportunities. The lack of qualified applicants for professional positions in a community often results in hiring individuals from outside the county to fill vacancies.

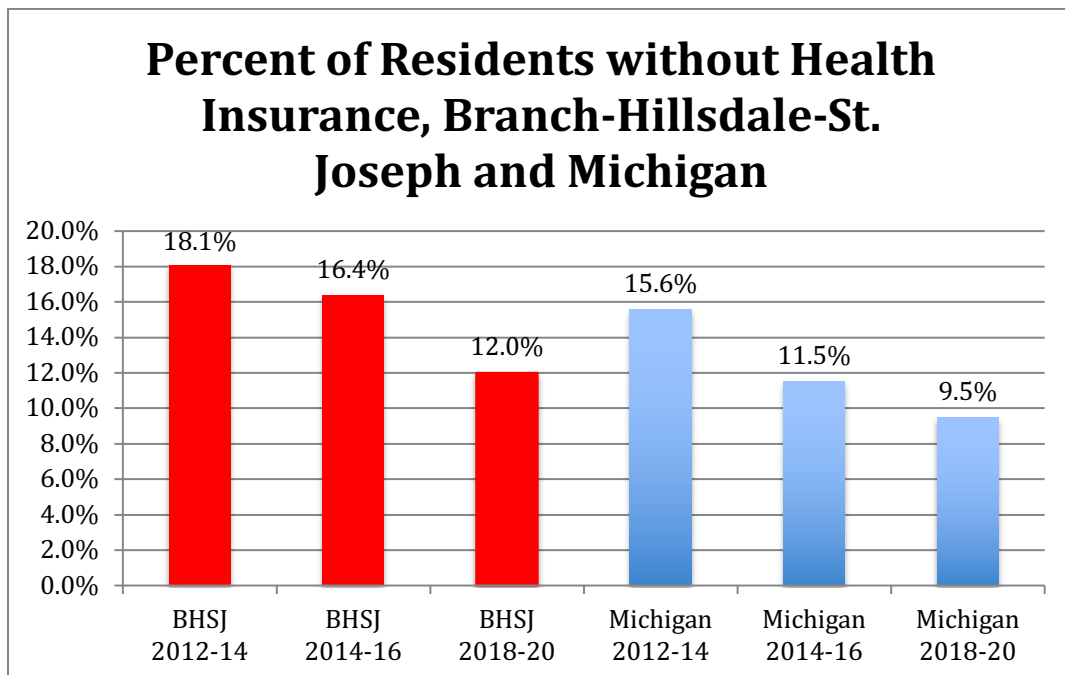
THE COMMUNITIY AND HEALTH INSURANCE

Prevalence of Health Insurance

Economic status was traditionally the most important factor determining whether a person had any, or adequate, health insurance. Today there are many government-subsidized programs that provide coverage for medical treatment, though there are still some people who do not qualify, or do not apply, for these programs.

The Michigan Behavior Risk Factor Survey (BRFS), 2018-20 average, showed 12.0% of residents in Branch-Hillsdale-St. Joseph Counties between the ages of 18 and 64 reported they had no health insurance compared to 9.5% in Michigan.

There has been a steady decrease between the 2012-14 BRFS to the latest report, though the tri-county area percent of uninsured is consistently higher than Michigan.

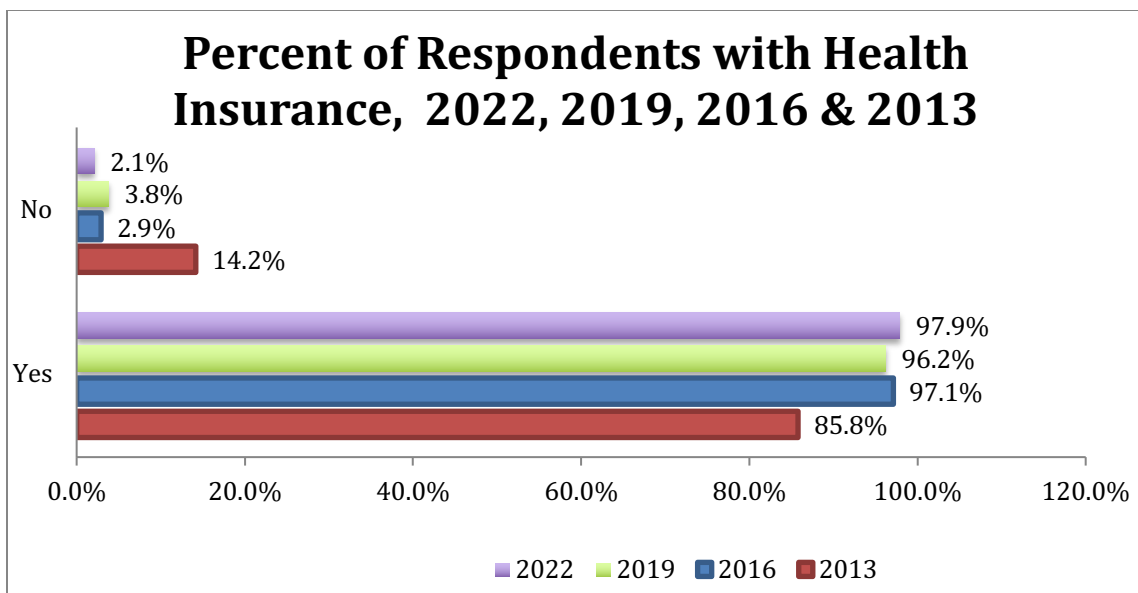


Sources: Behavior Risk Factor Survey, Branch-Hillsdale-St. Joseph Residents and Michigan, 2012-14, 2014-16 and 2018-20 Averages

The CHNA survey asked whether respondents had health insurance. Of the 704 who responded to this question:

- 689 (97.9%) said they did.
- 15 (2.1%) said they did not.

The number of uninsured is about the same as in the 2019 and 2016 CHNA surveys but it was much higher in 2013.



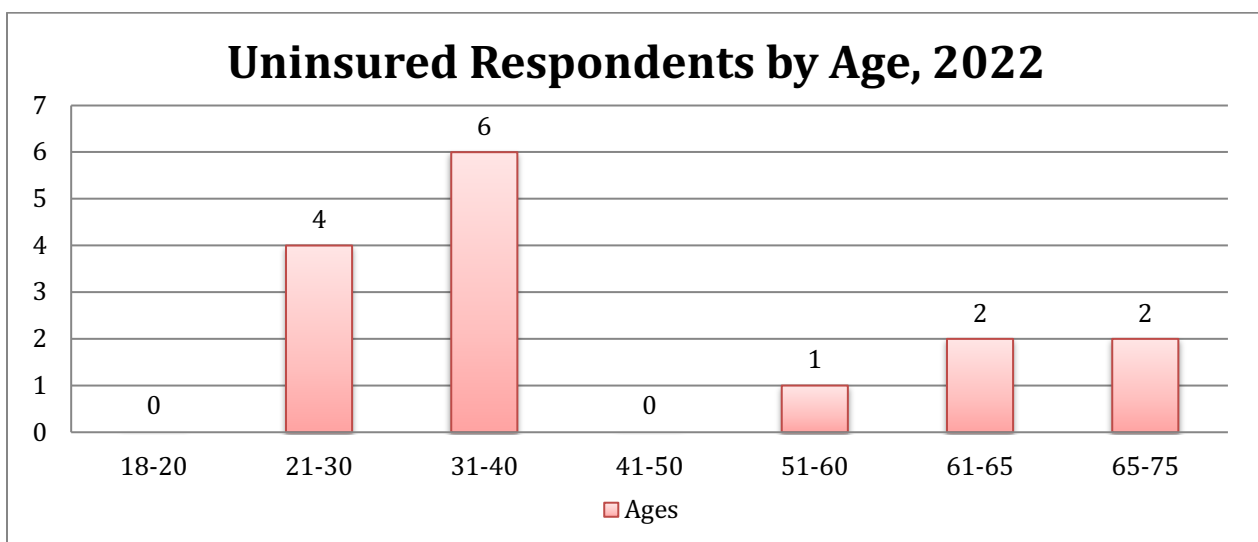
Sources: CHNA Surveys, 2022, 2019, 2016 and 2013

The Uninsured

15 people on the 2022 CHNA survey said they did not have health insurance. When individual responses were analyzed, it was found two were 65 or older and most probably were covered by Medicare.

Of those who reported no insurance:

- 4 were age 21 to 30.
- 6 were age 31 to 40.
- 1 was age 51 to 60.
- 2 were age 61 to 64.
- 2 were age 65 to 75



Source: CHNA Survey, 2022

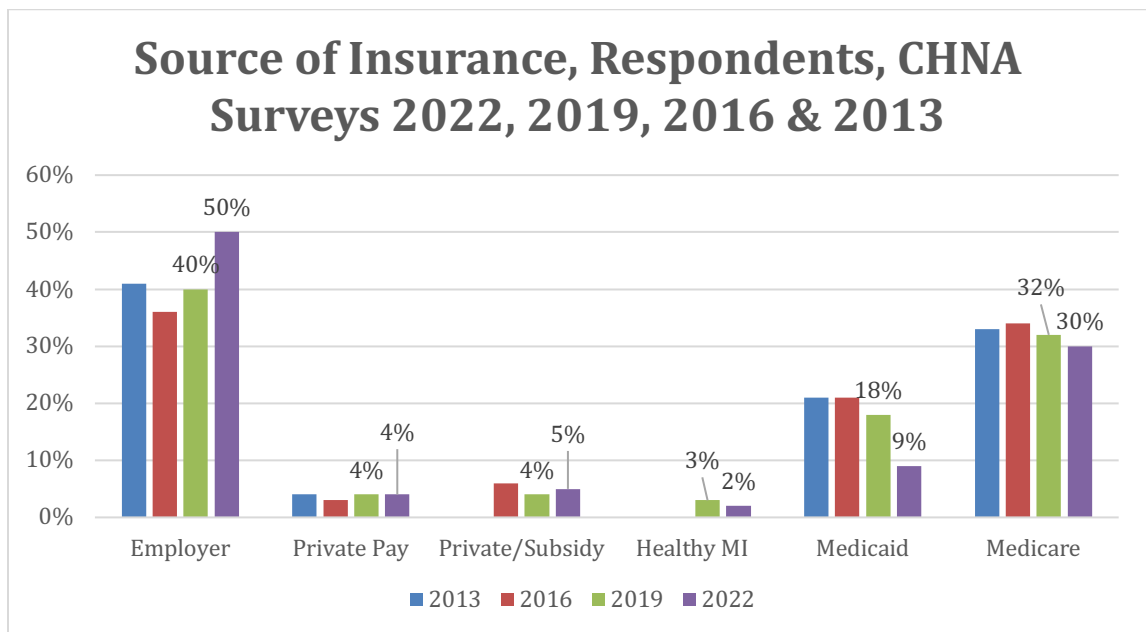
Type of Insurance

Respondents were asked in the CHNA survey what type of health insurance they had. Of the 681 who answered this question:

- 341 (50.1%) had insurance through their employer.
- 26 (3.8%) had privately paid insurance where they paid all the costs.
- 33 (4.9%) had a private plan where they paid some of the cost (government subsidized.)
- 61 (9.0%) were on Medicaid.
- 14 (2.1%) were on the Healthy Michigan plan.
- 25 (3.7%) had only Medicare.
- 146 (21.4%) had Medicare with a supplement plan.
- 35 (5.1%) had Medicare and Medicaid.

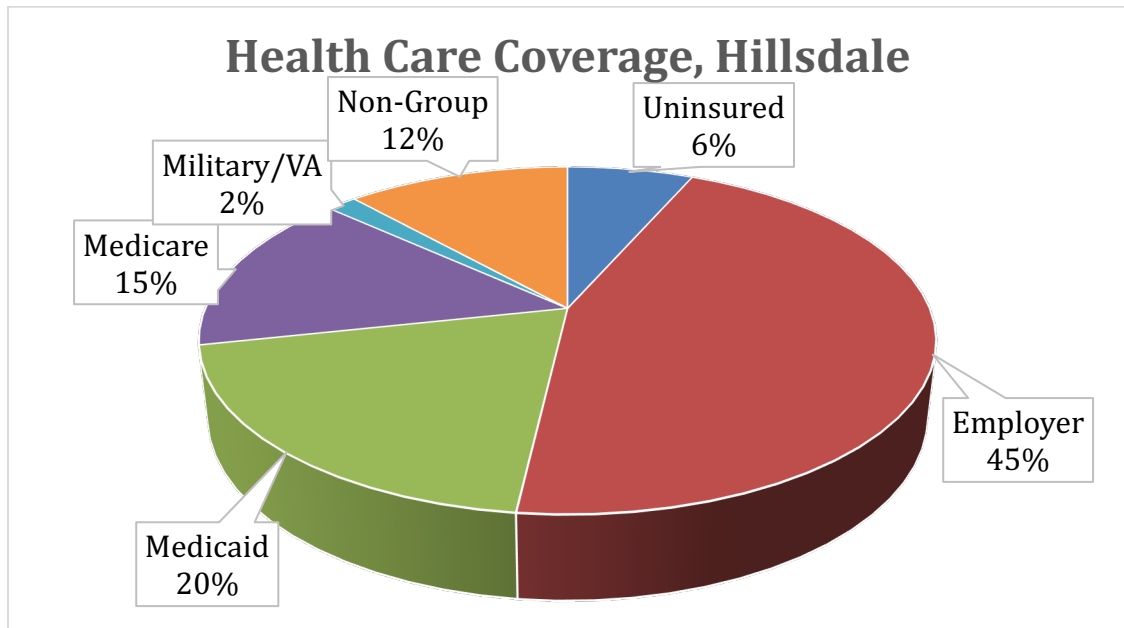
It was noted on the data entry of the paper surveys in 2019 that some people checked both Medicaid and Medicare as their health insurance. Analysis of these individuals revealed almost all were either disabled or aged. If they were less than 65, they were entered as on Medicaid; if over 65 they were entered as on Medicare.

As a result of this observation, a Medicare and Medicaid category was added to the 2022 survey. To make a comparison to previous surveys, all three Medicare categories were grouped together in the chart below.



Source: CHNA Surveys 2022, 2019, 2016 and 2013

A more complete look at the various types of health insurance used by Hillsdale County citizens relies on U.S. Census data.



Source: U.S. Census Bureau, American Community Survey, Five Year Estimate 2019

Patient Insurance Profile, Hillsdale Hospital

A study of Hillsdale Hospital inpatient admissions revealed the majority of patients were covered by Medicare. The percent covered by various insurance means has remained relatively constant over time.

Payment Source, Hillsdale Hospital Inpatients, 2016 to 2021						
	2016	2017	2018	2019	2020	2021
Medicare	47%	47%	45%	44%	45%	44%
Medicaid	21%	22%	23%	25%	22%	23%
BC/BS	18%	17%	18%	18%	19%	19%
Commercial	10%	11%	11%	10%	10%	12%
Self Pay	3%	3%	3%	4%	3%	3%

Source: Inpatient Insurance Profile, Hillsdale Hospital, 2016 to 2021

Employers and Health Savings Accounts

The largest group of respondents in the 2022 CHNA survey said they had health insurance through their employer.

Employer group plans are an inducement to attracting employees.

Respondents were asked if their employer plan had a Health Savings Account.

- 341 (50.1%) of respondents said they had health insurance through their employer
- Only 152 (34.3%) said that insurance included a Health Savings Account.

This is a little higher than was found on the 2019 survey when only 26.4% said their employer's insurance included a Health Savings Account

Medicaid

Medicaid provides a wide range of health insurance benefits.

According to the Medicaid Help Organization, a privately owned company that serves as a resource for those seeking affordable health insurance, “The health services deemed covered and necessary under Michigan Medicaid include:

- Ambulance and non-emergency medical transportation
- Emergency services
- Family planning and pregnancy services
- Home healthcare, nursing home care, personal care services, private duty nursing and hospice care
- Immunizations, labs, X-rays and medical supplies
- Mental health services
- Substance use disorder treatment services
- Physical and occupational therapies and chiropractic services
- Hearing and speech services
- Surgeries”

According to the Medicaid Help Organization, there are some fee-for-service inclusions where enrollees are responsible for a minimal co-pay of less than \$5. These include:

- “Physician office and free-standing urgent care center visits
- Outpatient hospital clinic visits
- Emergency room visits for both emergency and non-emergency services
- Inpatient hospital stays
- Pharmacy costs
- Chiropractic care
- Dental visits
- Hearing aids
- Podiatric visits
- Vision appointments”

(Source: <https://medicaid-help.org>)

Under the Affordable Care Act, Medicaid expansion was approved December 30, 2013 in Michigan and implemented beginning April, 2014. This was expected to cause an increase in the number of Medicaid users in Hillsdale County.

But the percentage of respondents in the current and previous CHNA surveys who said they had Medicaid only has been decreasing. There were:

- 9% in 2022
- 17.6% in 2019
- 20.6% in 2016
- 21.4% in 2013

There are several factors that raise questions about the number of county residents who report they are on Medicaid based on the CHNA surveys.

1. These numbers do not include those almost entirely aged 65 or older who claimed they were on both Medicare and Medicaid.
2. The CHNA surveys were limited to residents ages 18 and older, so children on Medicaid were not represented.

Children on Medicaid

Kids Count in Michigan, 2021 reports that the number of children ages 0 to 18 on Medicaid in 2018 was 51.5% in Hillsdale County compared to 46.3% in Michigan. This corresponds to what members of the HSN estimated.

Children on Medicaid automatically have prescription, dental, and eye exam/glasses coverage, though not all adults on Medicaid will have dental benefits.

While many working parent(s) have health insurance through their employers, the coverage may apply only to the workers. Paying healthcare premiums to insure dependents under an employer plan is often prohibitive. As a result, many worker's children are enrolled in Medicaid.

Medicare

Medicare is a United States national health insurance program. It is administered by the Centers for Medicaid and Medicare Services of the U.S.

Medicare was created in 1966 under the Social Security Administration.

Medicare has four parts. According to the Medicare official website:

- 1) Medicare Part A, hospital insurance, covers:
 - inpatient hospital care
 - skilled nursing facility
 - hospice
 - lab tests
 - surgery
 - home health care
- 2) Medicare Part B, medical insurance, covers:
 - doctor and other health care providers' services
 - outpatient care including a yearly check up
 - durable medical equipment
 - home health care
 - some preventive services
- 3) Medicare Part C, Medicare Advantage Plans. The monthly premium for this varies by the specific plan chosen; terms and deductibles vary with the plans. Plans may cover:
 - dental coverage
 - eye exams and glasses
- 4) Medicare Part D, drug coverage, is an optional program to cover prescription drugs. This plan has a premium, yearly deductible and co-payments with costs that are income based.

Residents are eligible for Medicare once they reach age 65. There is no monthly premium for Part A, but people enrolled in Part B will pay an average monthly premium of \$170.1 in 2022.

Medicare was amended in 1973 to expand coverage to people of any age who receive Social Security benefits due to disabilities. This has resulted in an increase in the number of people who qualify for the program.

The Michigan Behavior Risk Factor Survey, 2018-20 asked adults if they had any disability conditions such as, "...serious difficulty hearing, visual impairment, difficulty walking or climbing stairs, difficulty dressing or bathing, or difficulty doing errands alone." They found 41.3% of Branch-Hillsdale-St. Joseph residents said they did compared to only 29.0% for Michigan residents.

Only a portion of elder residents on Medicare are also considered disabled.

Percent on Medicare based on Age and Disability, Michigan & US, 2019		
	Aged	Disabled
Michigan	84%	16%
United States	86%	14%

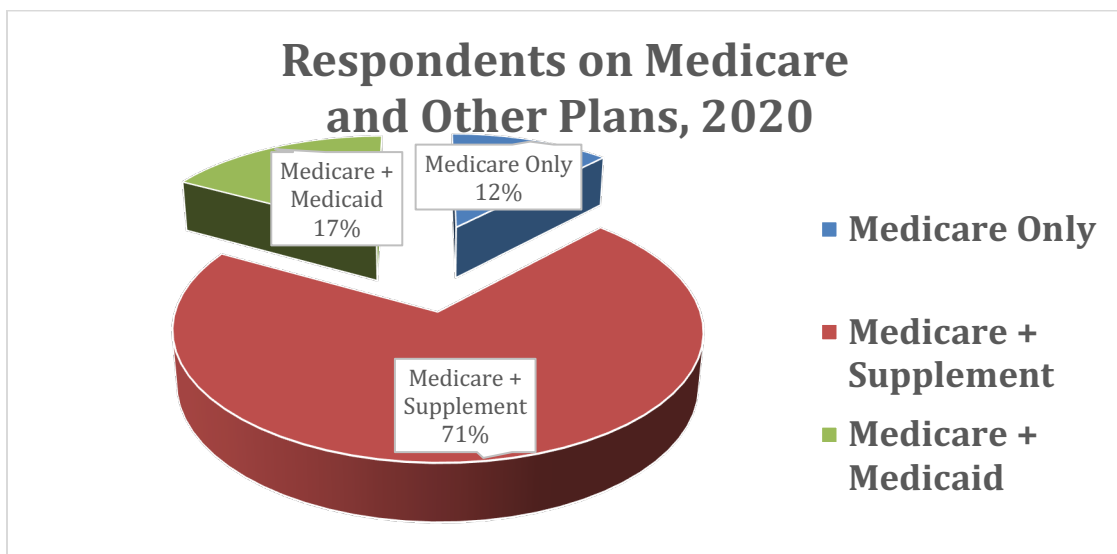
Source: Henry J. Kaiser Family Foundation, Disability of Medicare Beneficiaries by Eligibility Category, 2019

Medicare and Supplemental Plans or Medicaid

There is a yearly deductible before Medicare will cover any expense and coverage is not 100% of the cost. Because of this, many Medicare enrollees carry supplemental insurance at their own expense. Some people on Medicare qualify for Medicaid and do not need a separate supplemental plan.

The majority of the 206 respondents who reported they were on Medicare in the 2020 CHNA survey had either a supplemental plan or were on Medicaid:

- 146 (70.1%) said they carried a supplemental plan.
- 35 (17%) said they also had Medicaid.
- 25 (12.1%) had neither a supplement nor Medicaid.



Source: CHNA Survey, 2022

The majority of the respondents in the previous CHNA surveys also has supplemental plans but there was no separate category on those surveys to identify those on both Medicare and Medicaid.

Of the Respondents who reported they were on Medicare on previous surveys:

- 87% reported they had a supplemental plan in 2019
- 81% reported a supplemental plan in 2016.
- 82% had a supplemental plan in 2013.

Concerns about Medicare's Sustainability

Medicare is financed by the premiums paid by enrollees and payroll taxes on younger workers. But the amount paid out by Medicare to enrollees is significant and questions about the sustainability of the program are often raised, especially as the aged population increases and coverage expanded to include those who are permanently disabled.

The average reimbursement per Medicare enrollee in Hillsdale County was \$10,669. This was a little more than the national average in 2019.

Money Spent per Enrollee, Hillsdale, Michigan & U.S., 2019			
	Hillsdale	Michigan	U.S
Enrollee	10,669	\$10,614	\$10,536

Source: Dartmouth Atlas Project, Medicare Spending per Enrollee, 2019

Prescription Drug Insurance

While 97.9% of those surveyed had some form of health insurance, a slightly smaller percentage had prescription coverage.

