



*Ho-Chunk Nation*  
Department of Health

# Health Profile Report

Public Health & Environmental Health **2024**

Submitted June 2024

**WAŽA HIGIRAWI**  
(We care)

Ho-Chunk Nation-Chief Headdress



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Ho-Chunk Nation-Female Powwow



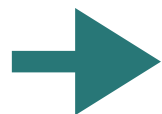
Ho-Chunk Nation-Yarn belts



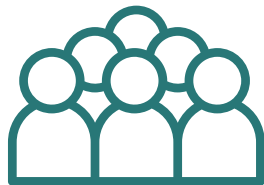
# Data details

## Where does the data come from?

Multiple data sources are used in this report. This includes:



**Internal data:** From the Ho-Chunk Nation Department of Health and other Ho-Chunk Departments



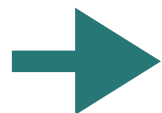
**HCN Office of Enrollment**



**HCN DOH Programs**



**NextGen  
(HCN DOH Medical Records)**



**External data:** From places outside the Ho-Chunk Nation, including state and federal sources



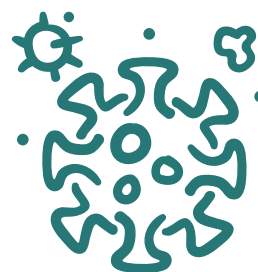
**US Census**



**WI DNR**



**WI DHS**



**CDC**



**WEDSS**

## When is the data from?

Because public data can lag, the data represented in this report reflects the latest, currently available information. For some measures, you may see multiple years and an average of those years presented- this is commonly used in smaller populations or with public sources that use surveys and weigh responses to reflect a larger population like a county, state, or nation.

### Other source details:

**WI Department of Natural Resources (DNR):** <https://dnr.wisconsin.gov/>

**WI Department of Health Services (DHS):** <https://www.dhs.wisconsin.gov/>

**Centers for Disease Control & Prevention (CDC):** <https://www.cdc.gov/>

**WI Electronic Disease Surveillance System (WEDSS):** Internal surveillance site for public health staff, infection control practitioners, clinical laboratories, clinics, & other disease reporters.



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# Data details cont.

## Who is represented in the data?

Because of how tribal nations and tribal health departments can 1) receive/share information and 2) due to differences in funding reporting requirements, some data sources report on all tribal members and others report on Ho-Chunk tribal members only. In addition, some sources will only report on specific geographic areas, such as the state or specific counties. Be sure to keep this in mind when interpreting results and referencing the data source on each page.



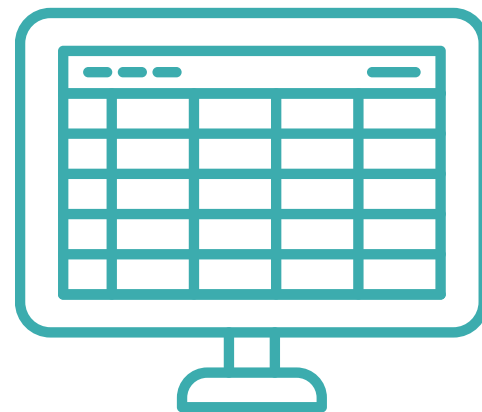
## Can I access/get a copy of the original data?

Depends! Anyone can access external public data sources and download data. However, some external sources can only be used by specific organizations and are not available to the public. Some internal Ho-Chunk Nation data may be available to receive in an aggregated report upon request.



## How do I use the data in this report?

There are many ways data can be used ranging from individual, community, or organizational use. See the following page (iv) for more ideas on how this information can be applied in different settings.



## Other Questions?

Please contact Sarah Reed-Thryselius

Ho-Chunk Nation Epidemiologist  
Sarah.Thryselius@ho-chunk.com



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# Data uses

## Community Knowledge & Empowerment

A key function of the HCN DOH is to provide information to our communities about their health on community conditions and health outcomes to make informed decisions.

## Education & Communication

Providing the most up-to-date health information to our communities, including health education and resources from the Public Health and Environmental Health divisions.

## Accreditation

This includes standards such as analyzing data, providing health education, and conducting performance management.

## Programming & Service Development

Measures highlight gaps and opportunities for improvement in community conditions and health outcomes. The data pinpoints where programs/services could focus on.

## Grant Proposals

Use Ho-Chunk Nation data to support grant proposals and explain your "so what."

## Community Health Assessment

Provides additional community data to deepen the understanding of community conditions and outcomes.