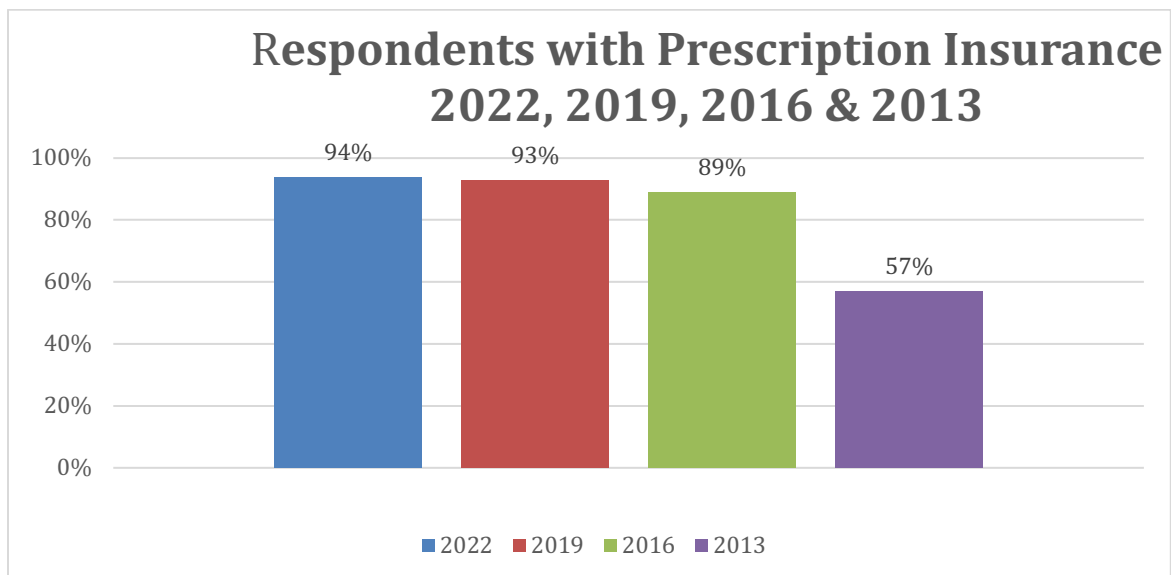
Respondents were asked if they had health insurance, did they have prescription drug coverage. 684 answered this question; of those, 641 (93.7%) said they did.

Those who said they had prescription coverage were further analyzed as to what type of primary health insurance they said they had.

The analysis showed that among those who had a prescription plan:

- 321 were covered under an employer health insurance plan.
- 24 were covered through a private plan.
- 28 were covered through a government subsidized plan.
- 58 were covered under Medicaid.
- 13 were covered through Healthy Michigan.
- 19 were covered through Medicare.
- 131 were covered through Medicare with a supplement plan.
- 22 were covered under Medicare with Medicaid.
- 25 did not identify their plan.

The percentage of respondents with prescription insurance has risen slightly over the years based on previous CHNA surveys.



Source: CHNA Surveys, 2022, 2019, 2016 and 2013

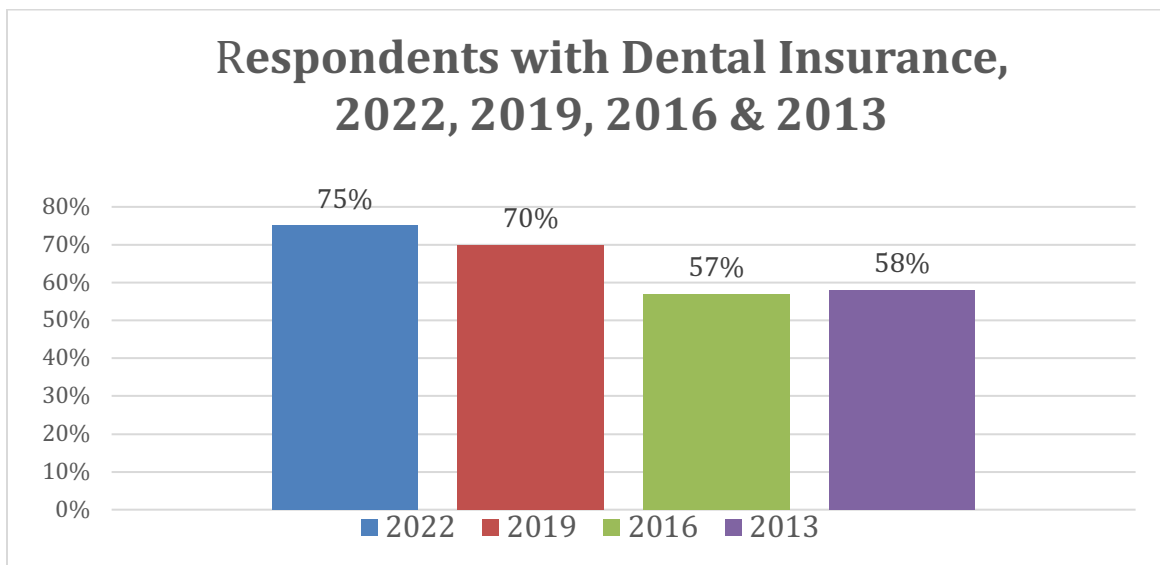
Dental Insurance

A smaller percentage of the survey respondents with health insurance had dental coverage than prescriptions.

Respondents were asked if they had health insurance, did they have dental coverage. 658 answered this question and 492 (74.8%) of them said they did. Of those who said they had dental coverage:

- 290 were covered by an employer plan.
- 14 were covered under a private plan.
- 18 were covered through a government subsidized plan.
- 48 were covered under Medicaid.
- 8 were covered through Healthy Michigan.
- 10 were covered under Medicare.
- 69 were covered through Medicare with a supplement plan.
- 21 were covered under Medicare with Medicaid.
- 14 did not identify the plan.

This is higher than what was found in previous surveys and may reflect the increase of employment opportunities in the county with dental insurance offered under an employer provided plan.



Source: CHNA Surveys, 2022, 2019, 2016 and 2013

The Michigan Behavior Risk Factor Survey (2018-20 average) asked respondents about dental care. They found:

- 31.8% of Branch-Hillsdale-St. Joseph residents had not visited a dentist in the past year compared to 30.8% of all Michigan residents.
- 27.4% had 6 or more missing teeth compared to 14.9% of all Michigan residents.

Percentage with no Dental Visit or Missing Teeth, 2018-20 Average		
	No Dental Visit	Missing 6 or more Teeth
Branch-Hillsdale-St. Joseph	31.8%	27.4%
Michigan	30.8%	14.9%

Source: Michigan Behavior Risk Factor Survey, 2018-20 Average

Dental Clinic

In March 2011, the Branch-Hillsdale-St. Joseph Community Health Agency, in partnership with My Community Dental Centers, opened a dental clinic in Hillsdale. The clinic is located at 20 Care Drive, Hillsdale and serves Medicaid, the under-insured and uninsured clients.

Eye Exams and Glasses

The 2022 CHNA asked respondents if they had insurance for eye exams and glasses. Of the 663 who answered this question:

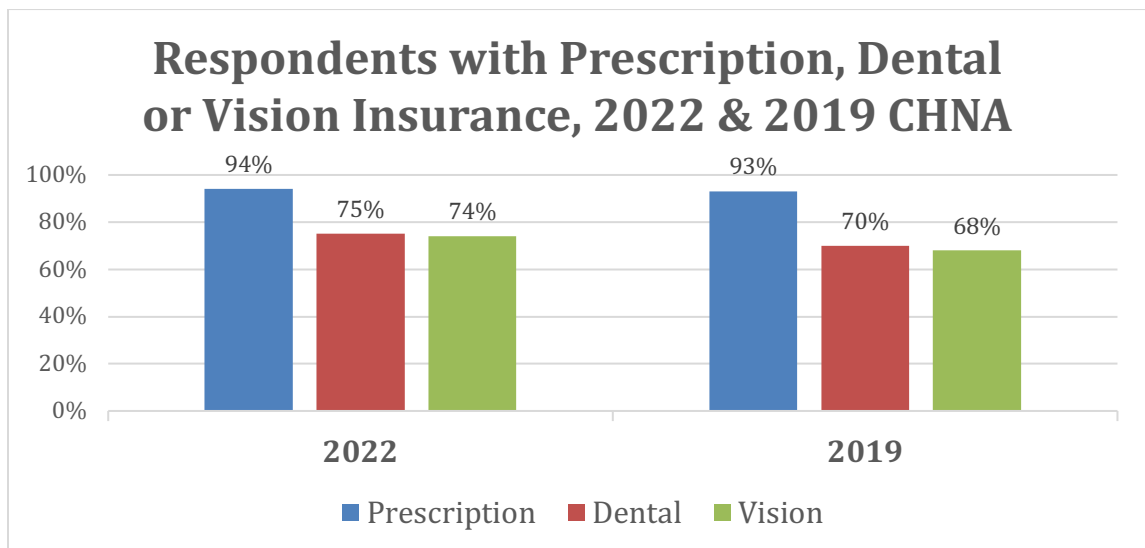
- 489 (73.8%) said they had coverage.
- 174 (26.2%) did not.

Respondents who said they had vision coverage were further analyzed as to what type of primary health insurance they said they had.

The analysis showed that among those who had a vision plan:

- 265 were covered by an employer plan.
- 14 were covered through a private plan.
- 21 were covered under a government subsidized plan.
- 54 were covered under Medicaid.
- 10 were covered through Healthy Michigan.
- 11 were covered through Medicare only.
- 72 were covered through Medicare with a supplement plan.
- 29 were covered under Medicare/Medicaid.
- 13 did not identify a plan.

Summary of Prescription, Dental and Vision Insurance



Source: CHNA Surveys, 2022 and 2019

COVID 19

The Covid 19 epidemic dominated the news and affected everyone's life in some way during 2020 and 2021.

Many people were encouraged or forced to set aside some health concerns due to shut downs. Some hospitals and doctors limited care to those with only urgent health issues. As a result, some preventative services and health maintenance visits were curtailed.

The 2022 CHNA survey addressed a few of the Covid 19 issues.

Missing Appointments due to Covid 19

Respondents in the 2022 survey were asked if they missed any medical appointments due to Covid 19. Of the 698 who answered this question:

- 121 (17.3%) said they had.
- 577 (82.7%) had not.

As a follow-up question, respondents were asked if they missed appointments due to Covid 19 were they still skipping them. 32 (6%) respondents said they were still doing so.

Covid 19 Vaccination

The Covid 19 vaccines in use in 2022 are made by one of three drug companies:

- Pfizer
- Moderna
- Johnson and Johnson

The vaccines were released under emergency use authorization. Emergency use authorization can only be done if there are, "...no adequate, approved, and reliable alternatives." (Source: Federal Drug Administration)

The first vaccine approved under the emergency use authorization was the Pfizer vaccine which was approved October 22, 2020.

The 2022 survey asked if the respondents had been vaccinated for Covid 19. Of the 686 who answered this question:

- 486 (70.9%) said they were.
- 200 (29.1%) had not.

The Centers for Disease Control tracks the percentage of residents who have had at least one dose of a Covid 19 vaccine. As of March, 2022, they estimate:

- 81.4% of the US population age 5 or older have been vaccinated.
- 63.1% of Michigan residents have done so.
- 40.6% of Hillsdale residents have done so.

As a follow-up question in the CHNA 2022 survey, respondents were asked those not vaccinated why they chose not to do so. 213 respondents answered this question though only 200 said they were not vaccinated. Some respondents gave multiple answers:

- 63 said they had a religious objection.
- 38 were concerned about fertility.
- 128 cited safety concerns.
- 117 said they already had Covid 19.
- 48 people wrote in specific concerns. Among the major reasons cited:
 - Several said they did not trust the vaccine.
 - Many refused to say
 - Some just said personal reasons.
 - One said they got the first Moderna shot and had a bad reaction.
 - Some said they were for choice and not mandates.

Reluctance to get an initial Covid 19 vaccination and subsequent boosters is prevalent among some circles. Resistance to the vaccines has increased in recent months with the court mandated release of the Pfizer clinical trial results that were submitted to the Federal Drug Administration prior to vaccine approval. The Pfizer clinical trial report documented many adverse effects in trial participants.

The Centers for Disease Control and Prevention maintains a Vaccine Adverse Event Reporting System (VAERS). The VEARS relies on reports from health professionals and is generally considered to under report adverse effects due to the time it takes to file reports. Reports filed are submitted by a team, not just one health professional.

The March 4, 2022 VAERS report for the United States including U.S. Territories details vaccine adverse events to the Covid 19 vaccines since their roll-out. These include:

- 13,692 deaths.
- 13,564 life threatening events.
- 14,737 permanent disabilities.
- 560 congenital anomaly/birth defects.
- 68452 hospitalizations.
- 415 prolong hospitalizations.
- 103,737 emergency room visits.
- 166,310 physician office visits.
- 538,065 none of the above effects.

These adverse effects exceed adverse effects for all other vaccines combined since the inception of the VAERS.

Hospitalization and Covid 19

Many who are hospitalized in the past years for various causes were found to test positive for Covid 19.

Hospitalization data from multiple sources often make it difficult to determine how many hospitalizations were due to Covid 19 only, rather than citing Covid 19 as a contributing factor.

The 2022 survey asked respondents if they already had Covid were they hospitalized. Of the 149 who answered this question:

- 7 (4.7%) said yes.
- 142 (95.3) said no.

Hillsdale Hospital reported:

- Of those hospitalized for Covid, 18% were vaccinated and 82% had not.
- Of those that had to be ventilated, 4% were vaccinated while 96% were not.
- Of those who died, 4% were vaccinated and 96% were not.

Hospitalizations for Covid have varied with the variant prevailing at the time. But data from U.S. federal, state and local agencies show the number of Covid 19 cases requiring hospitalization and death rates are lower for Americans that are vaccinated than the unvaccinated.

BIRTH COMMUNITY HEALTH INDICATORS

Birth Statistics

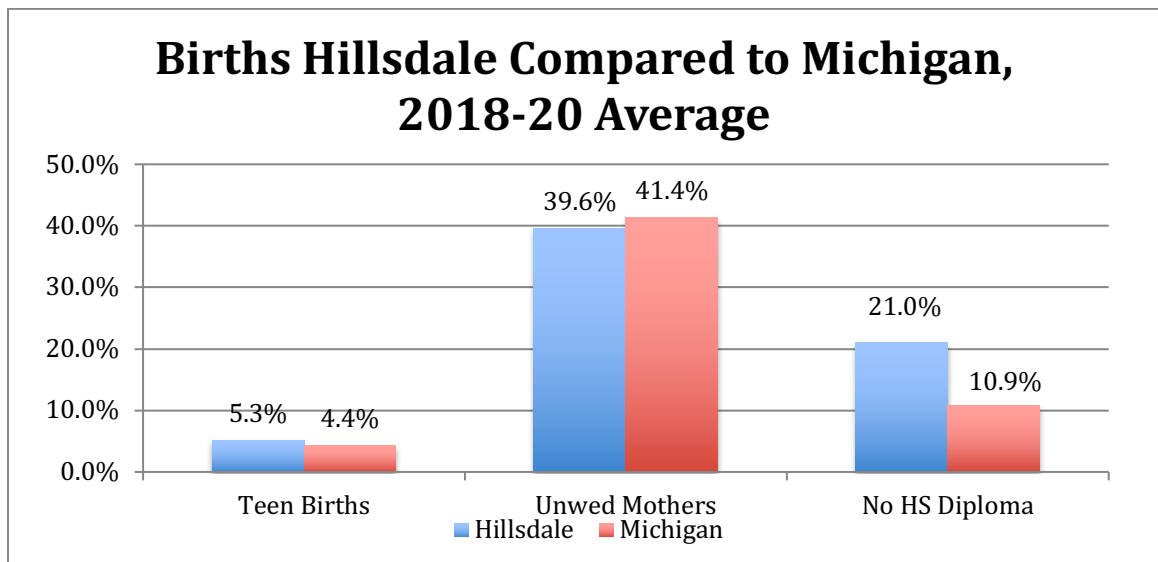
Hillsdale County's average live birth rates for women age 15 and older during the years 2018 to 2020 were higher than Michigan. The average pregnancy rate in the county was comparable to the state but the county abortion rate was lower.

Pregnancy and Live Birth Rates, Hillsdale and Michigan, 2018-20 Average		
	Hillsdale	Michigan
Live Birth Rate	63.8	57.1
Pregnancy Rate	81.2	84.1
Abortion Rate	4.2	14.1

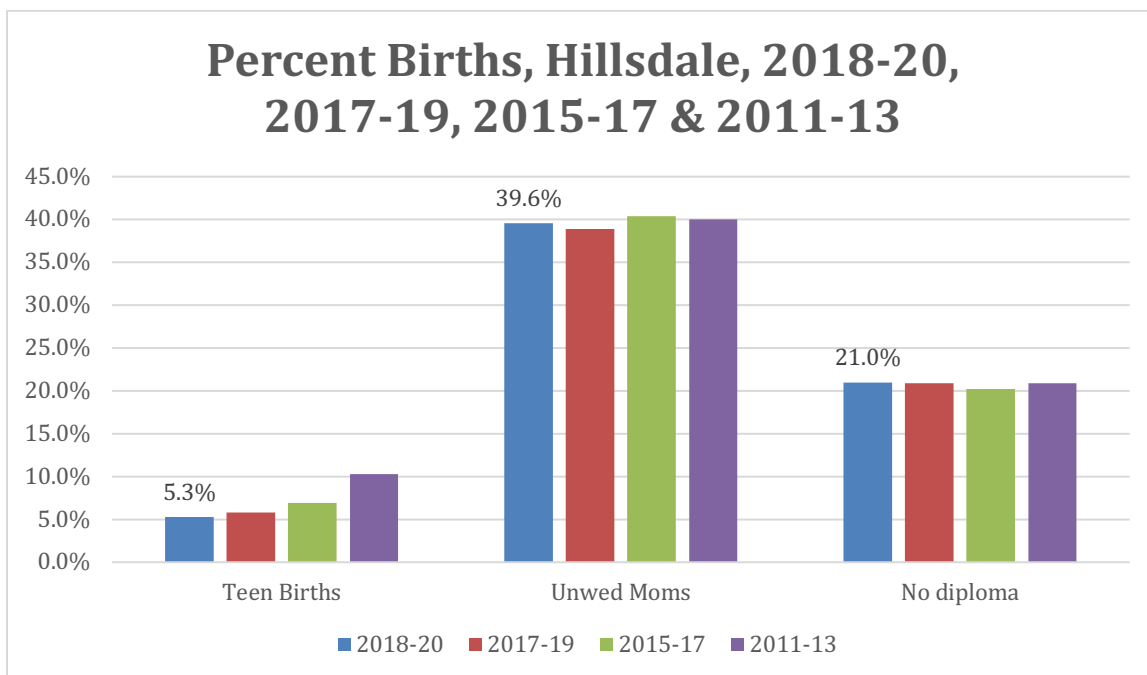
Source: Michigan Resident Birth Files, Michigan Department of Community Health, 2018-20 Average

There were 1,501 live births from 2018-20 for an average of 500 live births a year among county residents. During this time period:

- 5.3% of the births were to teen mothers compared to 4.4% in Michigan. Though this is slightly higher than in Michigan during this period, it is a decrease from the 5.7% seen in Hillsdale in the 2017-19, the 6.9% in 2015-17 or the 10.% in the 2011-13 periods.
- 39.6% were to unwed mothers compared to 41.4% in Michigan. This has remained little changed over the last decade.
- 21.0% of mothers had less than a high school education, compared to 10.5% in Michigan. This is also about the same as in previous periods.



Source: Michigan Resident Birth Files, Michigan Department of Community Health, 2018-20 Average



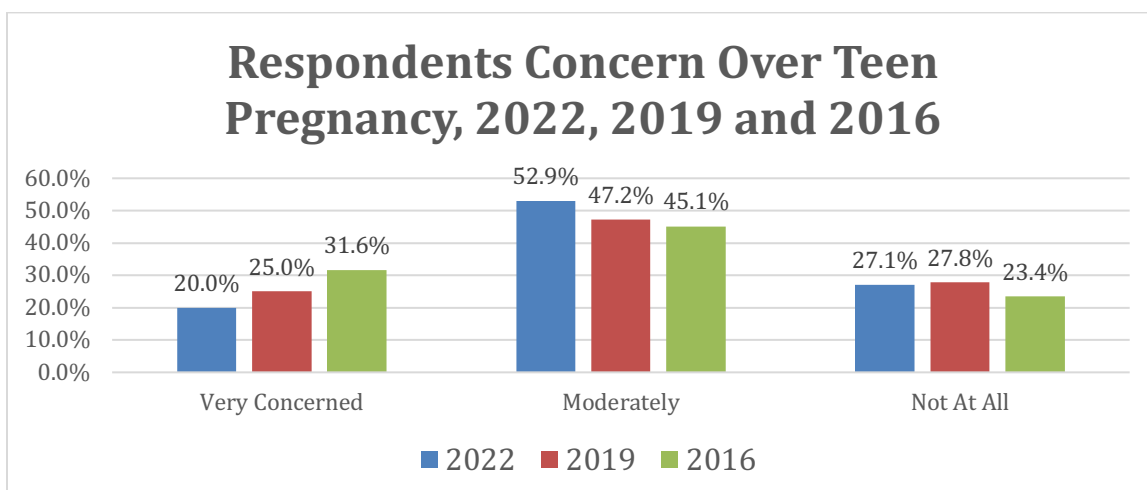
Source: Michigan Resident Birth Files, Michigan Department of Community Health, 2018-20, 2017-19, 2015-17 and 2011-13 Averages

Teen Pregnancy

2022 survey respondents were asked if they were very concerned, moderately concerned, or not at all concerned about the teen pregnancy in the community. Of the 665 who answered this question:

- 133 (20.0%) were very concerned.
- 352 (52.9%) were moderately concerned.
- 180 (27.1%) were not at all concerned.

This is a little different than what was found in previous surveys.

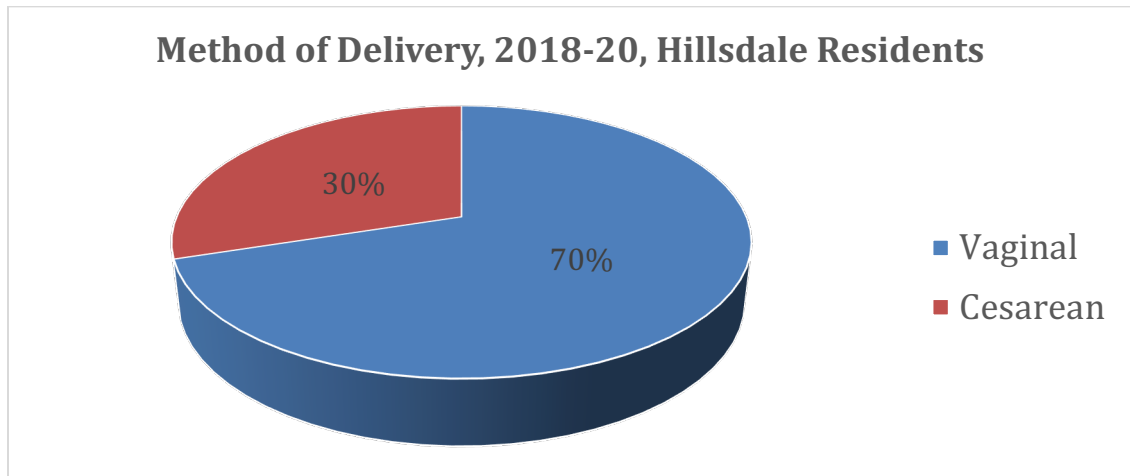


Source: CHNA Surveys, 2022, 2019 and 2016

Method of Delivery

Of the 1,501 births to county residents in the three-year period from 2018 to 2020, the majority of births, 1,055 (70.3%) were through vaginal delivery as opposed to 67.8% in Michigan.

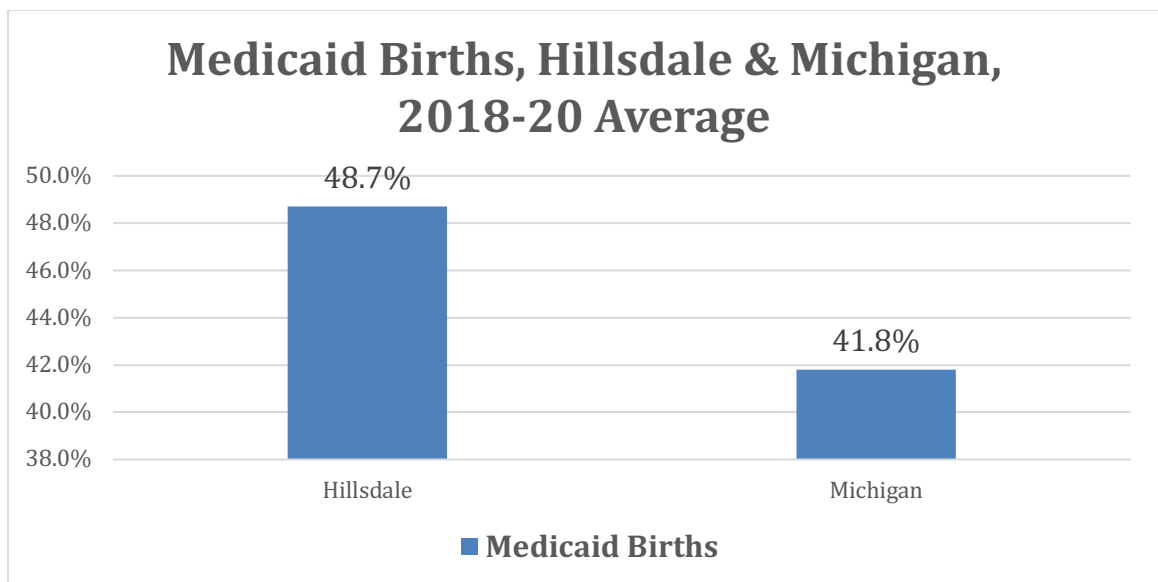
This is similar to the result found in previous years.