## Policy Development

Identifies needs and gaps in the community. Data could highlight the need for a policy.

## Research

Use data to identify a need or a question.

## Media Stories

Support and strengthen stories with data including articles, social media posts, interviews and more.

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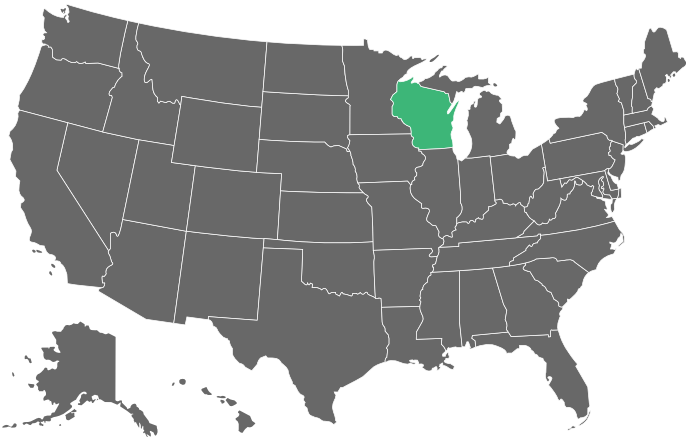
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# Ho-Chunk Nation Community Profile

Our Ho-Chunk Tribal members live all over the world. Population estimates are helpful to understand age, sex, and geographical location to predict service demand and resource allocation. The numbers below reflect enrolled Ho-Chunk Tribal members in 2022.



**7,733**  
members  
nationwide

**5,374**  
members in  
Wisconsin

**Sex**  
(nationwide)

**51% female**  
**49% male**

## By age

### All HCN Tribal in Wisconsin

0- 4 years	92
5-11 years	493
12-17 years	605
18-24 years	681
25-34 years	968
35-44 years	843
45-59 years	951
60+ years	741

**DYK?** Ho-Chunk people (*Hocaks/Ho-Chungra*) have traditional lands from Wisconsin, Minnesota, Iowa, Missouri, and Illinois.



**Among Wisconsin Ho-Chunk Tribal members, about 36% are considered vulnerable.** This includes Elders and youth.

These groups are more susceptible to health conditions & community impacts because of their age. **1**

**HCN Community Profile:** HCN tribal enrollment, August 2022  
**Source:** HCN Office of Enrollment  
**Years displayed:** 2022



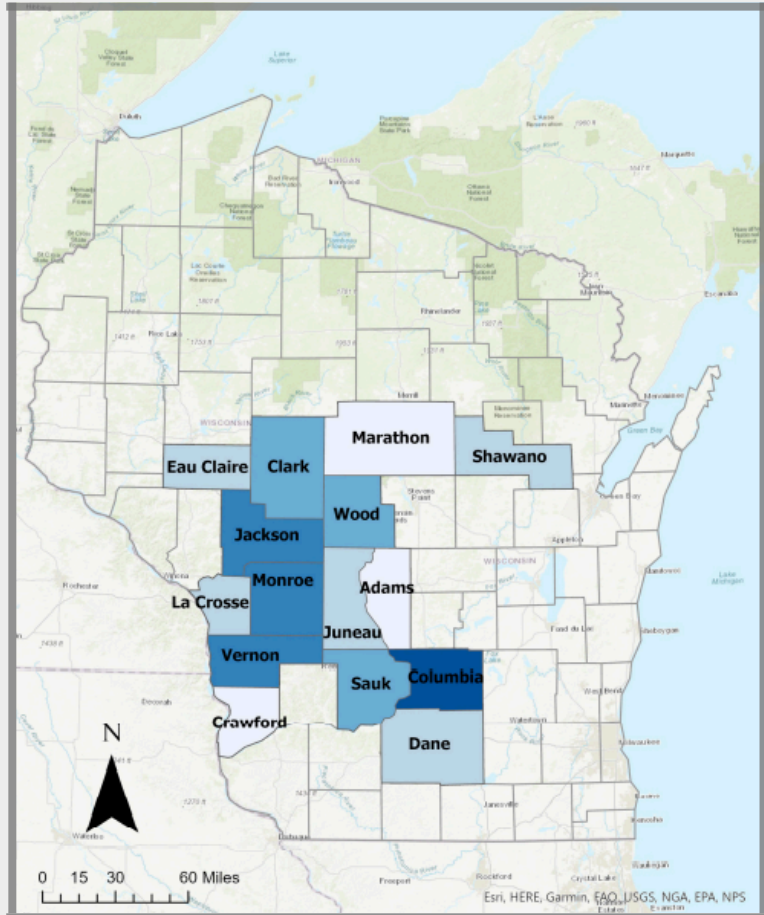
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# Purchased Referred Care Delivery Area

In addition to national and state populations, Indian Health Services (IHS) assigns designated **Purchased Referred Care Delivery Areas** (PRCDA) to tribes; these are "counties that include all or part of an American Indian or Alaska Native reservation or have a common boundary with a federally recognized tribal land.... it is a geographic area within which IHS makes purchased/referred care available to members of an identified Indian community who reside in the area....36 states have at least one PRCDA-designated county (CDC, 2022)." The Ho-Chunk Nation Department of Health often reports on national, state, and PRCDA populations due to funding and program requirements.



There are **15 counties in Wisconsin** and **one county in Minnesota** which make up the **HCN DOH PRCDA area**:

- Adams
- Clark
- Columbia
- Crawford
- Dane
- Eau Claire
- Jackson
- Juneau
- La Crosse
- Marathon
- Monroe
- Sauk
- Shawano
- Vernon
- Wood
- Houston



**4,181** enrolled members in PRCDA area

**78%** % of enrolled WI members living in PRCDA area

**HCN Community Profile:** HCN tribal enrollment, August 2022  
**Source:** HCN Office of Enrollment  
**Years displayed:** 2022

NOTE: Houston County (MN) not pictured



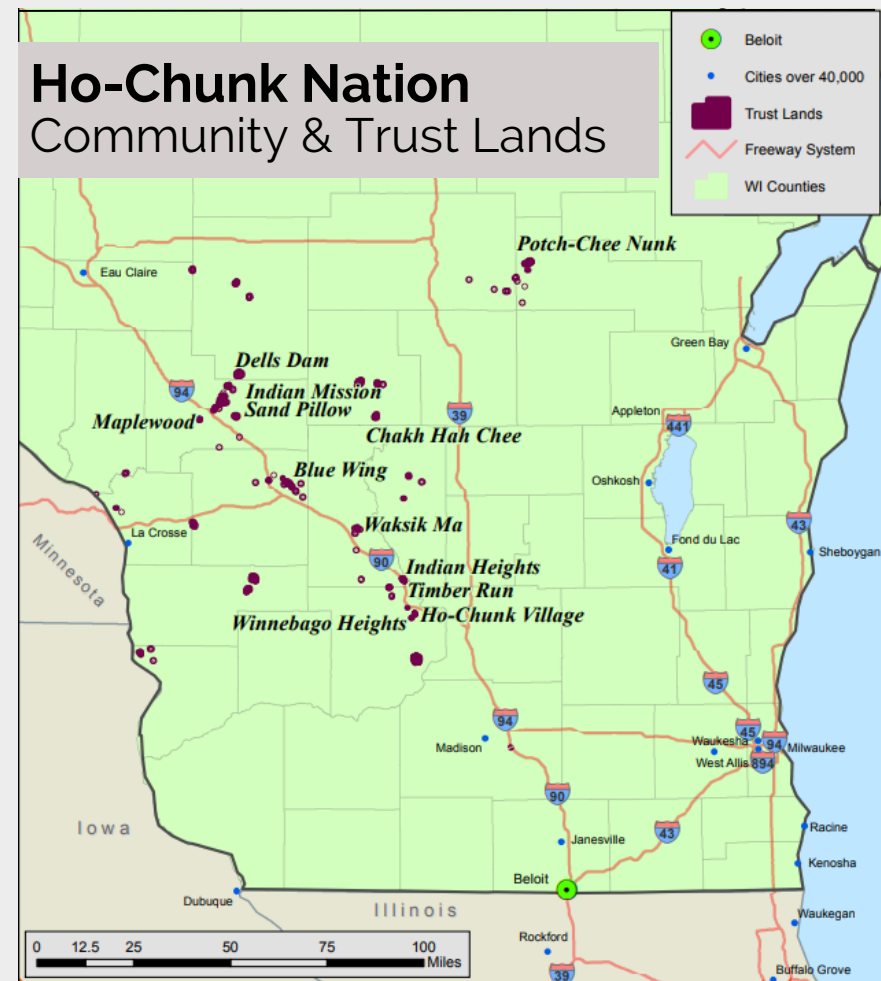
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# Ho-Chunk Nation Tribal Communities

Ho-Chunk communities are located on Nation Trust land. Ho-Chunk Tribal members and their families are eligible for housing in these designated places which span seven Wisconsin counties. The Environmental Health (EH) Division oversees certain services in these communities and on other trust land properties including their water systems.