Source: Michigan Resident Birth Files, Michigan Department of Community Health, 2018-20 Average

Payment of the Cost of Deliveries

Among the 1,501 births to county residents between 2018 to 2020, 48.4% (726) of deliveries were covered by Medicaid compared to 40.8% in Michigan. This is similar to the 48.7% in 2017-19.



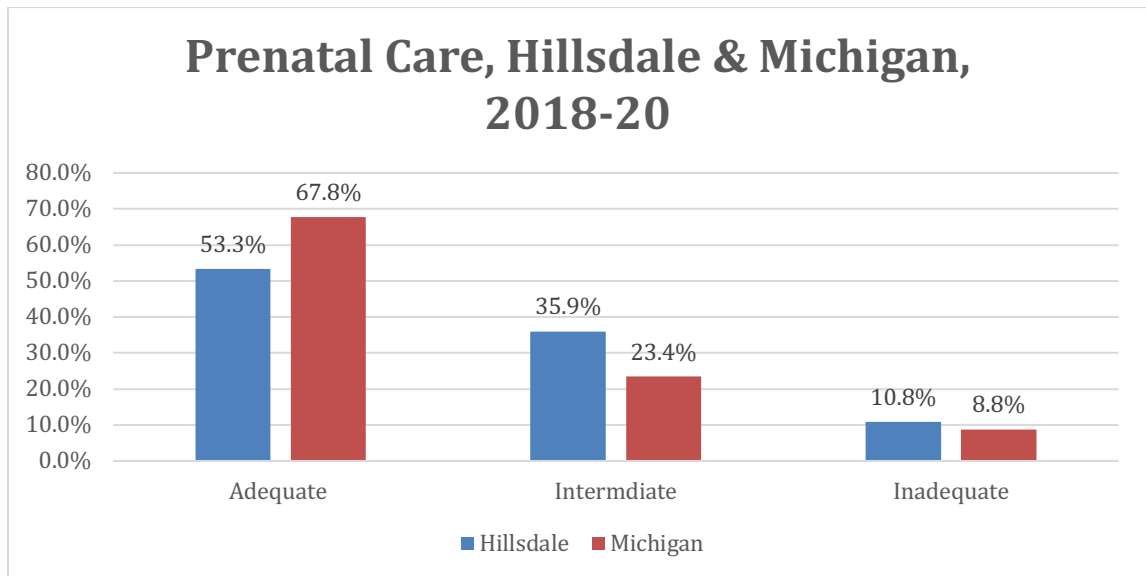
Source: Michigan Resident Birth Files, Michigan Department of Community Health, 2018-20 Average

Prenatal Care

Prenatal care is reported based on the Kessner Index.

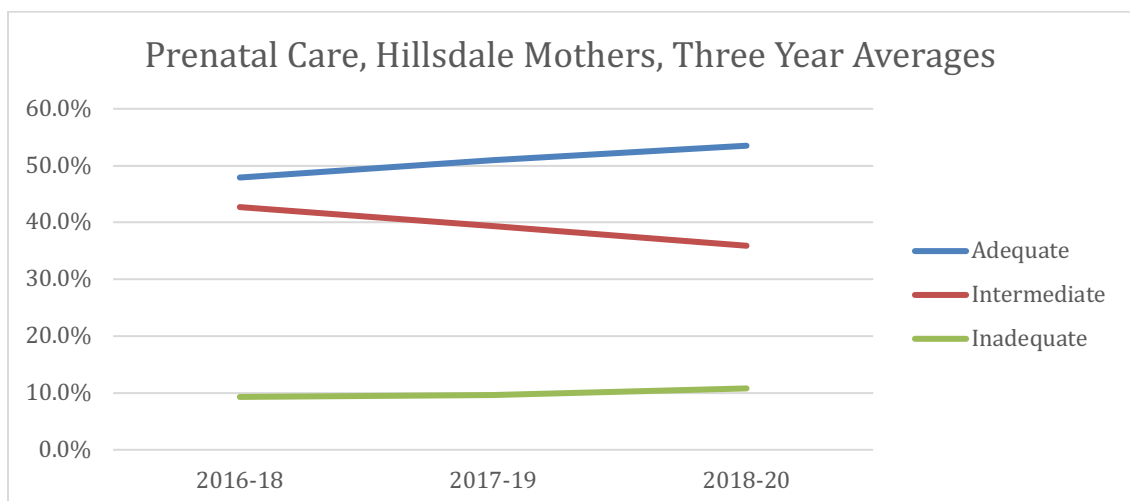
Among the 1501 births to county residents between 2018-20:

- 53.3% of the mothers received adequate prenatal care compared to 67.8% in Michigan
- 35.9% of mothers received intermediate care compared to 23.4% in Michigan.
- 10.8% had inadequate care compared to 8.8% in Michigan



Source: Michigan Resident Birth Files, Michigan Department of Community Health, 2018-20 averages

An analysis of prenatal care indicates that about 50% of Hillsdale mothers receive adequate pre-natal care, while 10% do not.



Source: Michigan Resident Birth Files, Michigan Department of Community Health, 2016-18, 2017-19 and 2018-20 averages

Low Birthweight

Lack of adequate pre-natal care contributes to several poor outcomes for infants, including low birthweight. The percent of low and very low birthweights was less in Hillsdale than in Michigan.

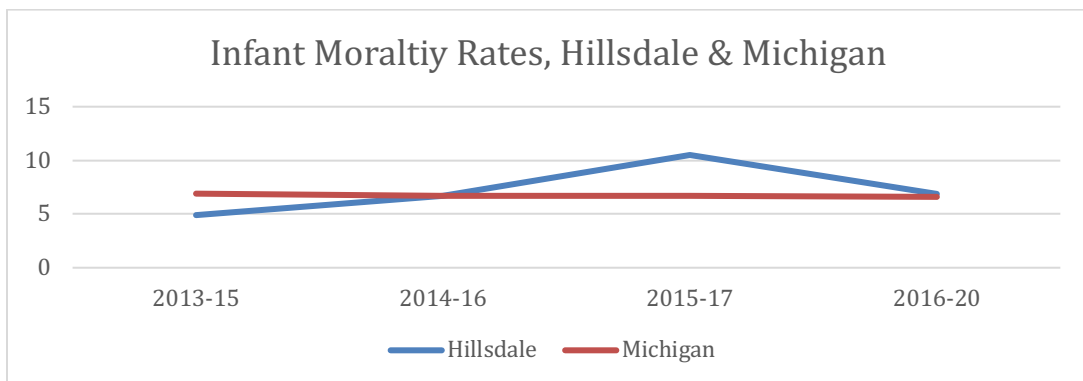
Percent of Low & Very Low Birthweight, Hillsdale & Michigan			
	2016-18	2017-19	2019-20
Hillsdale	8.1%	6.9%	6.4%
Michigan	10.2%	9.2%	10.1%

Source: Michigan Resident Birth Files, Michigan Department of Community Health, 2016-18, 2017-19 and 2018-20 averages

Infant Mortality Rates

Infant death is always tragic and can be due to several factors. The most common causes are congenital anomalies, sudden infant death syndrome and respiratory conditions.

Hillsdale County's infant death rate is comparable to that of Michigan residents.



Source: Source: Michigan Resident Infant Mortality, Michigan Department of Community Health

Hillsdale Hospital Birthing Center

Hillsdale Hospital offers a fully equipped birthing center.

Not all live births to Hillsdale County residents occurred at Hillsdale Hospital, but some out-of-county residents used the hospital facility.

Hillsdale Hospital Births, 2016 to 2021						
	2016	2017	2018	2019	2020	2021
Live Births	314	305	333	352	341	353
Still Births	13	6	2	4	4	0

Source: Hillsdale Hospital Live Births, 2016 to 2021

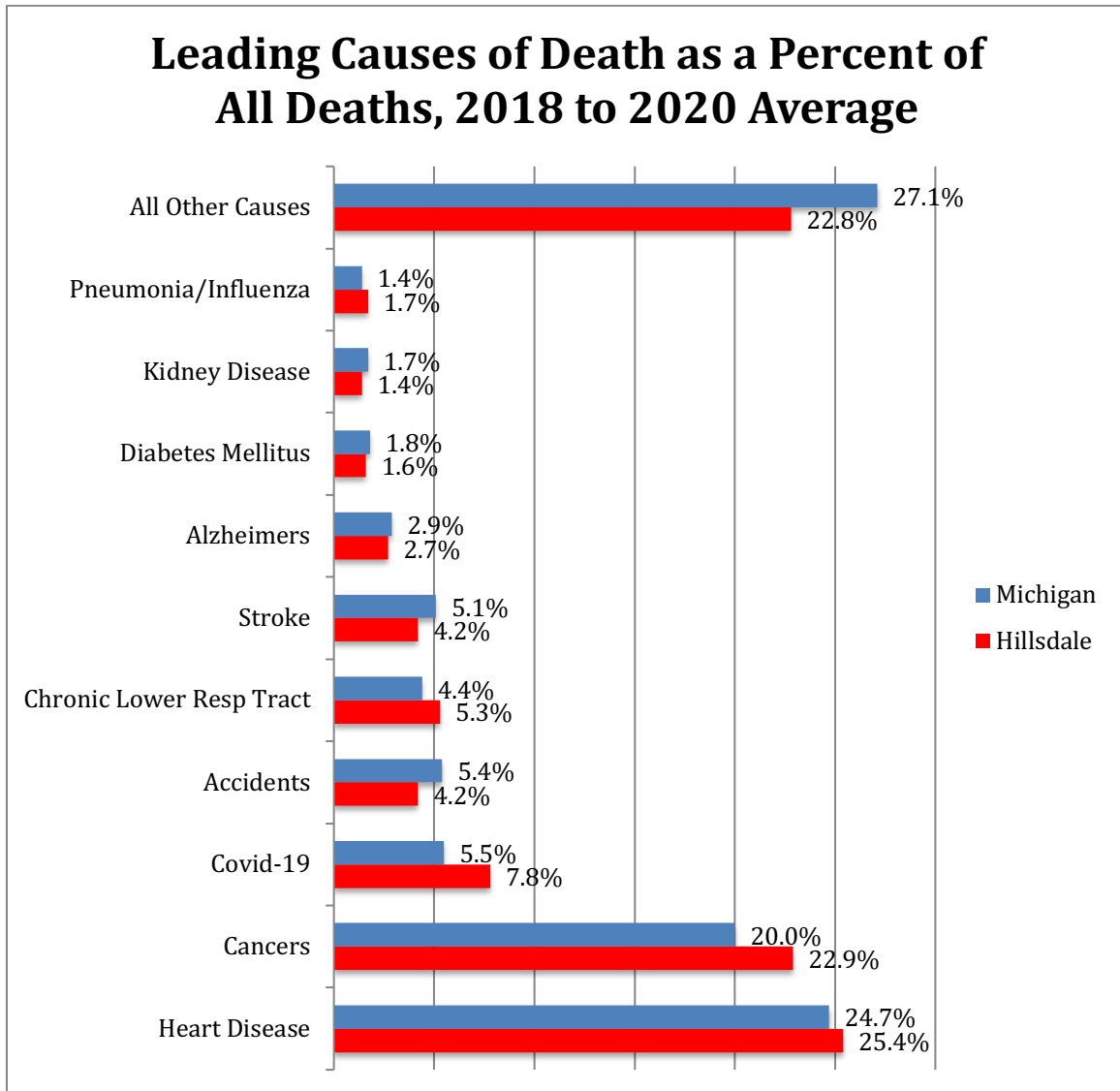
Respondents in the 2022 survey were asked if they had been pregnant in the past year. 51 respondents said they had.

As a follow up question, respondents were asked if had a baby in the past year, did they use Hillsdale Hospital for delivery. 25 respondents said they did.

DEATH COMMUNITY HEALTH INDICATORS

Causes of Death

The leading causes of death in Hillsdale County (reported as a 2018 to 2020 three-year average) were heart disease and cancer, both at slightly higher percentages compared to Michigan.



Source: Michigan Death Files, 2018 to 2020 Average

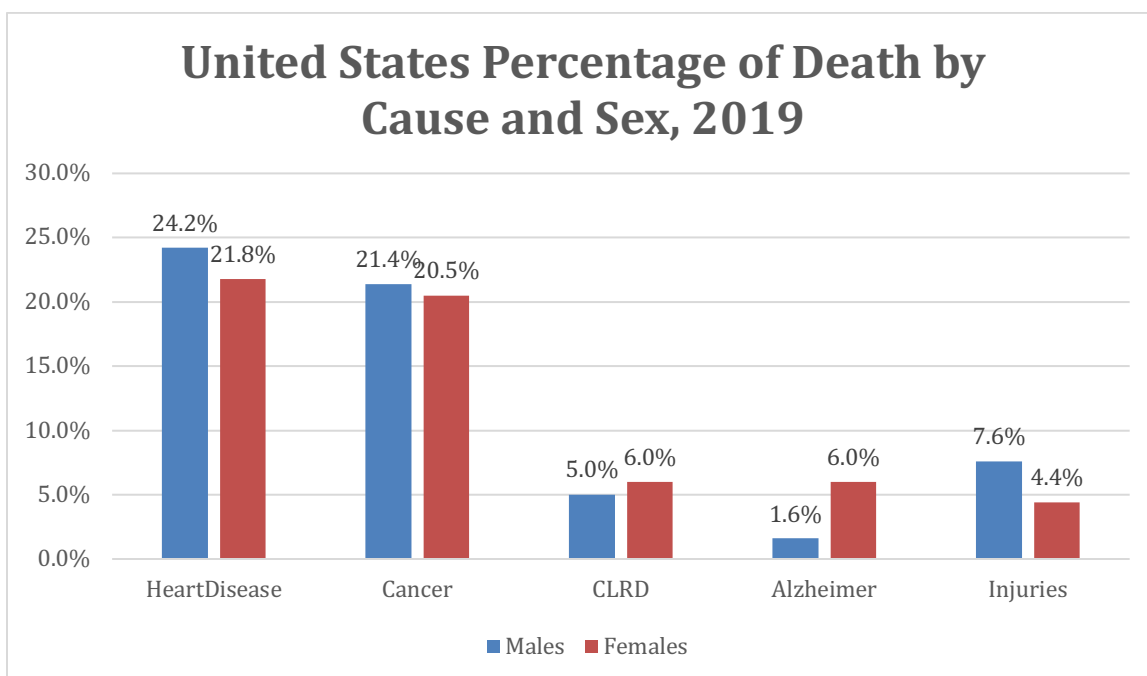
According to the Centers for Disease Control and Prevention (CDC), the leading causes of death in the United States in decreasing order in 2019 were:

- Heart disease: 659,041 (23.1%)
- Cancer: 599,601 (21.0%)
- Accidents: 173,040 (6.1%)
- Chronic lower respiratory diseases: 156,979 (5.5%)
- Stroke (cerebrovascular diseases): 150,005 (5.3%)
- Alzheimer's disease: 121,499 (4.3%)

- Diabetes: 87,647 (3.1%)
- Nephritis, nephrotic syndrome, and nephrosis: 51,565 (1.8%)
- Influenza and Pneumonia: 49,783 (1.7%)
- Intentional self-harm (suicide): 47,511 (1.7%)

Some causes of death are higher for one sex than for another. According to the Centers for Disease Control and Prevention analysis of deaths in 2019:

- 1) Heart disease accounted for 24.2% of male deaths but 21.8% of female ones.
- 2) Cancer caused 21.4% of male deaths but 20.5% of female ones.
- 3) Chronic lower respiratory diseases caused 5.0% of male and 6.0% of female deaths.
- 4) Alzheimer disease caused 1.6% of male deaths but 6.0% of female ones.
- 5) Unintentional injuries caused 7.6% of male deaths but 4.4% of female ones.



Source: Centers for Disease Control and Prevention, 2019

Discrepancies are also seen when comparing deaths in people from different races and ethnic origins. Since the Hillsdale County population is overwhelming white and non-Hispanic, discrepancies based on race and ethnic origin are negligible.

BEHAVIOR RELATED HEALTH ISSUES

Many behavioral factors can lead to, or increase the severity of, some diseases. Among these are:

- Obesity
- Smoking
- Drinking alcohol to excess
- Substance abuse

Respondents in the CHNA survey were asked about these indicators, and the results were compared to secondary data sources.

Obesity

Obesity is a major factor in the control of diabetes, heart disease and other chronic conditions. Weight control is a problem for many area residents.

When asked in the 2022 CHNA survey if they were concerned about their weight, 702 respondents answered the question. Of these:

- 334 (47.6%) said they were.
- 368 (52.4%) said they were not.

When asked how they would best describe their weight, 681 respondents answered the question. Of these:

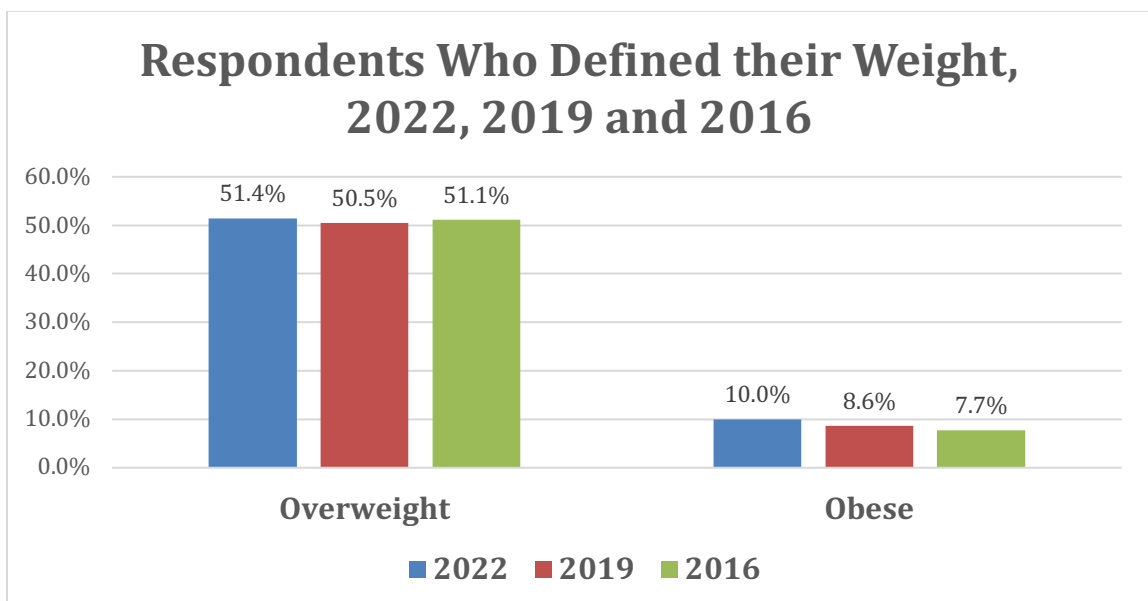
- 18 (2.6%) said they were underweight.
- 245 (36.0%) said they were average weight.
- 350 (51.4%) said they were overweight.
- 68 (10.0%) said they were obese.

These results were similar to what was found in the CHNA previous surveys.

- 50.5% said they were overweight and 8.6% said they were obese in 2019.
- 51.1% said they were overweight and 7.7% said they were obese in 2016.

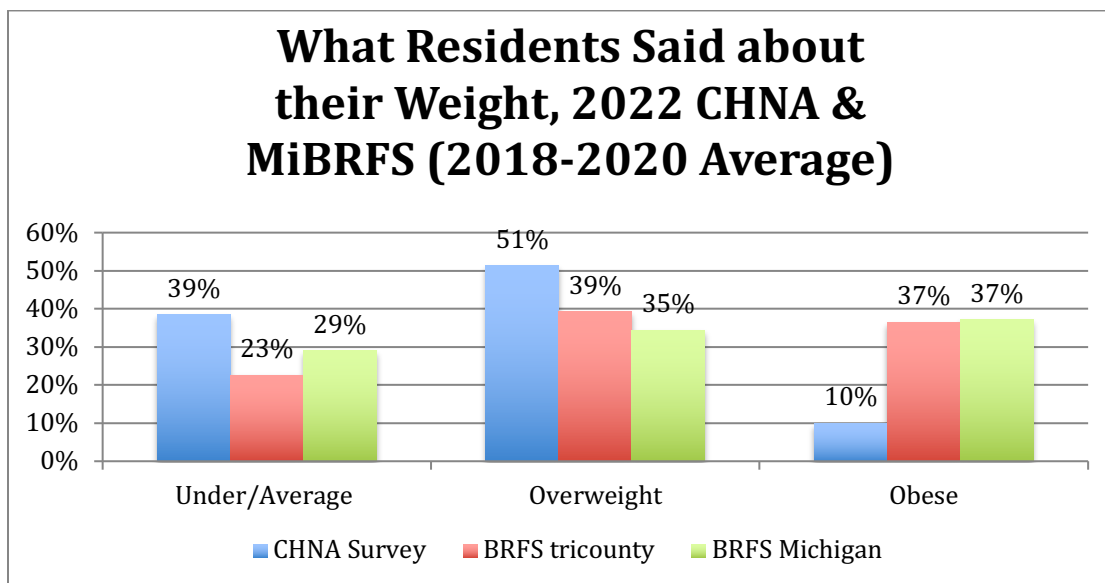
These results indicate little progress has been made in this area.

A Gallup poll found an average of 41% people were overweight in the U.S. for the years 2017-2021 compared to the respondents to our CHNA surveys.



Source: CHNA Surveys, 2022, 2019 and 2016

The result of the 2022 CHNA survey differs from the Michigan Behavior Risk Factor Survey of Michigan and Branch-Hillsdale-St. Joseph residents. The MiBRF Survey showed a smaller proportion of adults in the tri-county area considered themselves overweight while more considered themselves obese.



Sources: CHNA Survey, 2022 and Michigan Behavior Risk Factor Survey, Branch-Hillsdale-St. Joseph and Michigan Residents, 2018-2020 Average

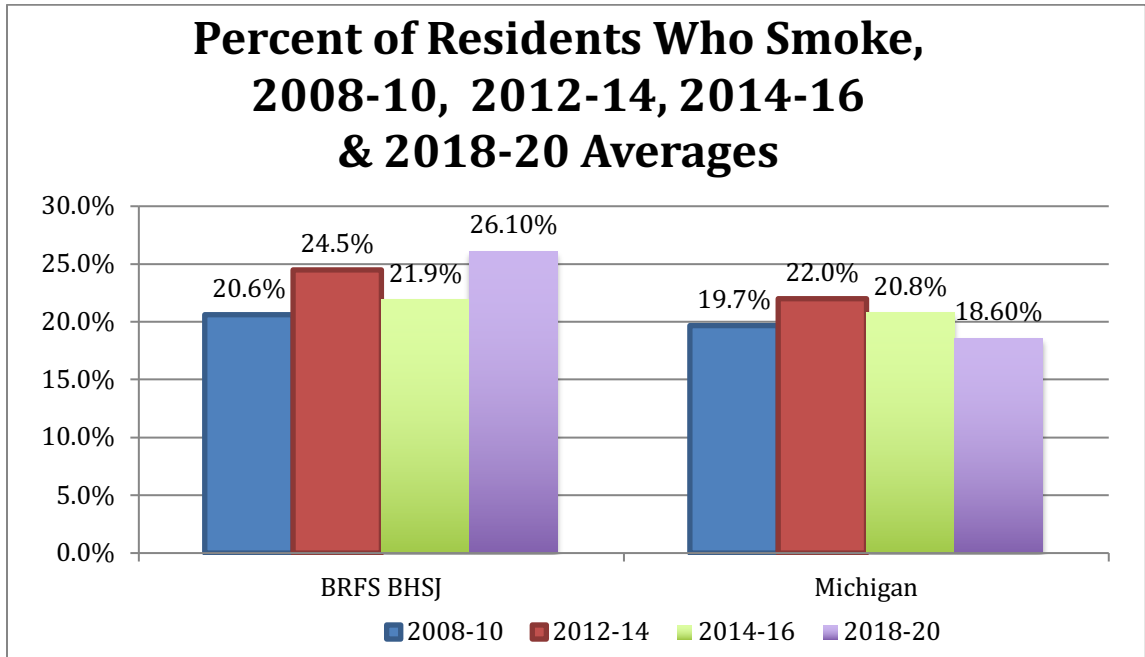
Hillsdale Hospital offers a multidisciplinary approach to treat obesity.