## Community locations (by county)

### Clark

- Dells Dam

### Jackson

- Sand Pillow
- Indian Mission

### Juneau

- Waksik Ma
- Indian Heights
- Timber Run

### Sauk

- Ho-Chunk Village
- Winnebago Heights

### Shawano

- Potch Chee Nunk
- Ho-Chunk Village

### Monroe

- Blue Wing

### Wood

- Chakh-Hah-Chee

Map: Courtesy of HCN GIS division

**DYK?** The EH division ensures safe potable water sources for its customers by maintaining compliance with all applicable Federal and State Regulations. These community water systems serve approximately 10,562 people, including residents, employees, and visitors.

The division shares full water quality reports (Consumer Confidence Reports) on their division webpage.



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# Community Conditions

All persons  
HCN DOH PRCD

**Social vulnerability** is the potential negative effects and outcomes on communities caused by external stressors or events- these include natural disasters or human-made events. Certain experiences and identities like poverty, transportation barriers, or living with a disability can place communities at a higher vulnerability to such stressors or events (CDC/ATSDR, 2022).

The Social Vulnerability Index (SVI) looks at **16 social factors**, categorized into **four main themes**:



Socioeconomic status



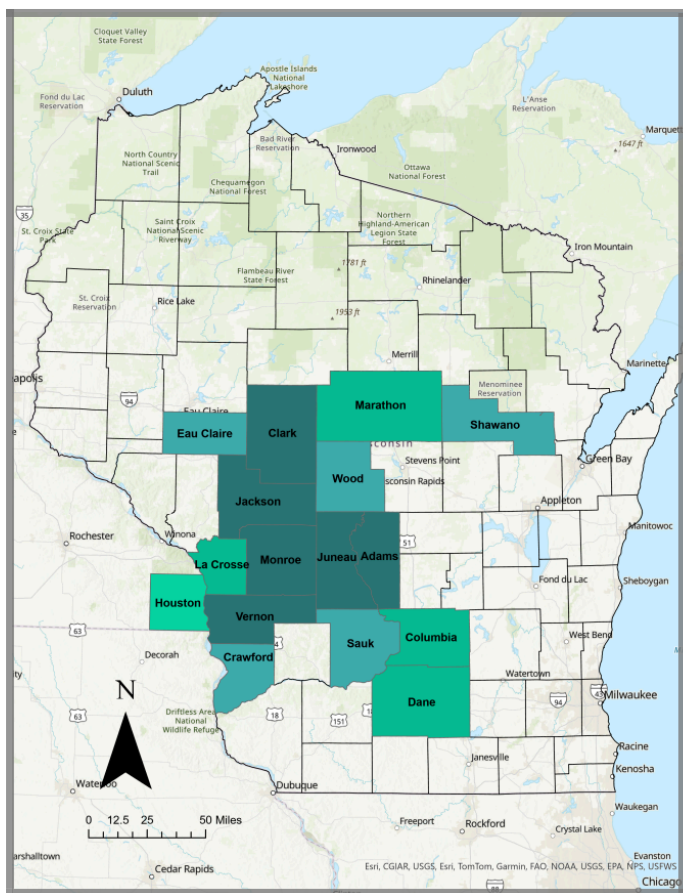
Household characteristics



Racial/Ethnic identity



Housing type/transportation




## Social Vulnerability level

All persons (Service area)	Medium-high
All persons (Minnesota)	Medium
All persons (Wisconsin)	Medium

Community conditions: Social Vulnerability Index  
Source: CDC/ATSDR SVI  
Years displayed: 2022

The **majority of counties** have a **higher social vulnerability rating**. These counties are mostly located in the center of the map.

-   **11 counties** have a **high or medium-high** rating.
-  **4 counties** have a **low-medium** rating
-  **1 county** has a **low** rating.