1. The hospital has a resident dietician. Area doctors can refer overweight or obese patients to the dietician for consultation on diets and diet modification.
2. Regular seminars are conducted for those interested in weight loss surgery to explain procedures and expected outcomes.
3. The hospital offers several surgical procedures in conjunction with the Hillsdale Surgical Group for those interested in surgical intervention. Surgical options include laparoscopic gastric sleeve resection and laparoscopic adjustable banding.

Smoking

A slightly higher percentage of Hillsdale County residents smoke compared to Michiganders.

26.1% of Branch-Hillsdale-St. Joseph County adult residents said they smoked on the Michigan Behavioral Risk Factor Survey, 2018-20 average, compared to 18.6% in Michigan. Despite anti-smoking programs, the percentage of smokers has remained relatively constant over the years.

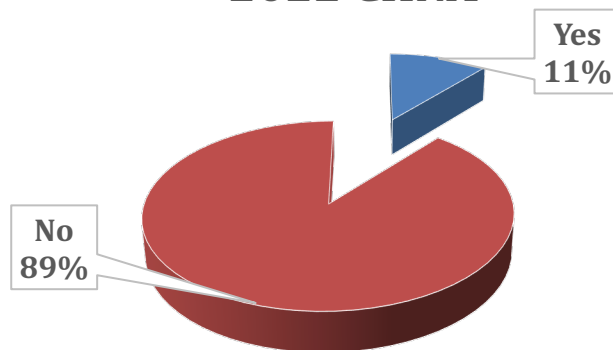


Sources: Michigan Behavior Risk Factor Surveys, Branch-Hillsdale-St. Joseph Residents and Michigan, 2008-2010, 2012-14, 2014-16, and 2018-20 Averages

Respondents in the CHNA 2022 survey were asked if they currently smoke. Of the 704 who answered this question:

- 76 (10.8%) said they smoked.
- 628 (89.2%) said they did not.

Percentage of Residents who Smoke, 2022 CHNA

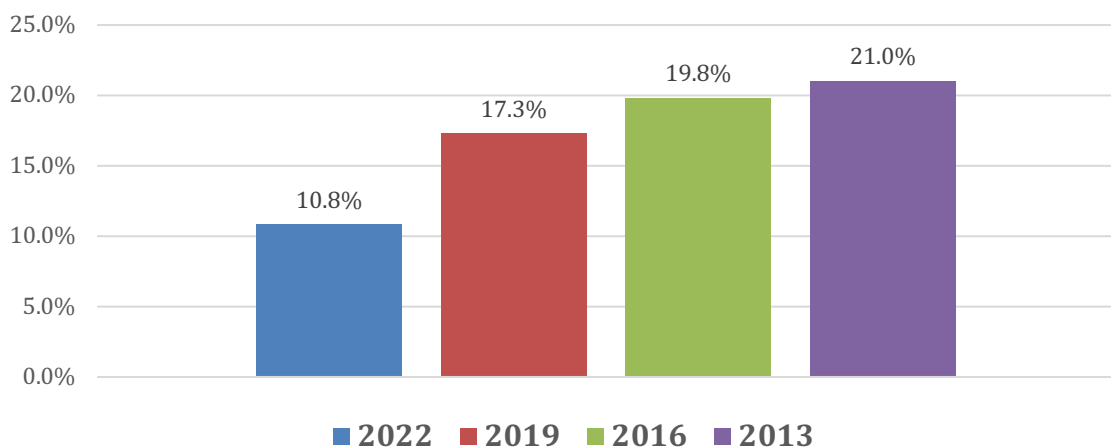


Source: CHNA Survey, 2022

This is slightly better than past CHNA surveys.

- 198 (17.3%) said they smoked in 2019.
- 105 (19.8%) said they smoked in 2016.
- 98 (21%) said they smoked in 2013.

Percent of Respondents who Smoked, 2022, 2019, 2016 & 2013 Surveys



Source: CHNA Surveys, 2022, 2019, 2016 and 2013

The 2022 CHNA survey asked respondents who said they smoked what age they began smoking. The answers ranged from age 9 to 35 with an average age of 17.

Smokers were then asked if they had ever tried to quit. Of the 151 who asked this question:

- 44.4% said they tried to quit.
- 55.6% admitted they never tried to quit.

Smoking and Live Births

Smoking is a significant problem among pregnant women.

Smoking during pregnancy is linked to a lower birth weight for babies as well as higher infant mortality.

The Michigan Resident Birth Files reveal a larger percent of Hillsdale mothers used tobacco before or during pregnancy compared to Michigan mothers. Smoking prevention programs have had little impact on mothers at the county level over the previous decade.

Percent of Mothers Who Smoked, Three Year Trends, Hillsdale & Michigan				
	2009-11	2012-14	2015-17	2018-20
Hillsdale	27.3%	30.7%	27.6%	25.6%
Michigan	18.4%	19.2%	16.2%	14.1%

Source: Michigan Resident Inpatient Files Division for Vital Records and Health Statistics, Michigan Department of Community Health

Vapor Cigarettes

Some young adults have turned to vapor cigarettes instead of traditional tobacco use. Education on the long term negative effects of vaping is often lacking.

Drinking

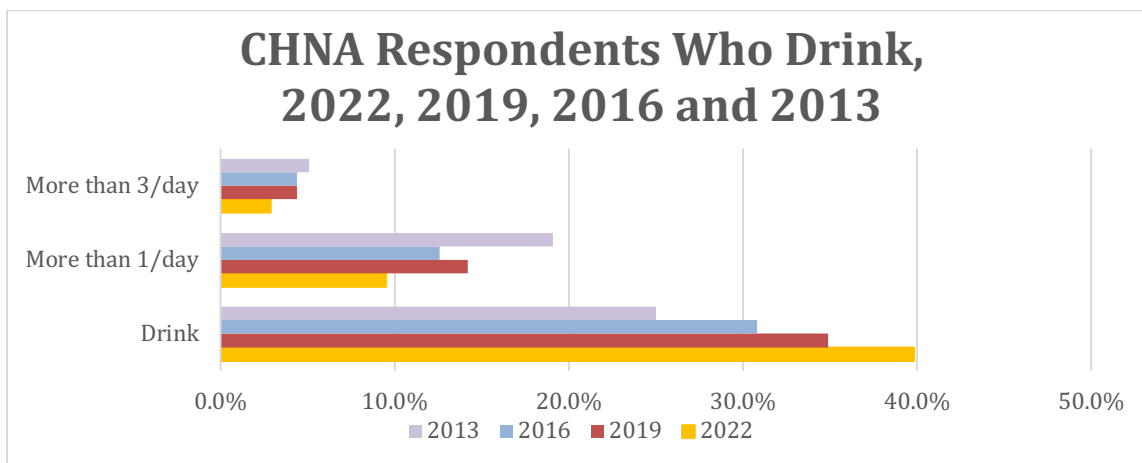
Respondents in the CHNA survey were asked about their drinking habits. 694 people told us about consuming any alcohol.

- 276 (39.8%) said they did.
- 418 (60.2%) did not.

Among the 276 people who said they drank:

- 31 (9.5%) consumed more than one drink a day.
- 8 (2.9%) consumed more than three drinks a day.

The percentage of people on the CHNA surveys who said they consumed any alcohol has increased over the years. The percentage who consume more than one drink a day increased slightly in 2022 compared to previous years but the percentage who drink more than one or three a day has not.



Source: CHNA Surveys, 2022, 2019, 2016 and 2013

In contrast, 14.4% of Branch-Hillsdale-St. Joseph County residents reported binge drinking on the Michigan Behavior Risk Factor Survey, 2018-20 average. (Binge drinking is defined as consuming five or more drinks on one occasion in the past month for men or four drinks for women) This is lower than 17.9% reported for Michigan.

Drinking Patterns, Branch-Hillsdale-St. Joseph & Michigan Residents 2018-20			
	Any Alcohol	Heavy Drinking	Binge Drinking
Branch-Hillsdale-St. Joseph	45.1%	4.8%	14.4%
Michigan	56.0%	6.5%	17.9%

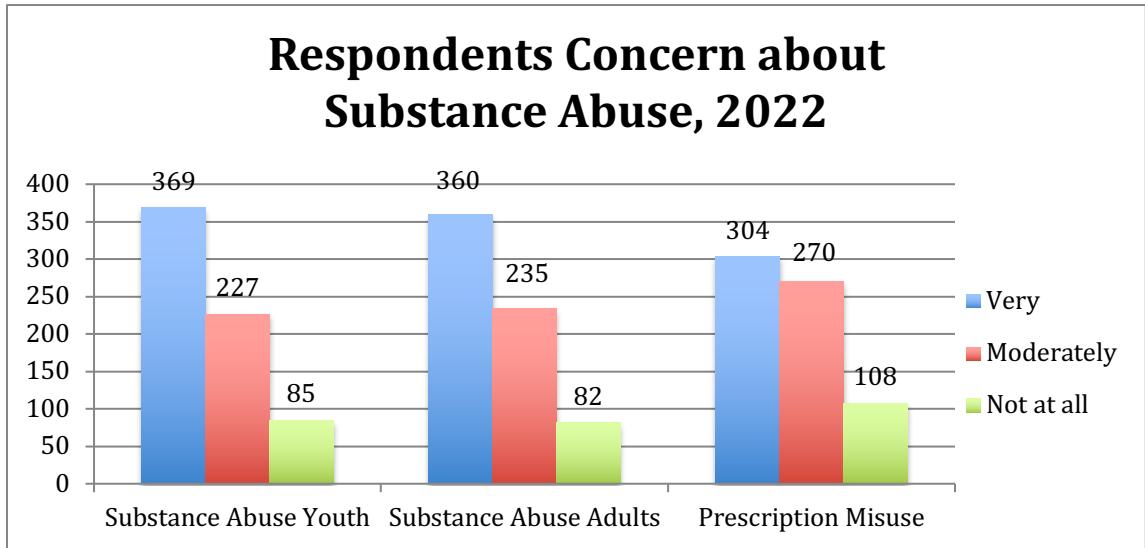
Source: Michigan Behavior Risk Factor Survey, Branch-Hillsdale-St. Joseph Residents and Michigan, 2018-20 Average

Drinking and driving accounted for 28% of all traffic fatalities in 2019; men are involved in four times the number of drunk driving accidents as women.

Substance Abuse

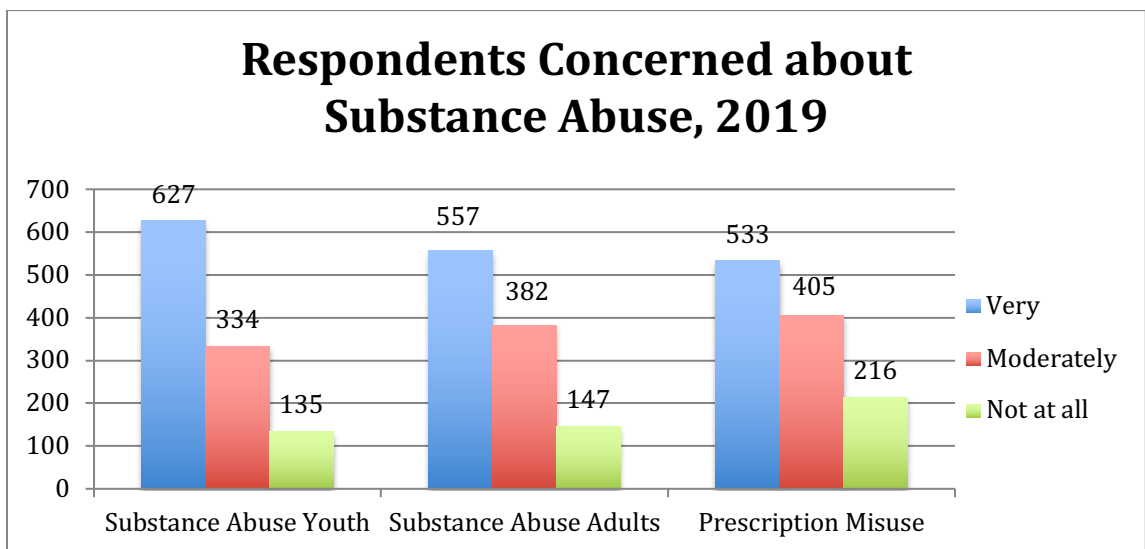
Substance abuse can involve both legal and illegal substances.

Respondents in the 2022 CHNA survey were asked if they were very concerned, moderately concerned, or not at all concerned about substance abuse among youth, substance abuse among adults or prescription misuse. The respondents were very concerned about all three issues.



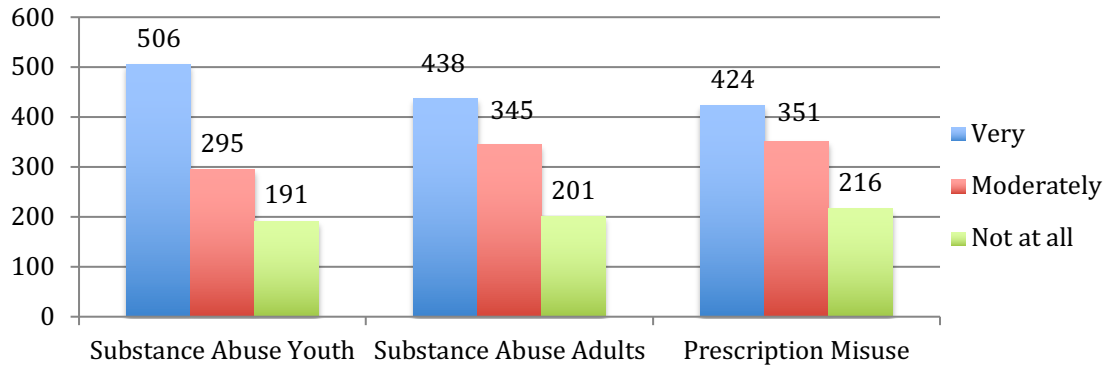
Source: CHNA Survey, 2022

Similar patterns were found in both the 2019 and 2016 CHNA surveys.



Source: CHNA Survey, 2019

Respondents Concerned about Substance Abuse, 2016



Source: CHNA Survey, 2016

Use of Marijuana

Michigan voters approved the medical use of marijuana in November, 2008; the law became effective in December of that year. The recreational use of marijuana was approved by Michigan voters in November, 2018. The effect of this law on the county is unknown, though the Hillsdale County Commissioners have voted not to have a licensed marijuana dispensary in the county.

The National Institute on Drug Abuse reports the long term effects of marijuana that have been documented by several studies.

- Marijuana exposure during gestation can have long-term and possible permanent adverse brain changes.
- Two large longitudinal studies suggest use of marijuana can impair cognitive abilities; impairment depends on the age and extent of its use.
- Several studies found a decrease in IQ among adolescent users that persists into adulthood.
- Adolescent use has been linked to the development of psychosis later in life.

“Research shows that about 1 in 10 marijuana users will become addicted. For people who begin using before the age of 18, that number rises to 1 in 6.” (Source: CDC’s National Center for Chronic Disease Prevention and Health Promotion.)

59 of the respondents in the 2022 CHNA survey said they used marijuana:

- 41 said they used it for medical/pain management.
- 35 said they used it for recreational purposes.
- 15 said they used it both for medical/pain management and recreational purposes.

Previous CHNA surveys did not ask specifically about marijuana but 44 respondents to the 2016 survey voluntarily said they used it.

Prescription and Illegal Drugs

The 2022 CHNA survey asked if respondents used any illegal drug. Only 3 respondents said they did. The survey did not ask what specific illegal drug was used.

The 2022 survey also asked if respondents used a prescription drug to manage chronic pain. Out of 689 responses to this question:

- 88 (12.8%) said they did.
- 601 (87.2%) said they did not.

As a follow-up to this question, the survey asked what prescription drug they used to manage their pain. Of the responses:

- 4 said they used oxycontin.
- 6 said they used Vicodin.
- 2 used some form of codeine.
- 61 said they used some other substance.
 - 17 used Tramadol.
 - 7 used Gabapentin/neurotropin.
 - 7 used Naproxin.
 - Several cited a particular prescription drug like Flexerol.

The 2019 survey also asked if respondents used a prescription drug to manage chronic pain. Out of 1,115 responses to this question:

- 123 (11%) said they did.
- 992 (89%) said they did not.

The prescription drug for pain management they used in 2019 were similar to those listed in 2022.

The Opioid Epidemic

According to the Centers for Disease Control and Prevention, “In 2019, nearly 50,000 people in the United States died from opioid-involved overdoses. The misuse of and addiction to opioids-including prescription pain relievers, heroin, and synthetic opioids such as fentanyl-is a serious national crisis.”

Opioids work in the nervous system or on specific receptors in the brain to reduce the intensity of pain.

Overdose deaths from opioids include those from prescription opioids, heroin, and synthetic opioids like fentanyl.

Opioid Drug Overdose Age Adjusted Death Rates per 100,000, United States & Michigan		
	United States	Michigan
2018	20.7	24.4
2019	21.6	24.2

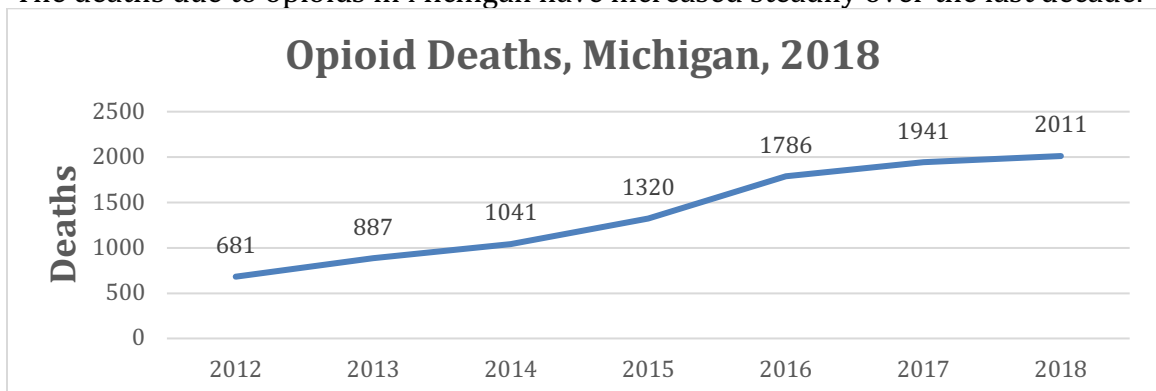
Source: Centers for Disease Control and Prevention, Opioid Deaths 201

Although prescriptions for opioids account for only some of the drug overdose deaths, the Centers for Disease Control and Prevention has been tracking the prescription dispensing rate per 100 persons over the past years. The rate has been much higher in Michigan than the United States for the years 2018-20 but Hillsdale County rates are lower than both Michigan and the United States rates for 2019 & 2020.

Prescription Dispensing Rates/100 persons, U.S., Michigan & Hillsdale			
	United States	Michigan	Hillsdale
2018	51.4	62.7	Not Available
2019	46.7	58	35.2
2020	43.3	54.4	35.16

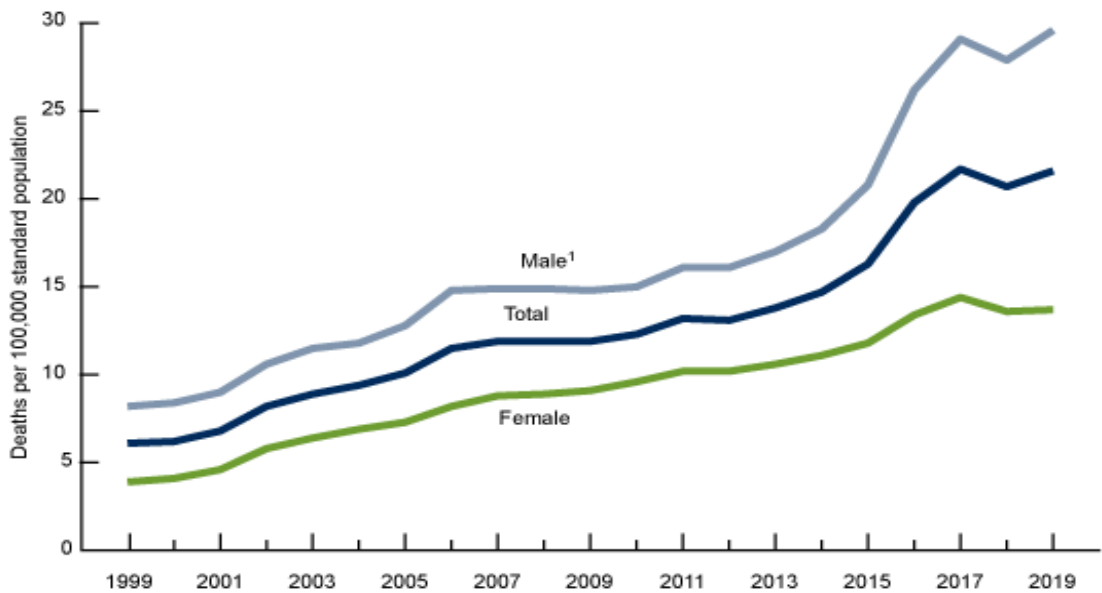
Source: Centers for Disease Control and Prevention, Opioids

The deaths due to opioids in Michigan have increased steadily over the last decade.



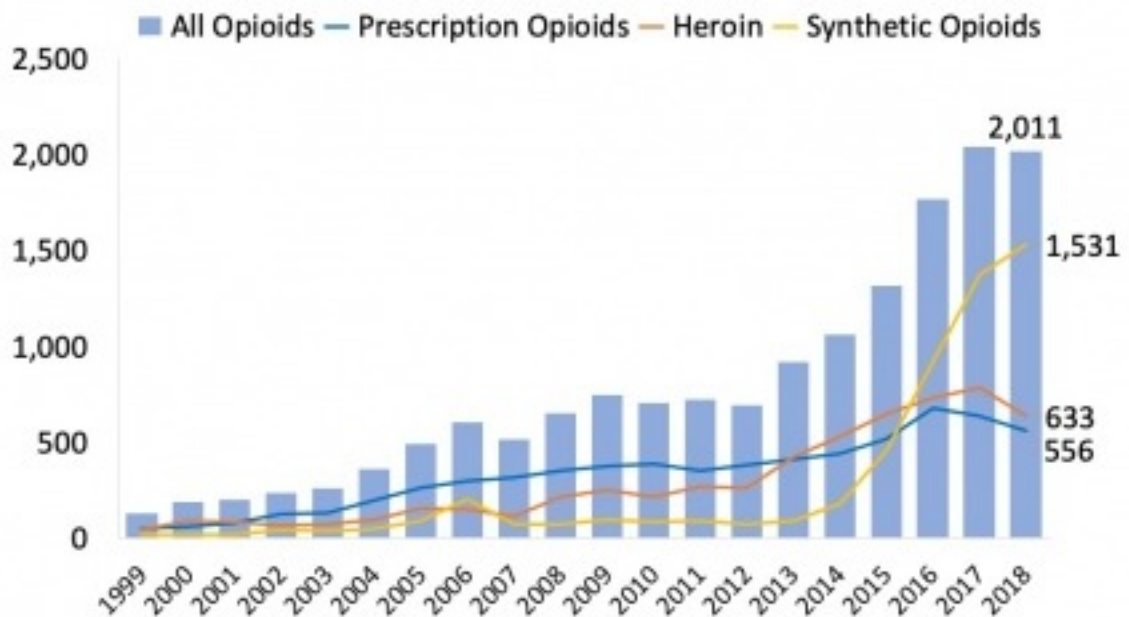
Source: Detroit Free Press, Oct. 4, 2018 for years 2012-17; Centers for Disease Control and Prevention for 2018

The Centers for Disease Control and Prevention published a chart breaking down opioid deaths for Michigan based on sex.