**4**

Higher  Lower



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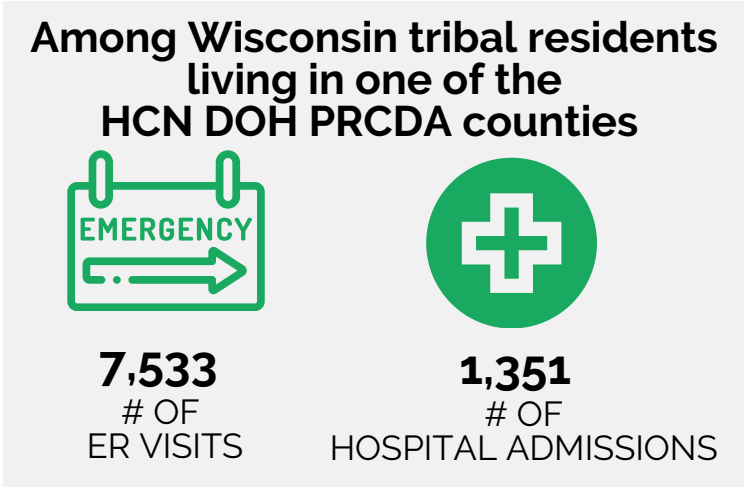
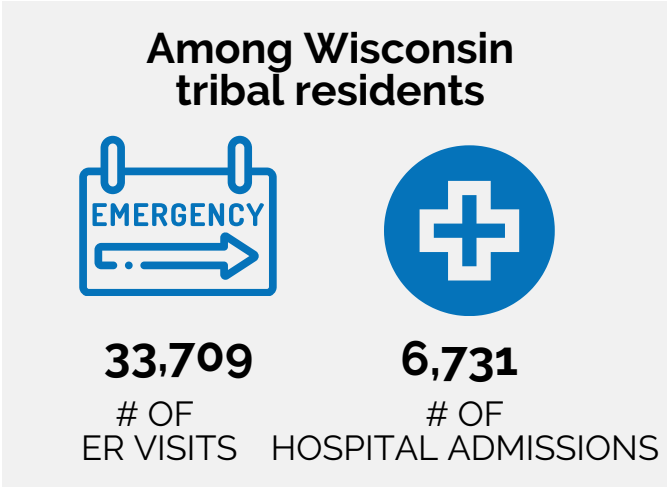




# Hospitalization & ER Visits

Hospitalization and emergency room (ER) visit data is captured for Wisconsin tribal residents who are treated in Wisconsin, Minnesota, or Iowa. The data below reflects the primary cause of admission and number of visits, not patient counts. Because someone may be seen multiple times, each encounter counts as a new visit.

## During 2022....

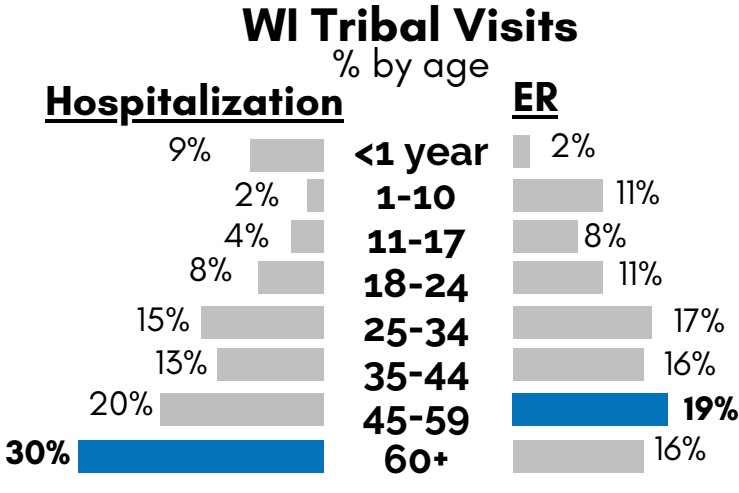


## DYK?

Wisconsin tribal ER visits made up about **1.8% of all statewide ER visits** and **1.2% of all hospitalization admissions.**



2020 Census estimates report that about 1.1% of Wisconsin residents are tribal (alone).



**Hospitalization & ER Visits:** Hospital discharge visits (inpatient and ER) for AI/AN; principal diagnosis  
**Source:** WI DHS Office of Health Informatics  
**Years displayed:** 2022



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# Hospitalization & ER Visits cont.

This table reports the **primary cause of ER visit** for **Wisconsin tribal residents who live within the HCN DOH PRCDA during 2022**. It also includes such residents who were treated in Minnesota and Iowa. Because someone may be seen multiple times, each encounter counts as a new visit.