Source: Centers for Disease Control and Prevention, 2019

The Centers for Disease Control and Prevention also published a chart breaking down opioid deaths by the drugs involved:



Number of drug and opioid-involved overdose deaths in Michigan, by opioid category. Drug categories presented are not mutually exclusive, and deaths may have involved more than one substance. Source: CDC WONDER, 2020.

There were two opioid deaths in Hillsdale County in 2008 and 4 in 2017.

According to Mark Hawkins, Deputy Fire Chief, Hillsdale City Fire Department, the fire department had 13 calls for potential opioid overdoses from 8/1/18 to 2/28/19.

USE OF HEALTH CARE IN THE COMMUNITY

Availability of Health Care in Hillsdale County

Hillsdale County is served by:

- One hospital, the Hillsdale Hospital.
- Three primary care health clinics owned and operated by Hillsdale Hospital:
 - Hillsdale Health and Wellness located at 240 W. Carleton Road, Hillsdale and is open seven days a week from 10 AM to 6 PM.
 - Hillsdale Community Health Center, 535 Marshall Street, Litchfield, MI. This clinic operates Monday 8 AM to 6 PM and Tuesday through Friday, 8 AM to 4 PM.
 - Reading Health Clinic, a Rural Clinic in Reading, Hospital located at 143 South Main Street, Reading, MI 49274. This clinic operates Monday, Wednesday, Thursday and Friday from 8 AM to 4 PM and Tuesday from 8 AM to 6 PM.
- Hillsdale Hospital also owns and manages several other facilities in the county including:
 - Dr. Boakye's Office.
 - Hillsdale Neurology/Pulmonary.
 - Hillsdale Orthopedics.
 - Hidden Meadows OB/GYN.
 - Hillsdale Surgical Group.
 - Hillsdale Home Care
 - Hillsdale Home Oxygen & Medical Equipment
 - Hillsdale Hospital Work Health, Quincy, MI
- One free clinic, St. Peter's, open only two nights a week. The hospital donates lab services and medical supplies in support of this clinic. Many hospital staff members also donate their time to serve clinic clients.
- Private physicians.

A full database of all facilities and medical personnel in the area has been compiled and is maintained by the Branch-Hillsdale-St. Joseph Health Department. The Hillsdale County list can be found in Appendix C of this report.

Hillsdale County currently has no round-the-clock urgent care facility. All health clinics have limited hours.

Primary Care Associates of Jonesville, 100 E. Chicago St., Jonesville, MI 49250. This clinic operates 8 AM to 5 PM Monday through Friday.

Health Resources and Services Administration Designations

The Health Resources and Services Administration (HRSA) determines if there is a Health Professional Shortage Area (HPSA) based on population, area geography, facilities available and other criteria.

Hillsdale County has several HPSA designations.

Shortage Area Designation	Type
Health Professional Shortage Area- Primary Care Rural Health Clinics	Entire County Hillsdale Medical Associates Primary Care Associates of Jonesville Reading Health Clinic
Health Professional Shortage Area- Mental Health	Coldwater-Hillsdale Service Area- Geographic Primary Care Associates of Jonesville Reading Health Clinic
Health Professional Shortage Area- Dental Care	Medicaid Population, Hillsdale Primary Care Associates of Jonesville Reading Health Clinic
Medically Underserved Area/Population	Service Area-County

Source: Health Resources and Service Administration, 2018

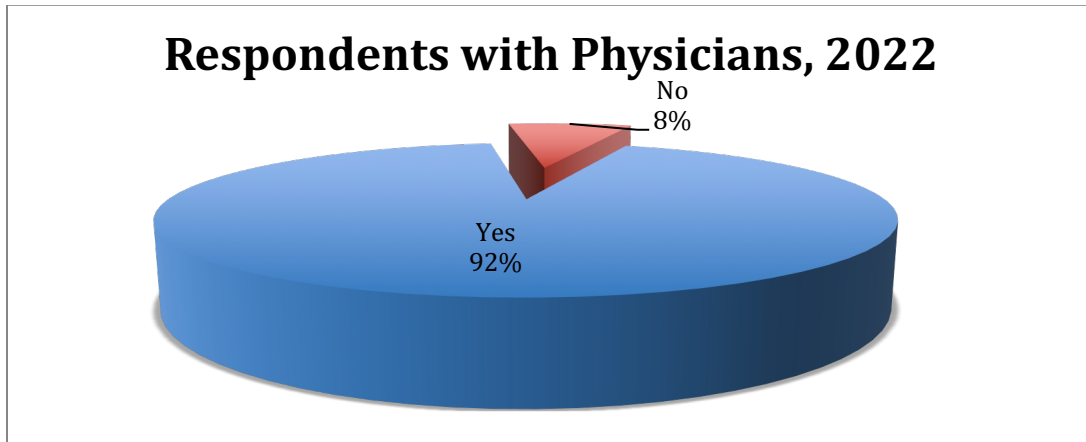
In order to address the HPSA designation of Hillsdale as a Health Professional Shortage area for Dental, Mental Health and Primary Care, Hillsdale Hospital has consistently attempted to recruit new Primary Care as well as medical specialists to the area.

Personal Physicians

Respondents were asked in the 2022 CHNA survey if they had a personal physician. Of the 706 who answered this question:

- 652 (92.3%) said they had a personal physician.
- 54 (7.7%) said they did not.

This is about the same as reported in 2019 and 2016 and better than the 12.0% who said in the 2013 CHNA survey that they did not have a personal physician.



Source: CHNA Survey, 2022

The Michigan Behavior Risk Factor Surveys asked adults if they needed to see a doctor in the last twelve months but did not due to cost. Tri-county residents were less inhibited by cost than Michiganders.

No Personal Health Care Provider		
Branch Hillsdale St. Joseph Residents Compared to Michigan		
	2018-20	2014-16
Branch-Hillsdale-St. Joseph	13.8%	14.8%
Michigan	14.6%	15.2%

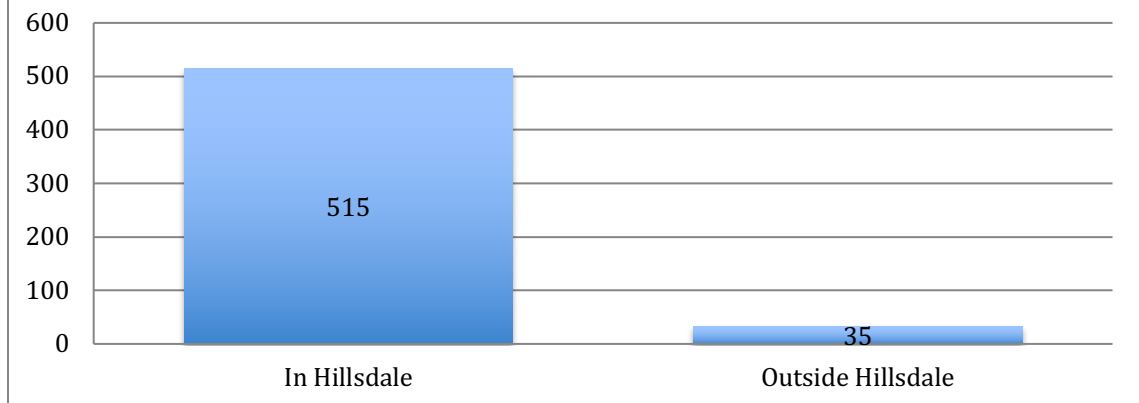
Source: Michigan Behavior Risk Factor Surveys, 2018-20 and 2014-16 Averages

Location of Personal Physicians

Not all respondents in the CHNA survey who said they had a personal physician have a doctor in Hillsdale County. When respondents were asked if their doctor was in the county, only 657 people answered the question. Of those who answered:

- 544 (82.8%) of all respondents said their physician was in Hillsdale. This included:
 - 86.3% of county residents (515) with a doctor in Hillsdale.
 - 13.7% of non-county residents(29) with a doctor in Hillsdale.
- 113 (17.2%) said their physician was in another county. This includes:
 - 78 who self-identified as non-county residents.
 - 35 county residents who went outside the county for their care needs.

Location of Respondents' Physicians for Hillsdale County Residents, 2022



Source: CHNA Survey, 2022

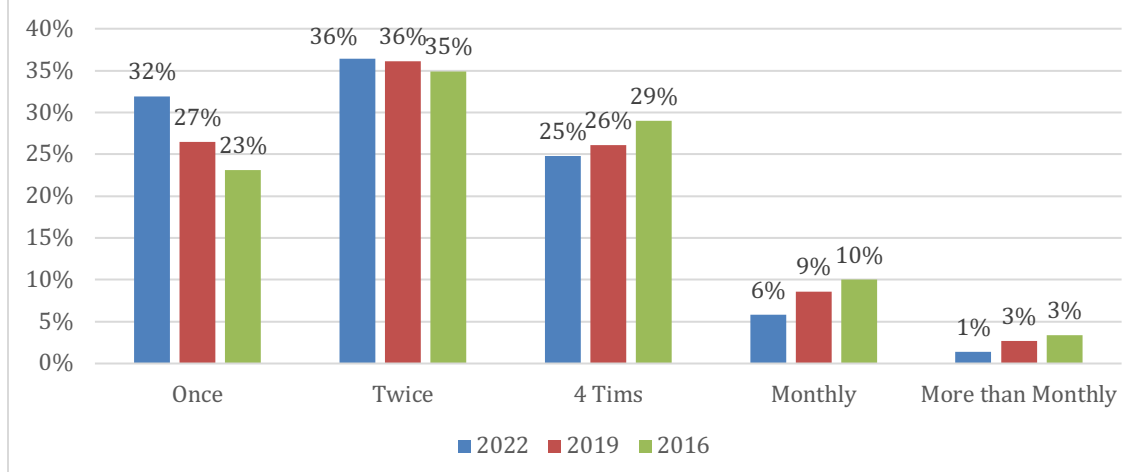
Frequency Respondents Visits Physicians

When asked how often they visited their regular doctor each year, 646 responded:

- 206 (31.9%) respondents said once a year.
- 235 (36.4%) said twice.
- 160 (24.8%) said four times.
- 36 (5.8%) said monthly.
- 9 (1.4%) said more than monthly.

The result is similar to the results found in 2019 and 2016.

Frequency Respondents Visited their Doctors Each Year 2022, 2019 & 2016



Source: CHNA Surveys, 2022, 2019 and 2016

Finding or Getting to a Doctor

The 2022 CHNA survey asked respondents if they ever had trouble finding a doctor when they needed one.

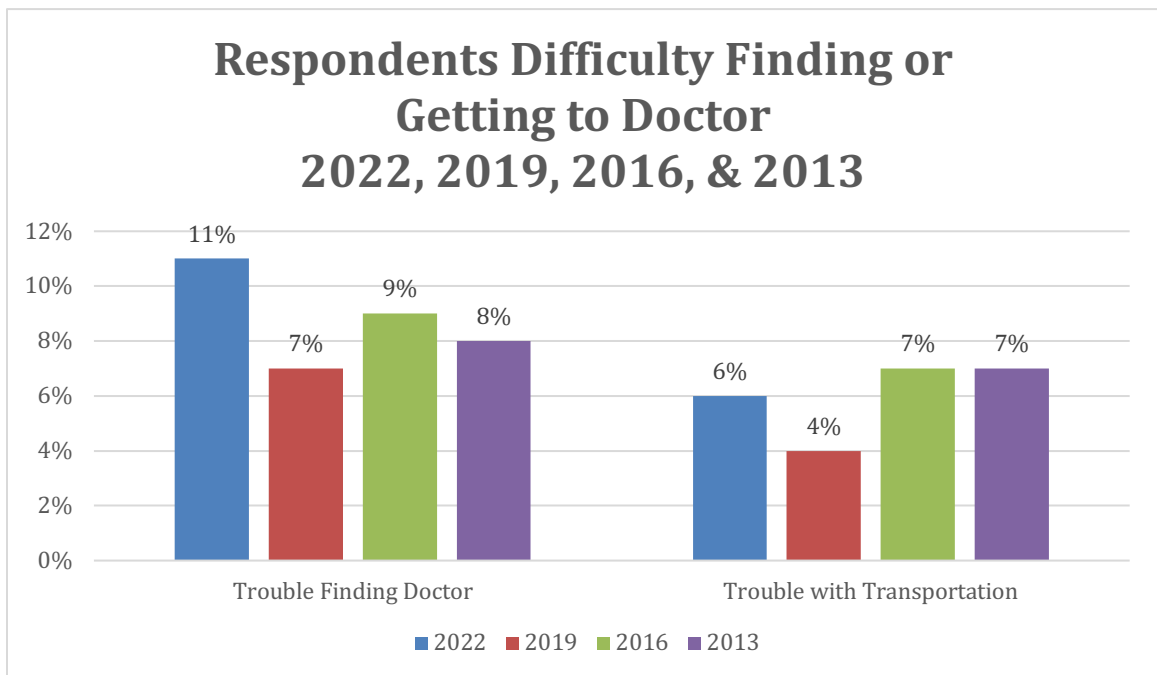
Of the 705 respondents who answered this question:

- 80 (11.3%) said they did.
- 625 (88.7%) did not.

The survey participants were then asked if they had trouble finding transportation to a doctor. Of the 692 who answered this question:

- 40 (5.8%) said they did.
- 652 (94.2%) did not.

A slightly higher percentage had more difficulty in finding a doctor than in past surveys but the need for transportation remained about the same.



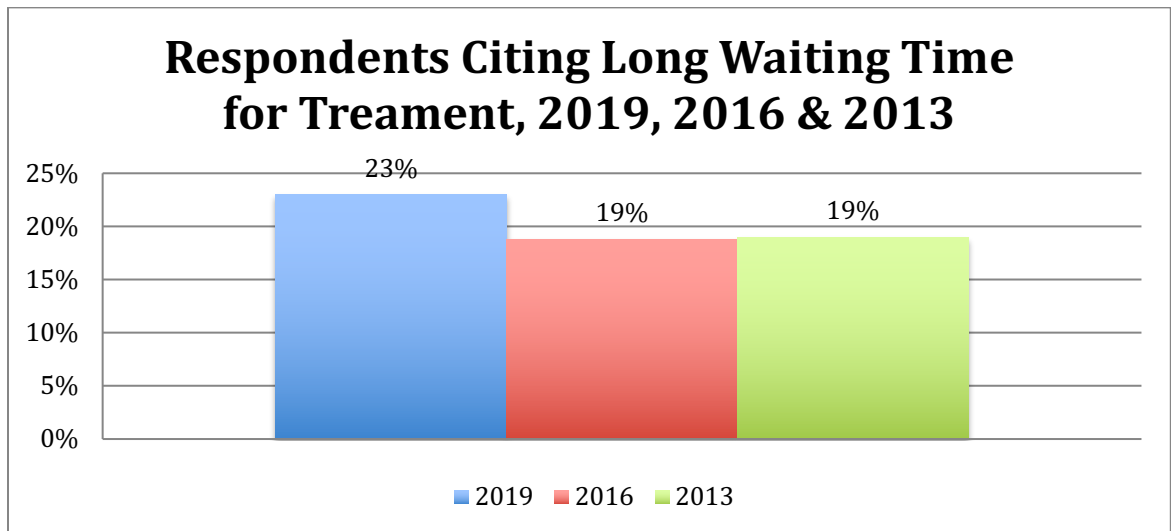
Source: CHNA Surveys, 2022, 2019, 2016 and 2013

Transportation to get medical treatment can be an issue in the county. Dial-a-Ride, the city's public transportation, stays only within the city limits; residents in outlying areas have no equivalent service.

The Hillsdale Senior Center provides non-emergency medical transportation both in and out of county. The Center requests a five day notice through their transportation coordinator.

Waiting Time to See a Doctor

In past CHNA surveys, respondents had the most difficulty waiting for an appointment to see a doctor since many specialists since some of them only come to the area once a week, or are located in another county.

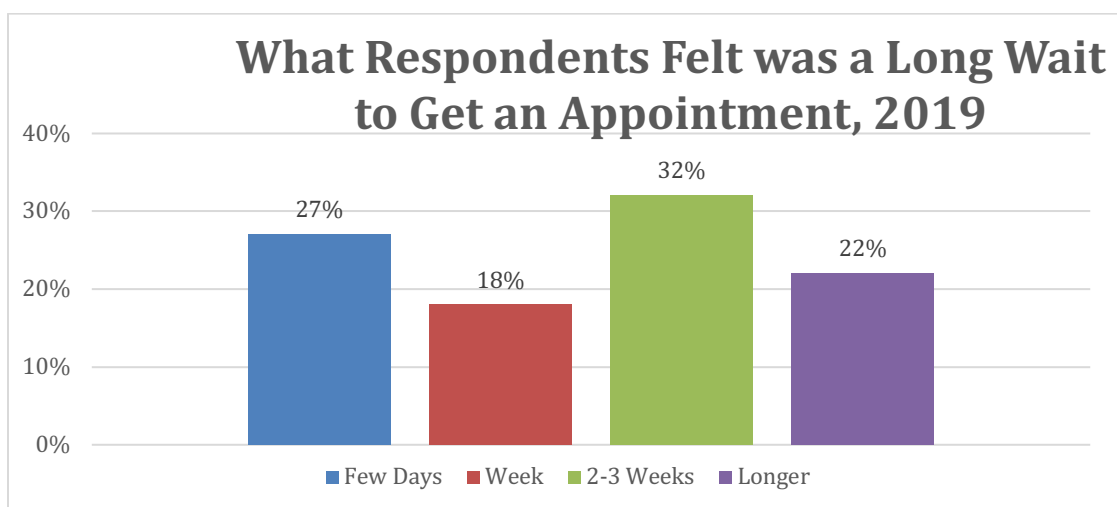


Source: CHNA Surveys, 2019, 2016 and 2013

In the 2019 survey there was an attempt to identify what respondents considered a long wait.

Of the 315 people who responded to this question:

- 86 (27.3%) said a few days.
- 58 (18.4%) said a week.
- 103 (32.7%) said two to three weeks.
- 68 (21.6%) said longer than three weeks.



Source: CHNA Survey, 2019

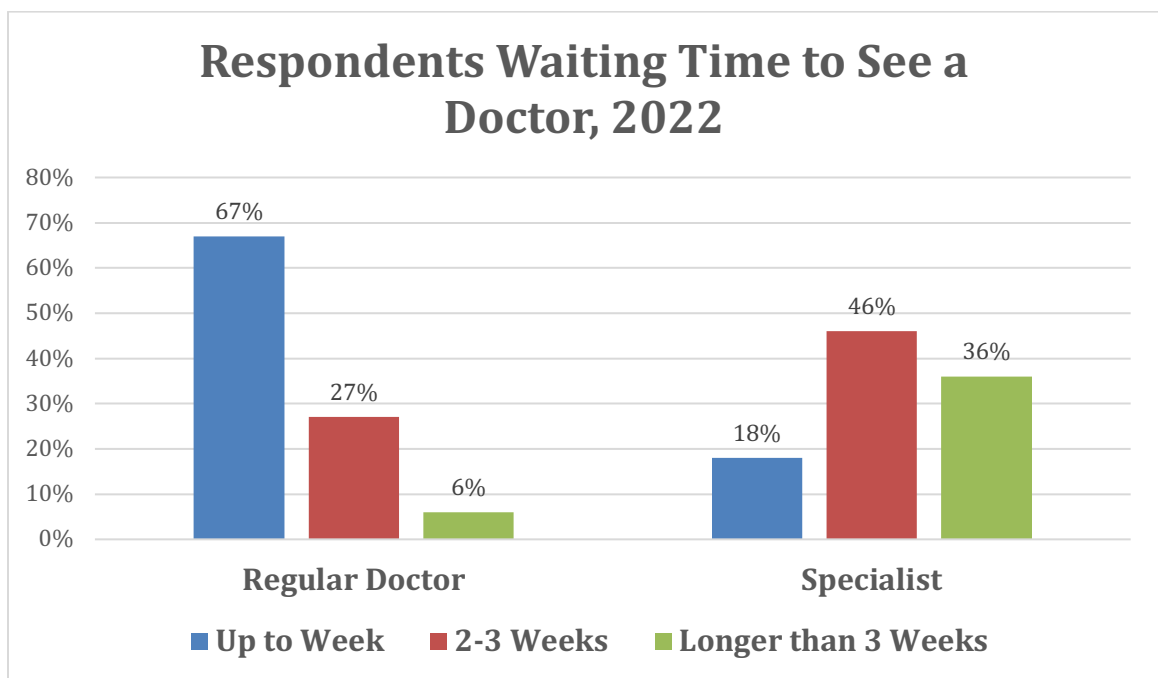
The 2022 survey attempted to find out if the wait time differed for general practitioners compared to specialists.

Of the 662 respondents to the inquiry as to how they waited for an appointment with their regular doctor:

- 433 (66.9%) said they waited up to a week.
- 178 (26.9%) waited two to three weeks.
- 41 (6.2%) waited longer than three weeks.

Of the 570 respondents to the inquiry about the waiting time to see a specialist:

- 100 (17.5%) said they waited up to a week.
- 263 (46.1%) waited two to three weeks.
- 207 (36.3%) waited longer than three weeks.

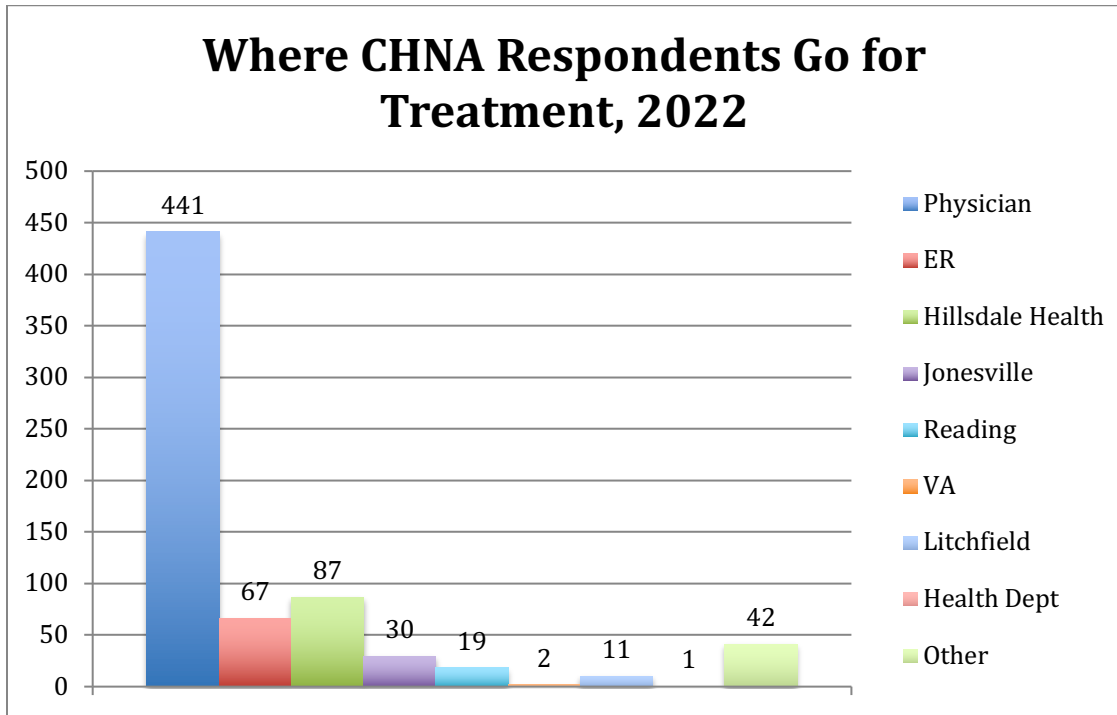


Source: CHNA Survey, 2022

Where County Residents Go for Treatment

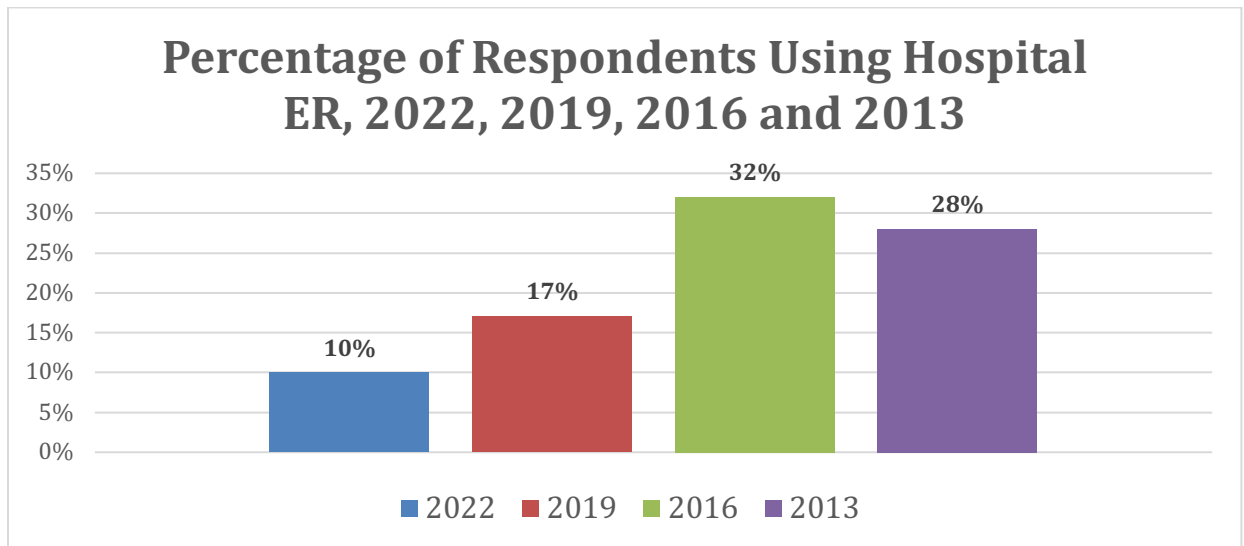
Respondents in the 2022 CHNA survey were asked where they went for treatment (not counting accidents or a crisis such as a heart attack). 697 people answered the question but some checked more than one box on the paper survey. Of those who answered:

- 441 said they went to their own physician, including 14 who said they went to either their physician or some other place.
- 67 went to the hospital emergency room including 5 who went to the ER or some other place.
- 87 went to Hillsdale Health & Wellness, including 12 who said they went either to this facility or some other place.
- 30 went to the Jonesville clinic.
- 19 went to the Reading clinic.
- 2 went to a VA facility.
- 11 went to the Litchfield clinic, including 4 who said they went to either Litchfield or some other place.
- 1 went to the Health Department.
- 0 went to St. Peter's free clinic.
- 36 went outside the area for treatment.
- 6 identified some other facility outside of the area.



Source: CHNA Survey, 2022

With the establishment of walk-in clinics in Hillsdale, Jonesville, Reading and Litchfield, less respondents said they would go to the emergency room for non-emergency treatment compared to other years.



Source: CHNA Surveys 2022, 2019, 2016 and 2013

Use of the Hillsdale Hospital Emergency Room

Hillsdale Hospital emergency room visits from 2015 to 2021 indicate the number of people using the emergency room dipped in 2020, possibly due to Covid 19 lockdowns and restrictions.

Hillsdale Hospital Emergency Room Visits, 2015 to 2021	
2015	22,684
2016	21,637
2017	21,515
2018	21,455
2019	21,788
2020	16,333
2021	19,083

Source: Hillsdale Hospital Records, 2015 to 2021

Medicaid Clients and the Emergency Room

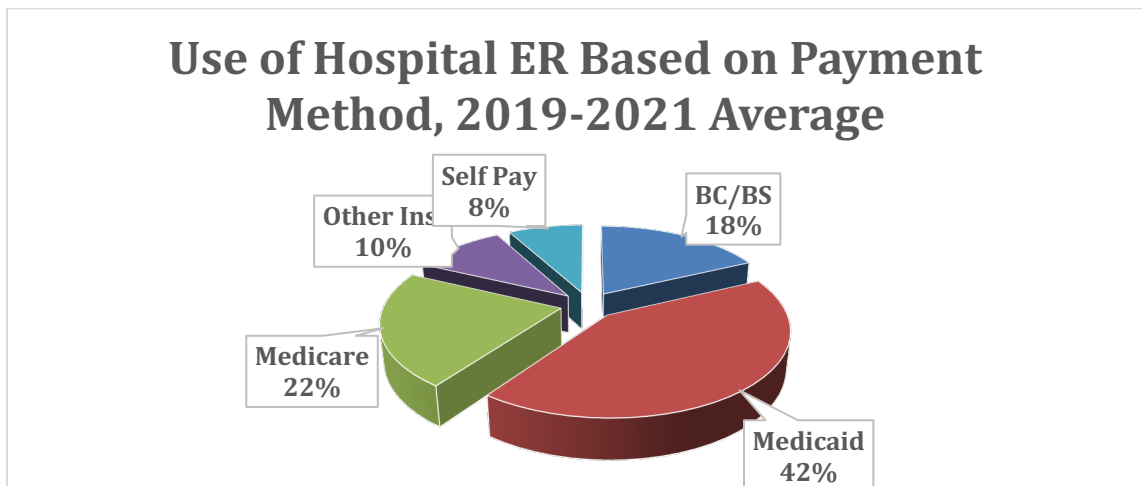
In previous years, the members of the HSN felt those on Medicaid were more likely to seek treatment in the hospital emergency room than personal physicians.

An analysis of the 2022 survey data comparing those on just Medicaid and where they sought treatment showed:

- 7 (11.9%) went to the emergency room compared to 9.6% of all respondents.
- 26 (44.1%) went to their personal physician compared to 63.3% of all respondents.
- 10 (17.0%) went to Hillsdale Health and Wellness compared to 12.4% of all respondents.
- 16 (27.1%) went elsewhere.

Though the percentage of Medicaid respondents who said they used the emergency room on the 2022 survey was less than the 30.3% found in 2019 and the 48.7% found in 2016, Hillsdale Hospital patient data records show a different picture.

A three year average (2019-21) shows 42% of emergency room visits to the hospital were from people on Medicaid.



Source: Hillsdale Hospital Records, Three Year Average, 2019-21

Telehealth

The rise of technology has given rise to many improvements in the health care system. In previous years, the HSN suggested that the development of a telemedicine system would benefit the community. During the Covid 19 epidemic, the use of telemedicine seemed like a viable and desirable option.

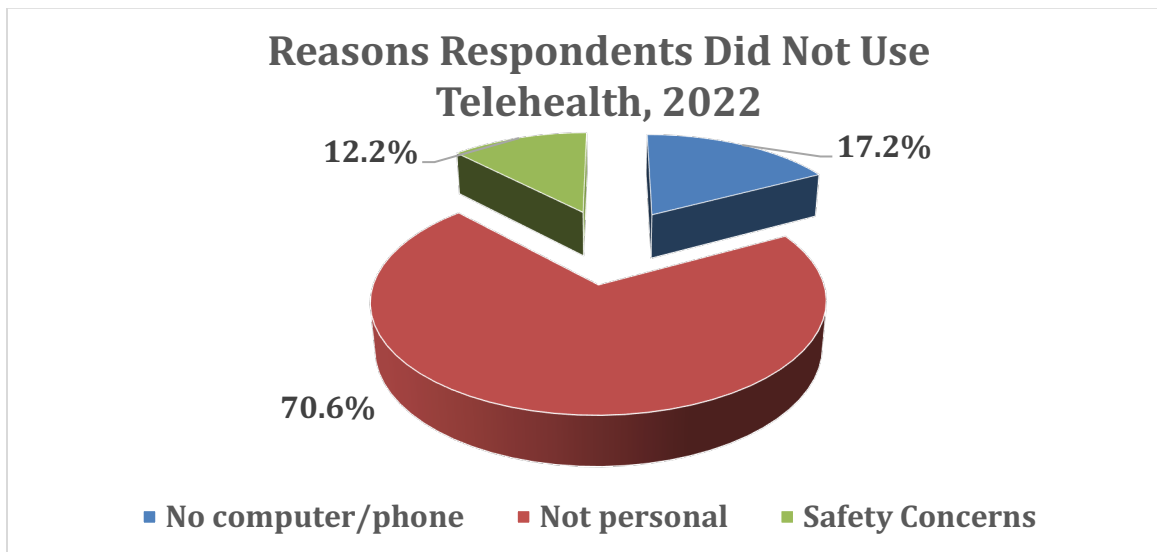
A telehealth service became available in early 2021 in the Hillsdale County area through nearly all of the health clinics. Respondents in the 2022 CHNA survey were asked about it.

The survey asked respondents if they had tried telehealth. Of the 672 who answered this question:

- 134 (19.9%) said they had tried it.
- 538 (80.1%) had not.

A follow up question asked respondents who had not tried telehealth why they had not. Of the 279 who answered this question:

- 48 (17.2%) said they did not have a computer or smart phone.
- 197 (70.6%) felt it was not personal.
- 34 (12.2%) said they had safety concerns.



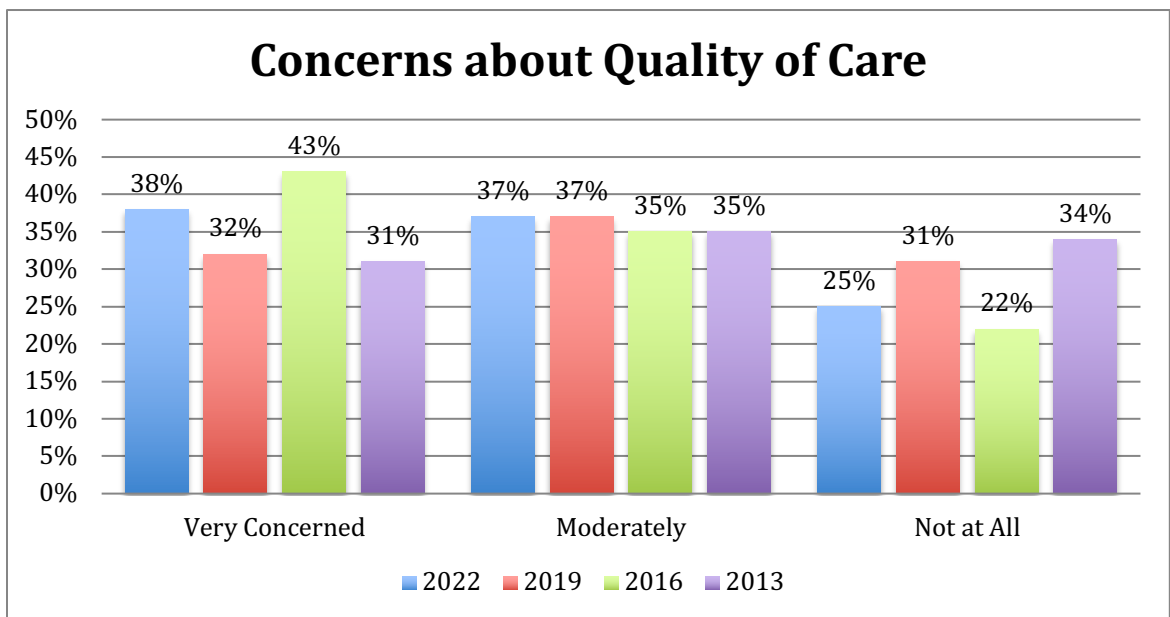
Source: CHNA Survey, 2022

Quality of Healthcare

Respondents in the 2022 CHNA survey were asked if they were very concerned, moderately concerned, or not at all concerned about the quality of health care in the community. Of the 681 who answered this question:

- 256 (37.6%) were very concerned.
- 252 (37.0%) were moderately concerned.
- 173 (25.4%) were not at all concerned.

This is very similar to what was found in the previous surveys.



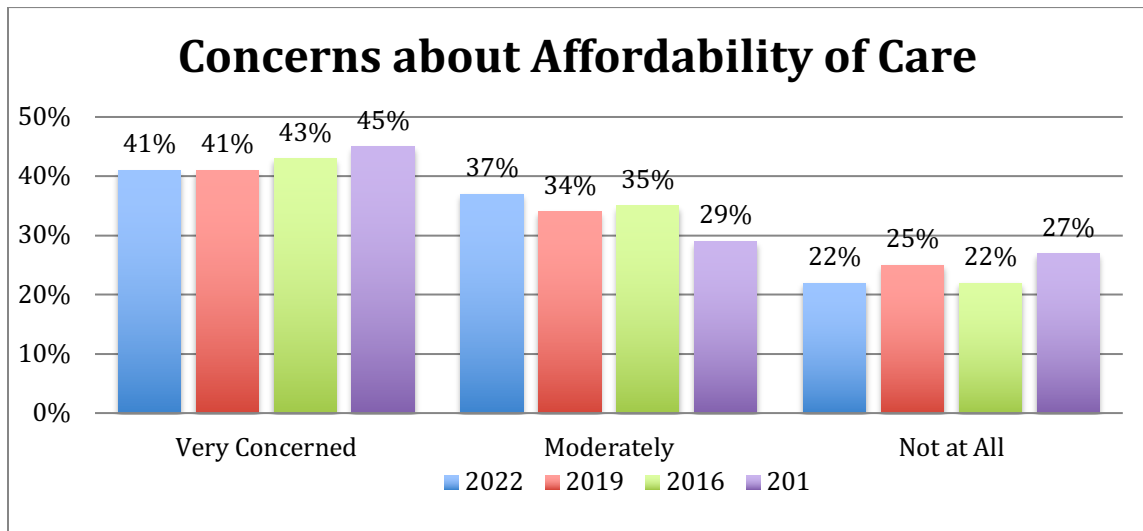
Source: CHNA Surveys, 2022, 2019, 2016 and 2013

Affordability of Care

When asked how concerned they were about the affordability of the healthcare available, 672 respondents answered. Their responses showed:

- 276 (41.1%) were very concerned.
- 251 (37.4%) were moderately concerned.
- 145 (21.6%) were not at all concerned.

These responses follow the same pattern seen in previous surveys and indicates there is slightly more concern about the affordability than the quality of care.

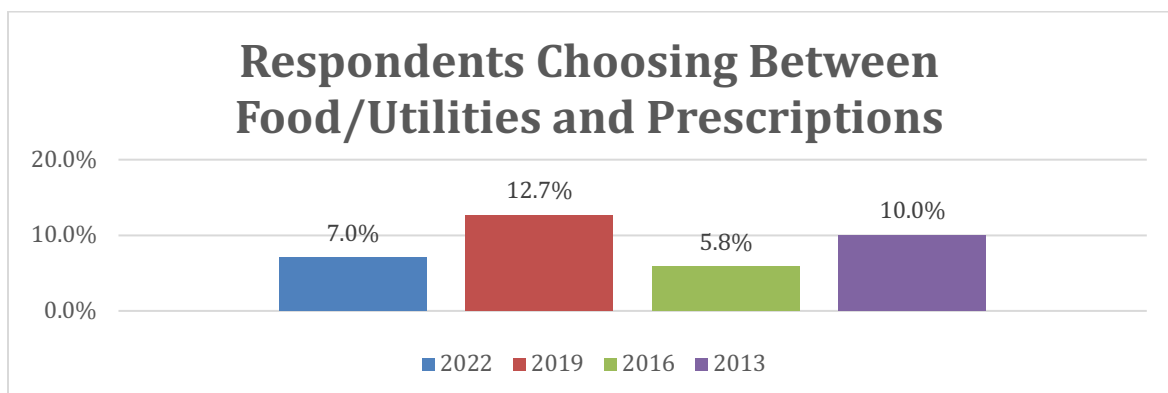


Source: CHNA Surveys, 2022, 2019, 2016 and 2013

Costs Prohibiting Factors in Medical Care Decisions

Respondents were asked in the CHNA survey if they ever had to go without food or utilities to pay for prescription drugs or conversely gone without prescriptions to pay for food or utilities.

Of the 703 who answered this question, 49 (7.0%) said they had. This is a comparable to previous surveys when respondents had cited cost as factor.

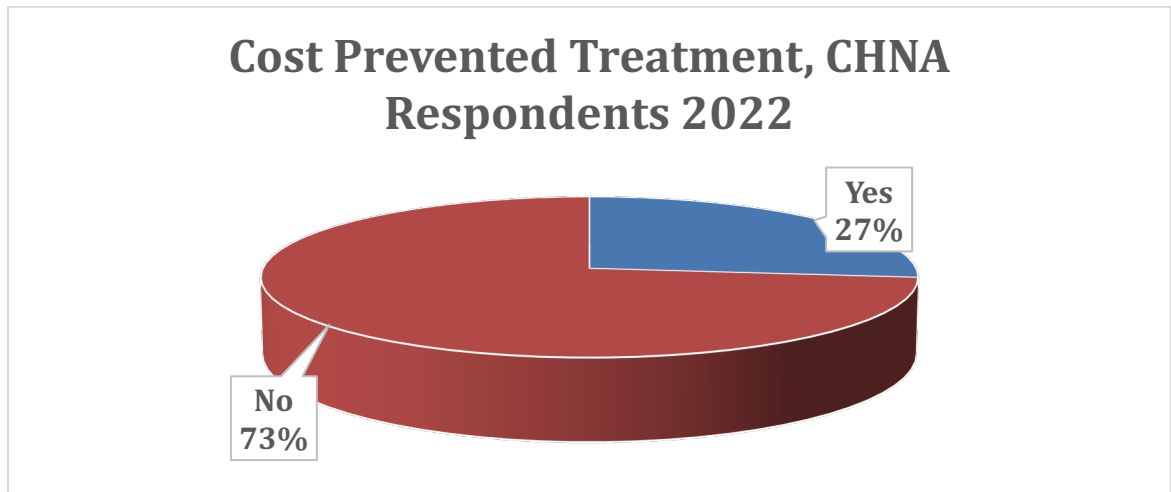


Source: CHNA Surveys, 2022, 2019, 2016 and 2013

The cost of medical treatment was a factor in seeking care for some survey respondents. When asked if they had avoided going to a doctor in the past year because of costs, 694 respondents answered the question. Of these:

- 186 (26.8%) respondents said yes.
- 508 (73.2%) said no.

This was similar to the results of the 2019 survey when 24% of respondents said the cost of health care was an inhibiting factor.



Source: CHNA Survey 2022

The population most likely to say they had to choose between food/utilities and prescriptions (or medical care in general) would be the working poor and the uninsured young adults.

The Michigan Behavior Risk Factor Surveys asked adults if they needed to see a doctor in the last twelve months but did not due to cost. Tri-county residents were less inhibited by cost than Michiganders.

Did Not See a Doctor Due to Cost, Last 12 Months Branch Hillsdale St. Joseph Residents Compared to Michigan		
	2018-20	2014-16
Branch-Hillsdale-St. Joseph	10.5%	12%
Michigan	12.1%	13.3%

Source: Michigan Behavior Risk Factor Surveys, 2018-20 and 2014-16 Averages

HILLSDALE HOSPITALIZATIONS AND DISCHARGE DATA

Hospitalizations

The Michigan Department of Community Health collects data on hospitalizations for all Michigan residents and correlates it to the county residences of the patients, regardless of where they are hospitalized.

Heart disease was the leading cause of hospitalization for Hillsdale County residents in 2019, the last year for which this data is currently available.

It is noted that Covid 19 had not yet reached epidemic status during this period so hospitalizations due to Covid 19 do not appear in this data.

Leading Causes of Hospitalizations by County of Residence for Hillsdale County and Michigan, Rates per 10,000 Population, 2019			
Principal Diagnosis	Hillsdale Number	Hillsdale Rate	Michigan Rate
All Hospitalizations	4859	1062.1	1208
Heart Disease	559	122.2	104.9
Newborns & Neonates (<7 days)	465	101.6	109.0
Injury & Poisoning	430	94.0	101.1
Arthropathies	264	57.7	44.4
Septicemia	219	47.9	76.7
Pneumonia	177	38.7	22.5
Mood Affective Disorders	146	31.9	25.0
Cerebrovascular Diseases	144	31.5	34.0
Cancer (Malignant Neoplasms)	138	30.2	34.6
Hypertension, excl. Heart Disease	116	25.4	30.5
Chronic Pulmonary & Bronchiectasis	109	23.8	19.7
Diabetes Mellitus	107	23.4	23.4
Renal Failure	74	16.2	20.5
Diseases of Skin/Subcutaneous Tissue	66	14.4	19.6
Diverticula of Intestine	42	9.2	11.0
Anemias	36	7.9	10.2
Neoplasmas, Benign/Unspecified	33	7.2	11.0
Infectious/Parasitic Diseases	33	7.2	10.2
Mental/Behavioral Disorders due to Alcohol	26	5.7	11.0
Care/Use of Rehab Procedures	12	2.6	13.4
All other Conditions	1915	492.2	562.2

Source: Michigan Resident Inpatient Files Division for Vital Records and Health Statistics, Michigan Department of Community Health, 2019

Hillsdale Hospital Discharge Data

Not all hospitalizations of county residents are at Hillsdale Hospital. But a study of the hospital discharge data shows that the leading causes of hospitalization at Hillsdale Hospital were psychiatric disorders, and obstetrics. Covid 19 discharges in the past year were also significant.

Inpatient discharges, Hillsdale Hospital						
	2016	2017	2018	2019	2020	2021
All Discharges HCHC	3602	3064	2922	1944	1813	1937
Pulmonary Medicine	316	350	344	229	185	132
Cardiology	374	300	254	252	171	153
General Medicine Adult	611	374	327	196	207	191
Obstetrics – Delivered	367	302	332	357	346	357
General Surgery-Adult	41	49	75	31	0	7
Orthopedics	536	464	352	231	162	143
Psychiatry	402	408	408	394	396	423
Gastroenterology-Medical	298	253	190	135	103	124
Neurology	97	81	99	19	11	13
Kidney/Urinary	112	95	88	53	68	33
Gynecology	52	30	68	29	17	26
Substance Abuse	8	6	11	17	13	19
Covid				0	123	303
All Other	387	353	378	9	11	13

Source: Hillsdale Hospital discharge data, 2016-21

Hillsdale Hospital has only one resident cardiologist. Many cardiac patients enter the hospital through the Emergency Department where they are quickly evaluated. Cardiac patients needing specific treatments not available at Hillsdale Hospital are sent by life flight to hospitals with the proper facilities.

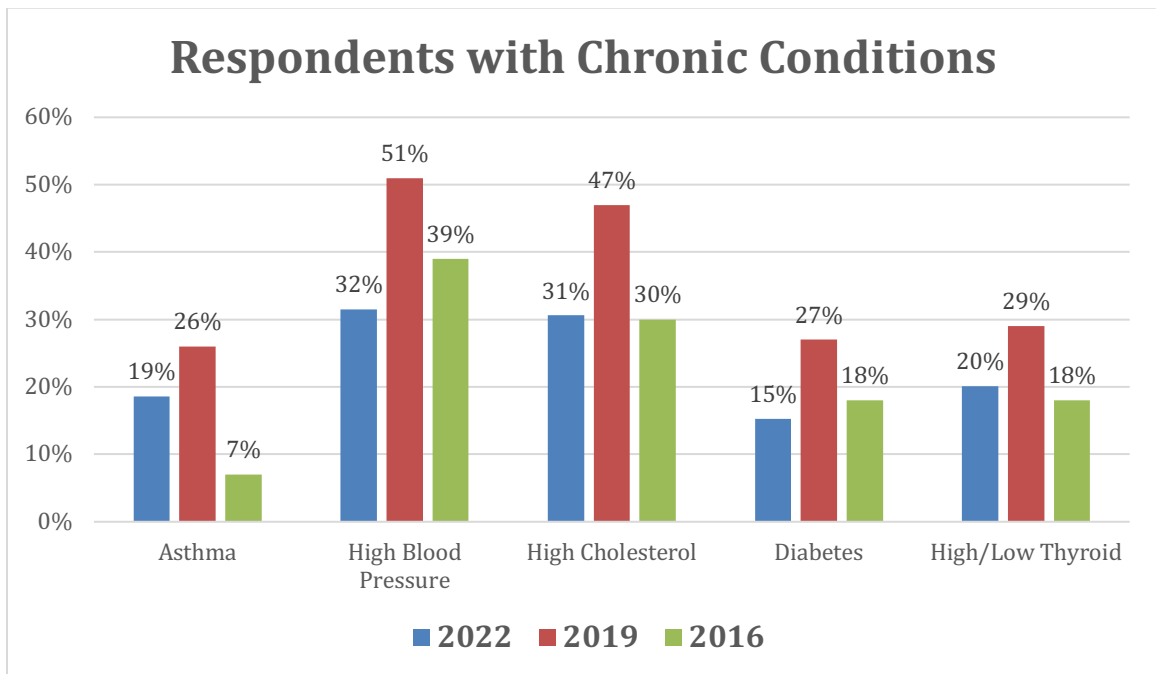
The hospital also life flights patients with other specific conditions when appropriate.

CHRONIC HEALTH CONDITIONS

Many chronic conditions contribute to overall poor health.

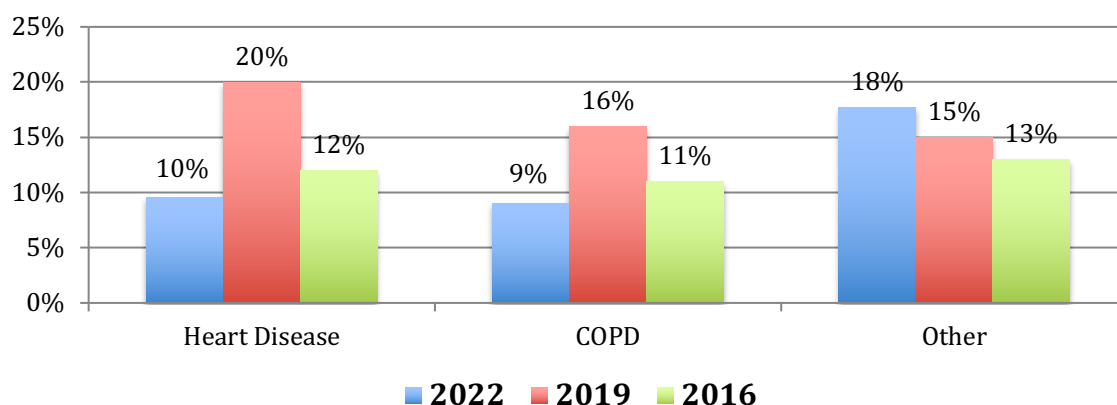
Respondents in the 2022 CHNA survey were asked if they suffered from select chronic conditions. Their answers revealed:

- 213 (31.5%) identified high blood pressure.
 - 203 (30.6%) said high cholesterol.
 - 132 (20.1%) had high or low thyroid.
 - 123 (18.6%) said asthma.
 - 101 (15.3%) said diabetes.
 - 63 (9.6%) said heart disease.
 - 60 (9.1%) had COPD.
 - 110 (17.7%) said they had other conditions and some listed more than one.
- Of these:
- 18 reported arthritis or rheumatoid arthritis.
 - 10 said they had cancer.
 - 7 said they had a gastrointestinal issue such as Crohn's disease or gastric reflex.
 - 7 said they had a kidney issue.
 - 5 reported fibromyalgia.
 - Several reported long term effects they attributed to Covid 19.



Source: CHNA Surveys, 2022, 2019 and 2016

Respondents with Other Chronic Conditions



Source: CHNA Surveys, 2022, 2019 and 2016

Secondary data from the Michigan Behavioral Risk Factor Survey for the Branch-Hillsdale-St. Joseph area compared to Michigan (2018-20 average) showed some differences between area and Michigan residents for reported illnesses.

Percent of Branch-Hillsdale-St. Joseph Residents with Select Health Conditions, 2018-20 Average, Michigan Behavioral Risk Factor Survey		
Condition	Branch-Hillsdale-St. Joseph	Michigan
Arthritis	39.6	31.0
HIV Test	37.8	45.5
Cancer	13.7	12.9
Asthma	17.8	15.9
Diabetes	13.7	11.7
Cardiovascular Disease	10.9	9.7
COPD	8.9	8.4
Heart Attack	5.1	4.9
Angina/Coronary Heart Disease	6.3	4.8
Stroke	4.4	3.5
Kidney Disease	4.6	3.4

Source: Michigan Behavioral Risk Factor Survey, 2018-20 Averages

MEDICAL SERVICES USED BY RESPONDENTS

The CHNA 2022 survey asked respondents what health services they had used in the past year and where the practitioners were located.

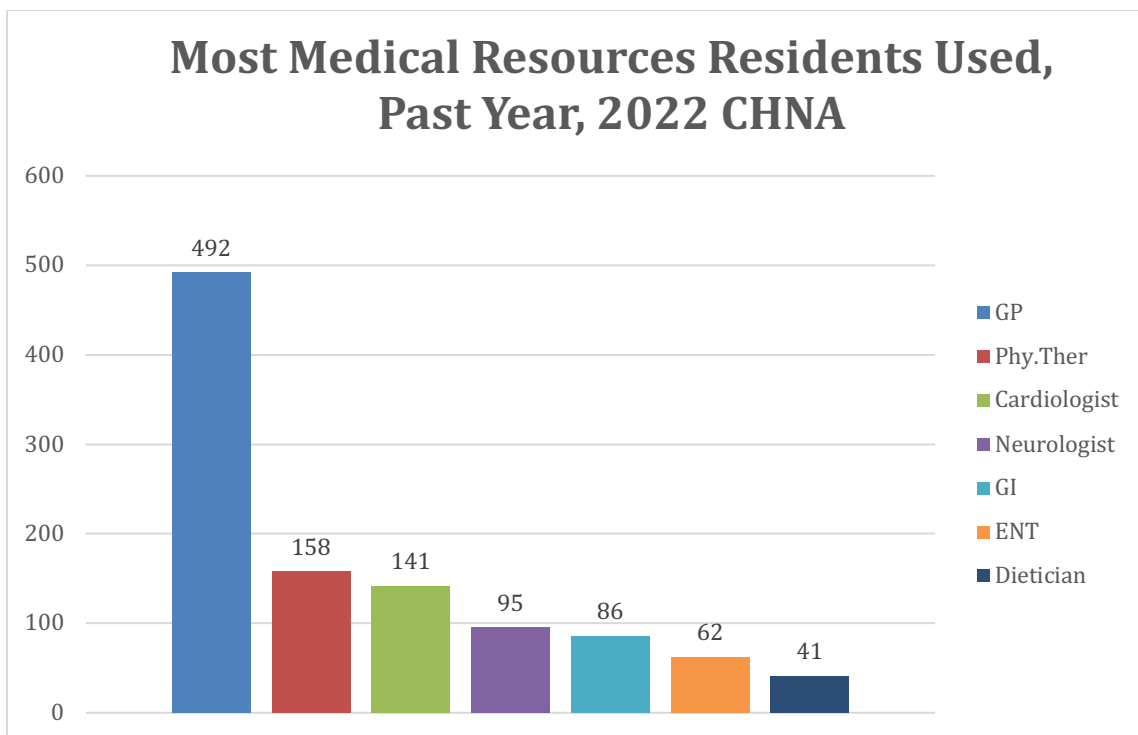
Services Used and Where Respondents Went for Treatment			
	In County	Outside County	Total
Cardiologist	75	66	141
Dietician	25	16	41
Gastroenterologist	49	37	86
General Practitioner	427	65	492
Neurologist	38	57	95
Ear, Nose & Throat	11	51	62
Physical Therapist	133	25	158

Source: CHNA Survey, 2022

The 2019 survey had a slightly different list of providers. That result is shown below.

Services Used and Where Respondents Went for Treatment			
	In County	Outside County	Total
Allergist	25	25	50
Cardiologist	154	85	239
Chiropractor	407	44	451
Dentist/Orthodontist	573	137	710
Dialysis	8	5	13
Dietician	53	10	63
Eye Doctor	619	106	725
Foot Doctor	166	29	195
Gastroenterologist	91	40	131
General Practitioner	600	56	656
Neurologist	56	55	111
OB/GYN	256	78	334
Physical Therapist	175	17	192
Psychologist/Psychiatrist	51	32	83

Source: CHNA Survey, 2019

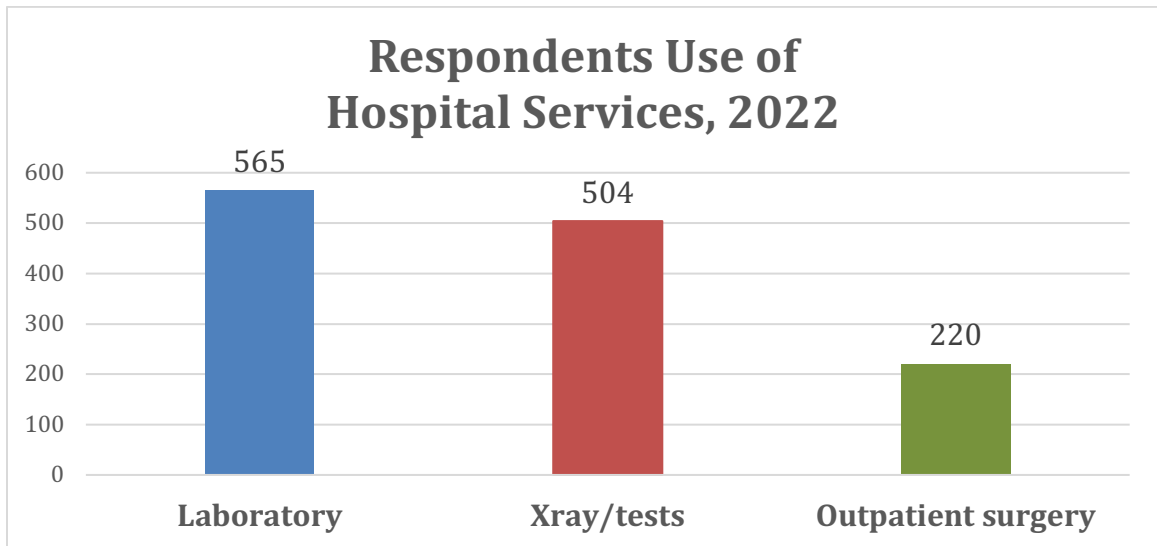


Source: CHNA Survey, 2022

Respondents Use of Hospitals

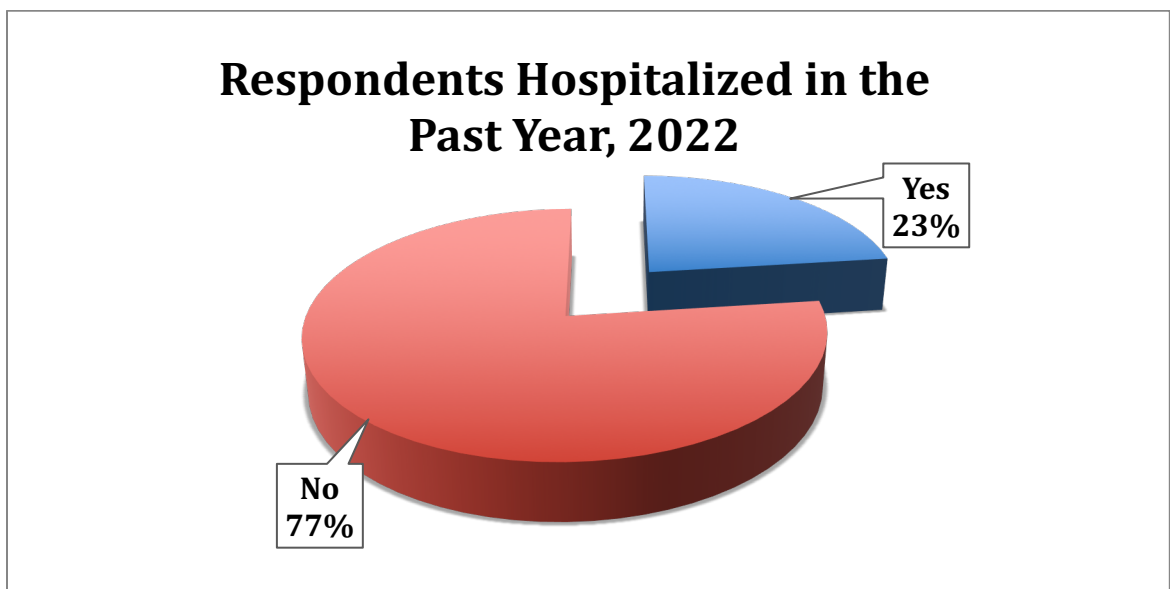
Respondents in the 2022 survey were asked if they used some of the services readily available at Hillsdale Hospital in the past year.

- 565 (91.7%) of the 616 who answered used the laboratory.
- 504 (86.9%) of the 580 who answered used X-ray or diagnostic tests.
- 220 (50.6%) of the 435 who answered said they had outpatient surgery.



Source: CHNA Survey, 2022

Respondents to the CHNA survey were asked if they had been hospitalized in the past year. Of the 723 respondents to the survey, 169 (23%) said they were. This is similar to the 2019 survey where 22% said they had been hospitalized.

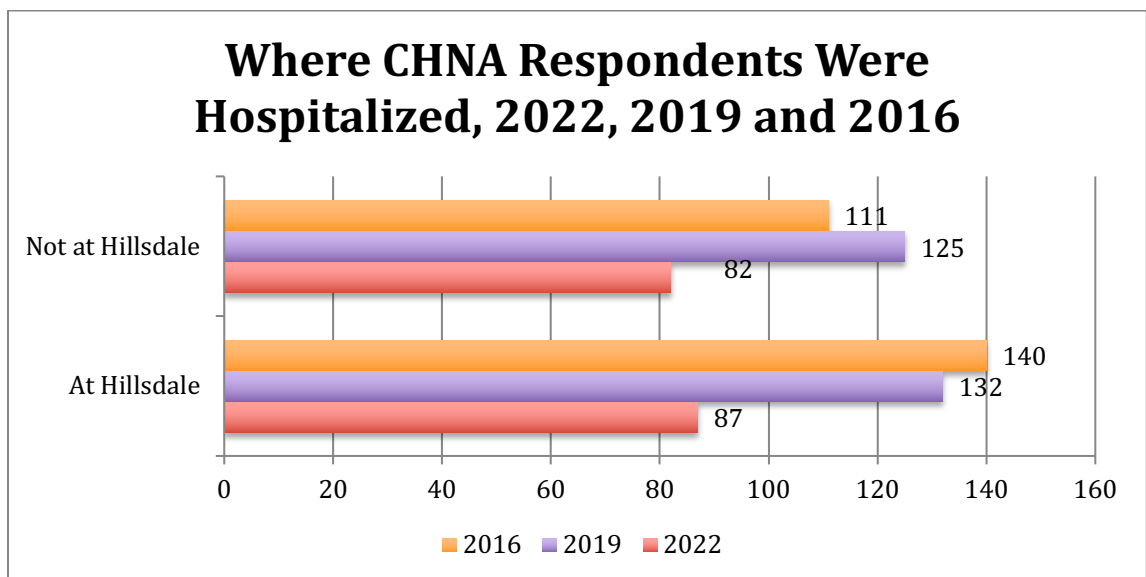


Source: CHNA Survey, 2022

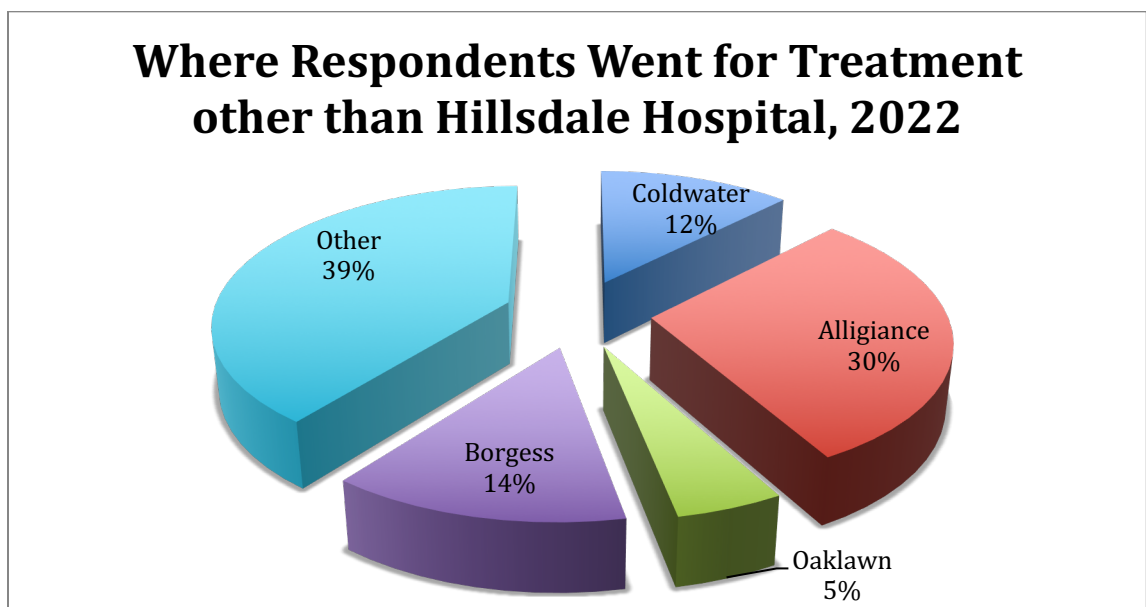
Respondents were then asked if they were hospitalized, what facility did they use.

- 87 said it was at Hillsdale.
- 24 said Allegiance.
- 11 said Borgess.
- 10 said Coldwater.
- 5 said Oaklawn.
- 32 said somewhere else.

This result is similar to what was found in past years where roughly 50% of respondents were hospitalized in the county.



Source: CHNA Surveys, 2022, 2016 and 2019

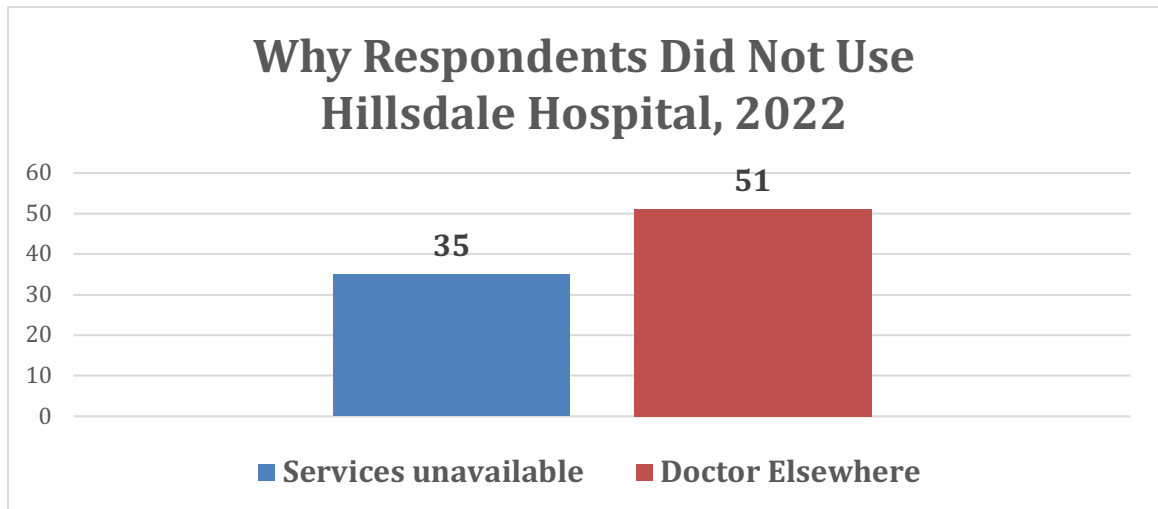


Source: CHNA Survey, 2022

Respondents were asked if they were hospitalized but not at Hillsdale why they went to another hospital. Of those who answered this question:

- 35 of the 166 respondents (21.1%) said the services they needed were not available at Hillsdale Hospital.
- 51 of 160 respondents (31.9%) said their doctor did not practice in Hillsdale.

This is a similar pattern found in 2019 when 56 respondents said they went elsewhere because the services needed were not available in Hillsdale and 71 said their doctor was not affiliated with the hospital.



Source: CHNA Survey, 2022

Hospital Re-admissions

Hospitals are monitored for the number of patients re-admitted for the same illness within a short period following discharge. Although in some cases this is unavoidable due to the nature of the illness or the actions of the patient following discharge, premature release of patients from a facility or lack of follow-up outpatient monitoring can contribute to the likelihood of re-admittance. But from Hillsdale has a lower re-admission rates compared to similar hospitals.

Percentage Re-admissions, Hillsdale Hospital				
2016/17	2017/18	2018/19	2019/20	2020/21
7.8%	6.5%	6.5%	5.6%	4.2%

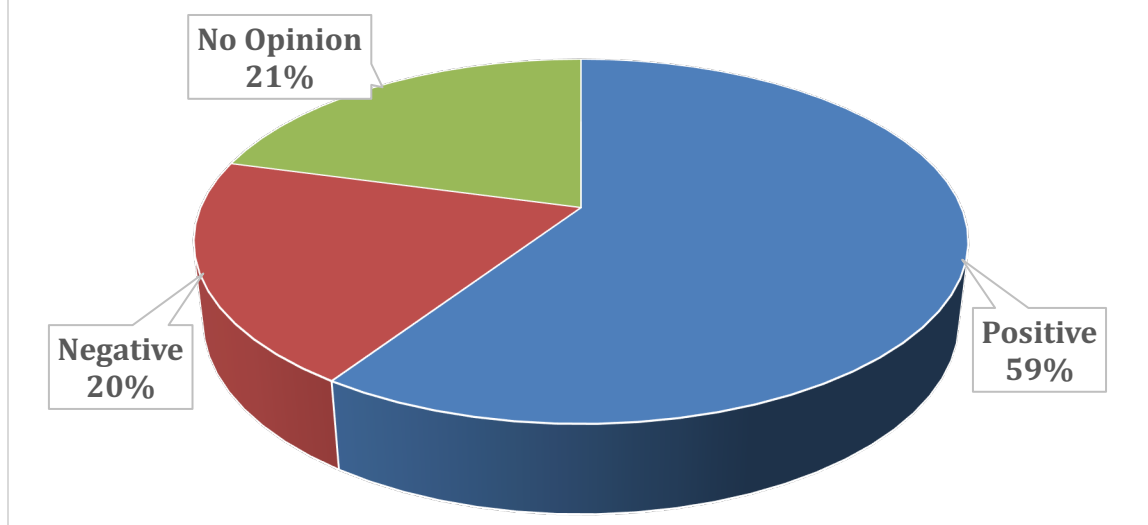
Source: Hillsdale Hospital Internal Data

Impressions of Hillsdale Hospital

Respondents in the 2022 CHNA survey were asked about their impression of Hillsdale Hospital. Of the 674 who answered this question:

- 400 (59.4%) had a positive impression.
- 134 (19.9%) had a negative one.
- 140 (20.8%) had no opinion.

Respondents Opinions of Hillsdale Hospital, 2022



Source: CHNA Survey, 2022

PREVENTIVE CARE: IMMUNIZATIONS

Many infectious diseases such as influenza and pneumococcal pneumonia can be prevented by immunization.

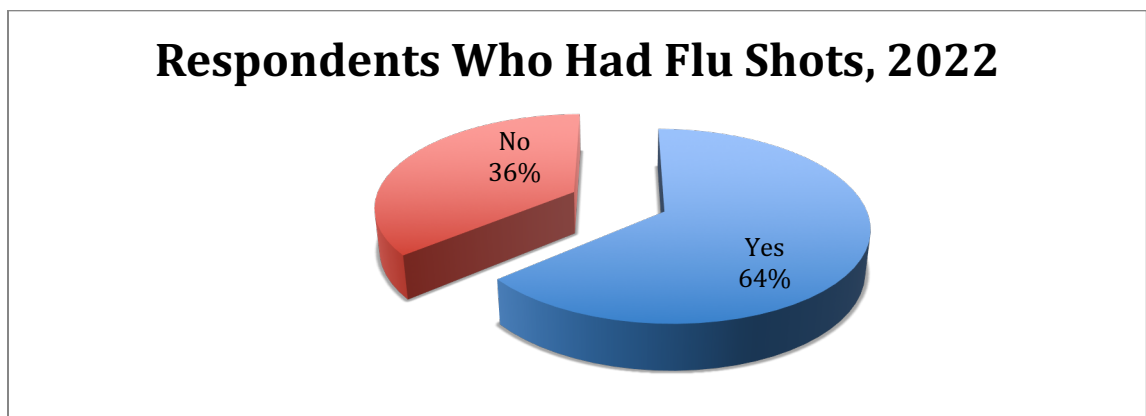
Influenza vaccines

Influenza vaccines are given on a yearly basis. The vaccine produced is based upon the strain of flu virus predicted for that year by the Centers for Disease Control and Prevention (CDC).

When asked in the CHNA survey if they had a flu shot within the last year, 701 people answered the question. 448 (63.9%) said they had been immunized.

This is slightly higher than previous surveys.

- 57% said they had a flu shot in 2019.
- 53% said they did in 2016.
- 51% said they did in 2013.



Source: CHNA Survey, 2022

Older residents may be more likely to get an influenza vaccination than the general population. 70.1% of respondents age 65 to 75 and 76.3% of those age 75 or over reported they had a flu shot.

The Michigan Behavior Risk Factor Survey showed Branch-Hillsdale-St. Joseph residents age 65 or older were slightly less likely to receive a flu shot in the last year than Michigan residents.

Flu Vaccination Branch Hillsdale St. Joseph Residents Age 65 or Older Compared to Michigan			
	2018-20	2014-16	2012-14
Branch-Hillsdale-St. Joseph	58.9%	55.6%	48.1%
Michigan	61.6%	57.1%	56.6%

Source: Michigan Behavior Risk Factor Surveys 2018-20, 2014-16 and 2012-14 Averages

Bacterial pneumonia

Bacterial pneumonia is caused by *Streptococcus pneumoniae* (pneumococcus). The Centers for Disease Control and Prevention estimates about one million people are hospitalized with pneumonia annually in the United States and 50,000 die from the disease. About half of these cases are preventable through the use of the available vaccine.

One vaccination with pneumococcal conjugate vaccine (PCV13) is recommended for people under age 65, or those with immunocompromised conditions. A second immunization is recommended after the age of 65 with a dose of pneumococcal polysaccharide vaccine (PPSV23.)

When asked if they had received a pneumonia vaccine in the past year, 117 (17.0%) of 689 respondents in the 2022 CHNA survey who answered this question said they had. This is slightly lower than the 22.5%, 20.6% or 18% who said they had done so in the 2019, 2016 and 2013 CHNA surveys, respectfully.



Source: CHNA Survey, 2022

Area physicians encourage older residents to get pneumonia shots. This is reflected in the Michigan Behavior Risk Factor Surveys which showed most of Branch-Hillsdale-St. Joseph residents age 65 or older had ever received a pneumonia vaccine. This is comparable to that reported for all Michigan residents in this age group.

Pneumonia Vaccination Branch Hillsdale St. Joseph Residents Age 65 or Older Compared to Michigan			
	2018-20	2014-16	2012-14
Branch-Hillsdale-St. Joseph	69.4%	72.0%	66.3%
Michigan	72.8%	71.3%	68.2%

Source: Michigan Behavior Risk Factor Surveys 2018-20, 2014-16 and 2012-14 Averages

PREVENTIVE CARE: CANCER SCREENINGS

Detecting cancer at an early stage can impact the course of the disease. Medical tests for many cancers are continuing to be developed but some tests have been in widespread use for many years including mammograms, cervical, prostate and colon cancer screenings.

Mammograms

The United States Preventive Services Task Force (2016) recommends women age 50 to 74 should have a mammogram every two years. Women age 40 to 49 and those at higher risk of breast cancer due to family history or another reason should follow the recommendations of their physicians.

Females were asked in the 2022 CHNA survey if they had a mammogram in the past year. 581 answered this question though the survey only had 534 women.

- 236 said yes. This would represent 44% of the women who took the survey.
- 345 said no, probably including some men who answered the question.

The Michigan Behavior Risk Factor Survey asked female residents if they had a mammogram in the last two years. The percent of Branch-Hillsdale-St. Joseph residents who said they did was much less in 2018-20 than in 2014-16.

Females age 40 or Older with Mammogram, last two years, Branch Hillsdale St. Joseph Residents Compared to Michigan		
	2018-20	2014-16
Branch-Hillsdale-St. Joseph	64.6%	81.1%
Michigan	72.7%	74.9%

Source: Michigan Behavior Risk Factor Surveys, 2018-20 and 2014-16 Averages

Prostate Screening

There are two commonly used tests to screen for prostate cancer.

The first test is a digital rectal exam. This is usually performed in the doctor's office during a routine male physical.

The second test is the prostate specific antigen (PSA) test. PSA antigen is made by the prostate gland. The level of this antigen in the blood can be higher in men who have prostate cancer but can also be elevated due to other factors. The value of the PSA test remains controversial, and there is disagreement about how frequently it should be conducted. Its appropriateness should be evaluated on a case-by-case basis considering family history and possible symptoms of the disease.

When men were asked in the CHNA survey if they had any prostate screening in the past year 46 said they had. There were only 177 males who answered the survey though there were 341 responses to this question, and not all men even answered this part of the survey. If all men had answered the question, the 46 who said yes would represent 26%.

The Michigan Behavior Risk Factor Survey asked male residents age 50 or older if they had a PSA test in the past year. Past surveys show area residents are as likely to have this test as Michigan ones. Unfortunately, data for area residents for the 2018-20 survey is not available due to the small sample collected.

PSA Test Past Year, Branch Hillsdale St. Joseph Male Residents Age 50 or Older Compared to Michigan			
	2018-20	2014-16	2012-14
Branch-Hillsdale-St. Joseph	Not Available	42.5%	41.0%
Michigan	32.9%	43.4%	46.3%

Source: Michigan Behavior Risk Factor Surveys 2018-20, 2014-16 and 2012-14 Averages

Colonoscopy

The U.S. Preventive Services Task Force recommends adults age 50 to 75 should be screened for colorectal cancer. Screening for those 75 and older should be decided on an individual basis.

There are several tests to detect colorectal cancer. A simple one is a laboratory test that can detect blood in stools from fecal samples. A colonoscopy is a more extensive test performed in the hospital.

The American Cancer Society (ACS) recommends both men and women with an average risk of colorectal cancer should begin screening at age 45 with a yearly fecal sample test. A visual colorectal exam (colonoscopy) is recommended every 10 years, with follow-up tests on a more frequent basis if polyps or cancer are detected.

When asked in the CHNA survey if they had a colonoscopy in the past year, 685 respondents answered.

- 89 (13.0%) said they did.
- 596 (87.0%) said they did not.

This is less than found on previous surveys.

- 19.7% of respondents said they did in 2019.
- 19.5% of the respondents said they did in 2016.

The decrease in colonoscopy screenings in the past year may be due to the curtailment of some routine screenings due to Covid restrictions.

Colorectal screening has been increasing over the years. The Michigan Behavior Risk Factor Survey, 2018-20 average, showed 76.5% of Branch-Hillsdale-St. Joseph adults age 50 or older had ever had an appropriate colorectal screening, compared to 75.6% for all Michigan residents in this age group. This survey defined an appropriate screening as either:

- A fecal occult blood test within the past year.
- A sigmoidoscopy within the past five years.
- A colonoscopy within the past ten years.

Colorectal Screening, Branch Hillsdale St. Joseph Residents Age 50 or Older Compared to Michigan			
	2018-20	2014-16	2012-14
Branch-Hillsdale-St. Joseph	76.5%	65.7%	58.9%
Michigan	75.6%	71.0%	68.6%

Source: Michigan Behavior Risk Factor Surveys 2018-20, 2014-16 and 2012-14 Averages

Cervical cancer Pap Tests

Pap tests are a rapid way to detect cervical cancer. The CDC recommends Pap tests for all women between 21 and 65 years old at intervals recommended by their doctor. Women age 65 and older who have had negative Pap tests for several years or who had their cervix removed should follow the recommendation of their doctor.

Women were asked in the CHNA survey if they had a Pap test in the past year. 159 said they had. This represents 30% of the 534 women who took the survey.

The Michigan Behavior Risk Factor Survey, asks residents age 18 or older if had a Pap test within the previous three years. Branch-Hillsdale-St. Joseph were slightly less likely to have this test compared all Michigan residents in past surveys. Unfortunately, data for area residents for the 2018-20 survey is not available due to the small sample collected.

Pap Test, Branch Hillsdale St. Joseph Women Residents Aged 18 or Older Compared to Michigan			
	2018-20	2014-16	2012-14
Branch-Hillsdale-St. Joseph	Not Available	69.2%	73.1%
Michigan	79.6%	73.7%	77.2%

Source: Michigan Behavior Risk Factor Surveys 2018-20, 2014-16 and 2012-14 Averages

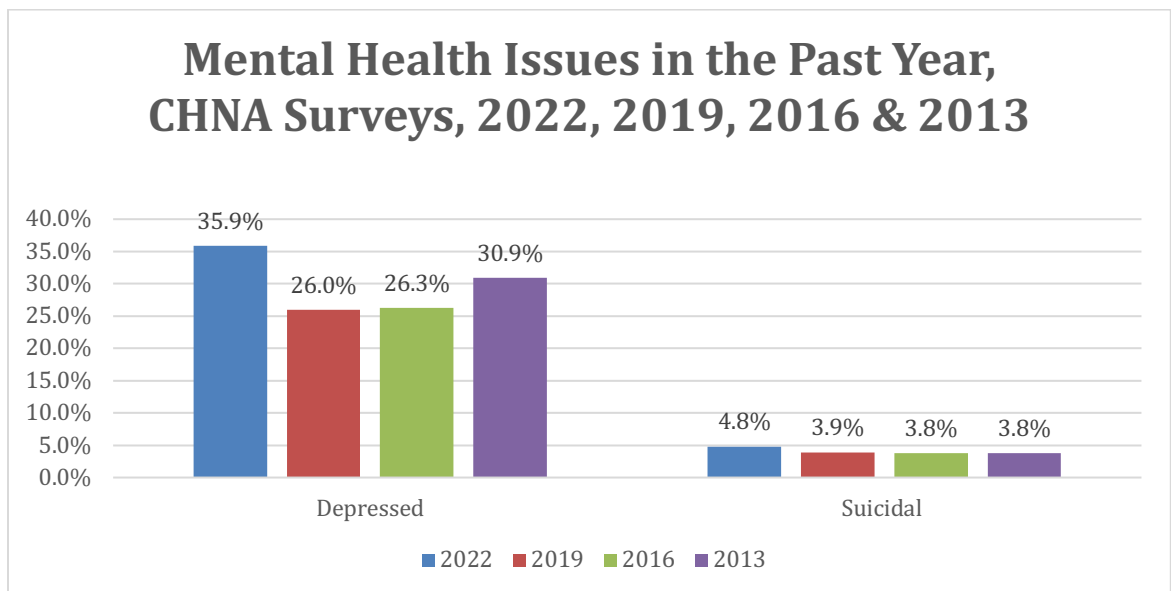
MENTAL HEALTH ISSUES

Mental health impacts not just the individual but the community. Feelings of wellbeing even have a positive impact on the management and progress of some diseases.

When respondents in the 2022 CHNA survey were asked about their mental health in the past year:

- 244 (35.9%) of the 679 respondents to this question said they had been depressed for more than a week.
- 31(4.8%) of the 646 respondents to this question had been suicidal.

These results are higher than in previous surveys. This might be somewhat contributed to the fear, uncertainty, and isolation due to the Covid 19 epidemic.



Source: CHNA Surveys, 2022, 2019, 2016 and 2013

The Michigan Behavioral Risk Factor Survey, 2018-20 averages, asked respondents if they had ever been told they had a depressive disorder by a health professional. Among the Branch-Hillsdale-St. Joseph residents, 20.0% said they had compared to 20.7% of Michigan residents.

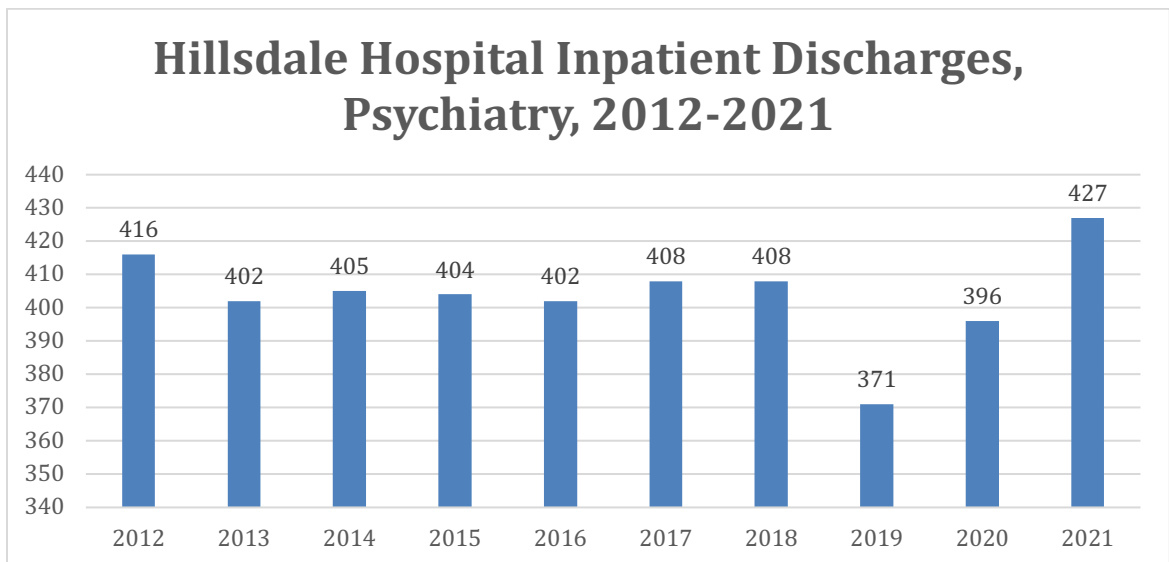
Feelings of Poor Mental Health

The Michigan Behavioral Risk Factor Survey asked respondents how many felt their mental health was not good for 14 or more days out of the previous 30 days including stress, depression and problems with emotions. 16.6% of Branch-Hillsdale-St. Joseph residents said their mental health was not good compared to 15.5% of Michigan residents but both groups showed a marked increase in poor mental health than in the past.

Poor Mental Health, Branch Hillsdale St. Joseph Residents Age 18 or Older Compared to Michigan			
	2018-20	2014-16	2012-14
Branch-Hillsdale-St. Joseph	16.6%	12.0%	12.7%
Michigan	15.5%	9.2%	12.6%

Source: Michigan Behavior Risk Factor Surveys 2018-20, 2014-16 and 2012-14 Averages

Hillsdale Hospital has a 10 bed psychiatric unit; this is the only inpatient Psych unit in the county. Examination of the hospital psychiatric patient discharge data shows a fairly consistent pattern of use.



Source: Hillsdale Hospital discharge data, 2012 to 2021

CAREGIVERS

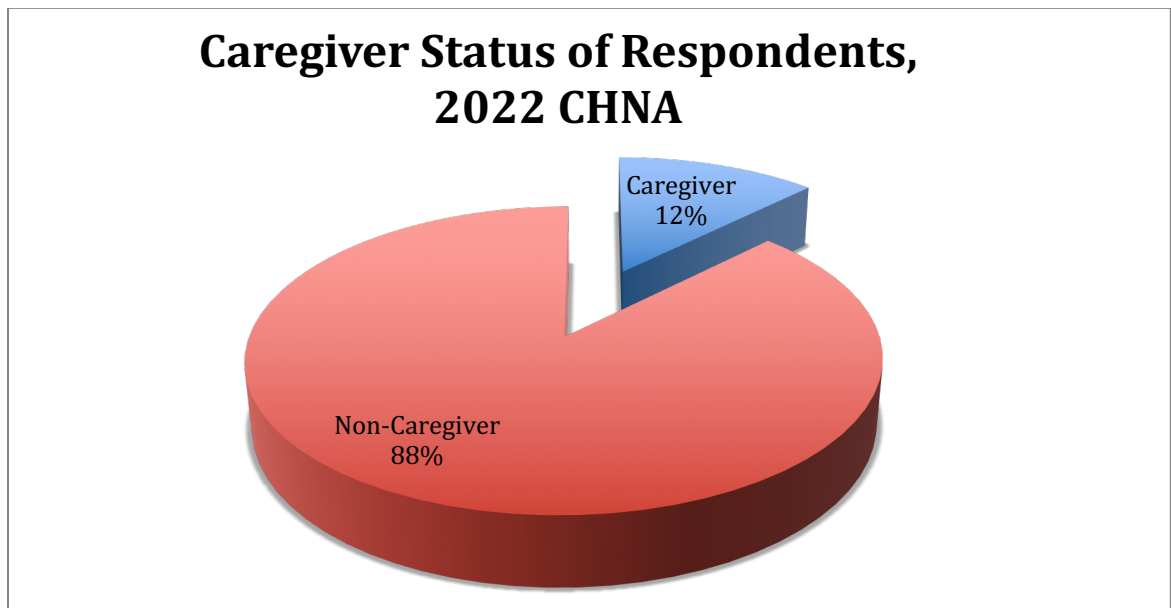
Caring for others can produce stress in caregivers and impact their physical and mental wellbeing.

The CHNA 2022 survey asked respondents if they were caregivers for any sick or aged person. Of the 715 people who answered this question:

- 89 (12.5%) said they were. Of these, 74 were women.
- 626 (87.6%) were not.

A similar result was found in previous surveys.

- 10.8% said they were caregivers in 2019.
- 11.7% said they were in 2016.



Source: CHNA Survey, 2022

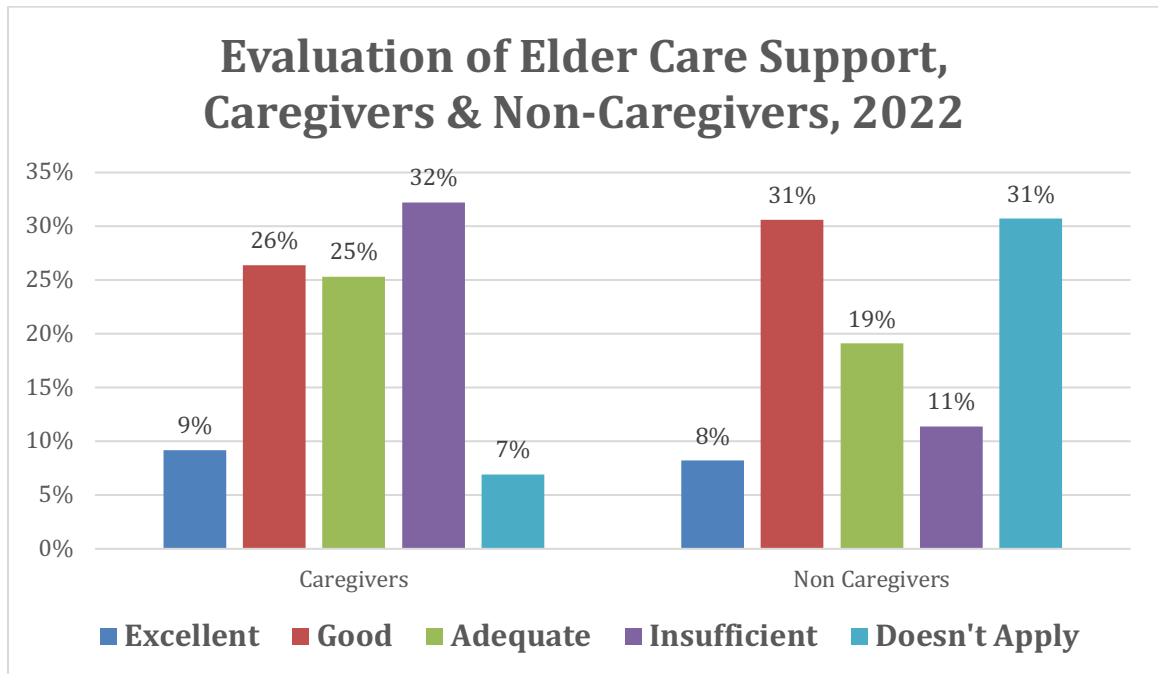
A follow up question was asked about how respondents would rate the healthcare service or support for elder care in Hillsdale County.

Of the 89 who said they were caregivers, 87 answered this question:

- 8 (9.2%) said it was excellent.
- 23 (26.4%) said it was good.
- 22 (25.3%) said it was adequate.
- 28 (32.2%) said it was insufficient.
- 6 (6.9%) said it did not apply to them.

A total of 704 people rated the support for elder care in Hillsdale County though only 89 had claimed to be caregivers. Perhaps some of them were previous caregivers or had a friend or relative that was in this position. Of the 612 who were not caregivers and answered this question:

- 5 (8.2%) said the support was excellent.
- 187 (30.6%) said it was good.
- 117 (19.1%) said it was adequate.
- 70 (11.4%) said it was insufficient.
- 188 (30.7%) said it did not apply to them.



Source: CHNA Survey, 2022

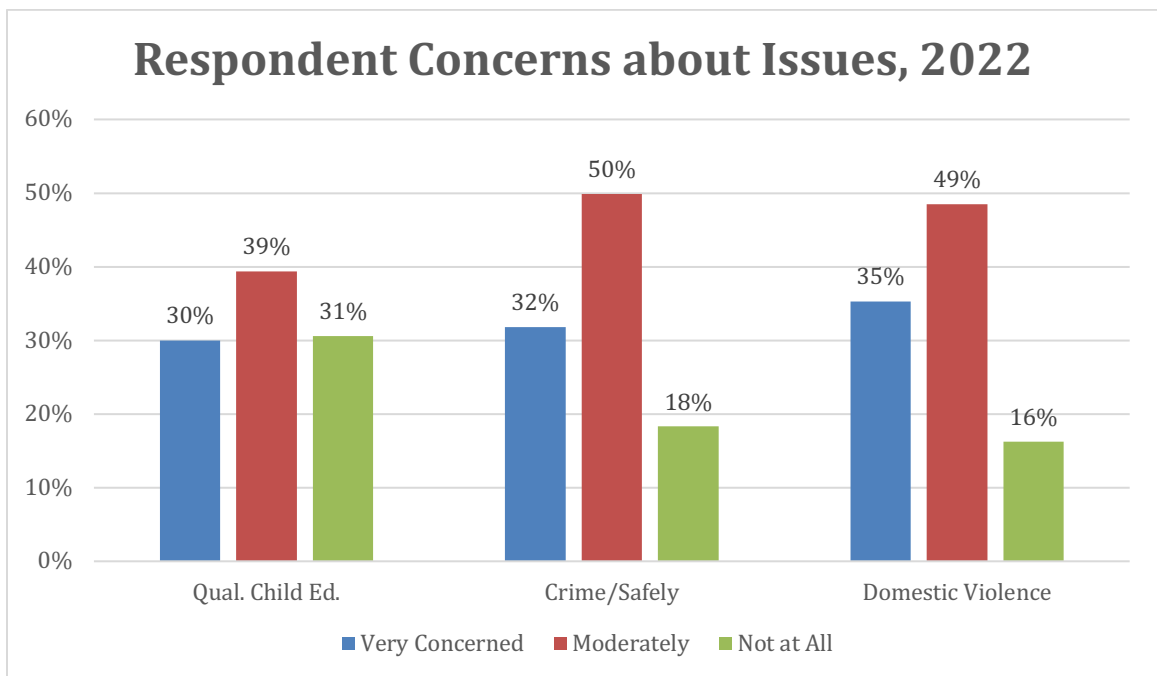
SAFETY AND SOCIAL CONCERNS

Respondents to the CHNA survey were asked whether they were very concerned, moderately concerned or not at all concerned about three safety issues:

- Quality of early childhood education.
- Crime/Public safety.
- Domestic Violence.

Their responses showed they were more concerned with crime and domestic violence than the quality of childhood education. This probably reflects the larger percentage of older respondents.

Domestic violence is often hidden so many survey respondents may be unaware of the extent on this problem. Domestic violence can usually be tied to economic factors or substance abuse. The effect on children can have lifelong consequences even if the children are removed from the home.



Source: CHNA Survey, 2022