TOTAL ER VISITS	# of visits
Total ER VISITS	7,533

AGE	# of visits
Less than 1 year	187
1-10 years	907
11-17 years	569
18-24 years	893
25-34 years	1,254
35-44 years	1,112
45-59 years	1,326
60+ years	1,285

**NOTE:** For ICD-10 CM conditions included in each primary health outcome group, please view pages 6-7 and Hospitalization & ER Data Definitions on reference page xiii.

**DYK?** Unintentional accidents/injuries made up about 19% of all ER visits



SELECTED PRIMARY CAUSES	# of visits
<b>ACCIDENTS/INJURIES (unintentional)</b>	<b>1,440</b>
Broken bones	204
Poisonings (any cause)	97
<b>MENTAL/BEHAVIORAL HEALTH</b>	<b>313</b>
Conditions/disorders	152
Suicide (intent and self-harm)	106
Alcohol/drug dependence	55
<b>COVID-19</b>	<b>299</b>
<b>INFECTIOUS/PARASITIC DISEASES</b>	<b>220</b>
<b>ALCOHOL &amp; DRUG USE</b>	<b>199</b>
<b>PNEUMONIA &amp; INFLUENZA</b>	<b>154</b>

<b>DIABETES</b>	<b>79</b>
<b>ASTHMA</b>	<b>61</b>
<b>COPD</b>	<b>40</b>
<b>HIGH BLOOD PRESSURE</b>	<b>36</b>
<b>CARDIOVASCULAR DISEASE</b>	<b>32</b>
Coronary heart disease	23
Cerebrovascular disease	9
<b>CANCER (all types)</b>	<b>0</b>

Alcohol and drug use: does not include "dependence," includes chronic liver disease/cirrhosis

Infectious/parasitic diseases: including sexually transmitted infections (STIs), other communicable diseases like salmonella, measles, or hepatitis. Does not include COVID-19, pneumonia, or influenza

COPD: Chronic Obstructive Pulmonary Disorder

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**Hospitalization & ER Visits:** Hospital discharge visits (inpatient and ER) for AI/AN; principal diagnosis  
**Source:** WI DHS Office of Health Informatics  
**Years displayed:** 2022



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# Hospitalization & ER Visits cont.

This table reports the **primary cause of hospitalization admission** for **Wisconsin tribal residents who live within the HCN DOH PRCDA during 2022**. It also includes such residents who were treated in Minnesota and Iowa. Because someone may be seen multiple times, each encounter counts as a new admission.

**TOTAL HOSPITALIZATIONS # of admissions**  
 Total hospitalizations **1,351\***

**NOTE:** For ICD-10 CM conditions included in each primary health outcome group, please view pages 6-7 and Hospitalization & ER Data Definitions on reference page xiii.

**AGE**

Less than 1 year	<b>118</b>
1-10 years	<b>24</b>
11-17 years	<b>47</b>
18-24 years	<b>105</b>
25-34 years	<b>202</b>
35-44 years	<b>177</b>
45-59 years	<b>264</b>
60+ years	<b>413</b>

\*One patient age is unknown.

**SELECTED PRIMARY CAUSES**

<b>MENTAL/BEHAVIORAL HEALTH</b>	<b>165</b>
Conditions/disorders	99
Alcohol/drug dependence	55
Suicide (intent and self-harm)	11
<b>INFECTIOUS/PARASITIC DISEASES</b>	<b>114</b>
<b>ACCIDENTS/INJURIES (unintentional)</b>	<b>113</b>
Broken bones	26
Poisoning (any cause)	13
<b>CARDIOVASCULAR DISEASE</b>	<b>59</b>
Coronary heart disease	32
Cerebrovascular disease	27
<b>HIGH BLOOD PRESSURE</b>	<b>46</b>
<b>DIABETES</b>	<b>44</b>

<b>ALCOHOL &amp; DRUG USE</b>	<b>44</b>
<b>COVID-19</b>	<b>27</b>
<b>CANCER (all types)</b>	<b>24</b>
<b>PNEUMONIA &amp; INFLUENZA</b>	<b>18</b>
<b>ASTHMA</b>	<b>11</b>
<b>COPD</b>	<b>6</b>

**Continued from page 6:**  
Cerebrovascular disease: including stroke, brain bleed, or brain aneurysm  
Coronary heart disease: including ischemic heart diseases  
Asthma: Not related to COPD



**DYK?** Mental/behavioral health outcomes made up about 12% of all inpatient admissions.

**Hospitalization & ER Visits:** Hospital discharge visits (inpatient and ER) for AI/AN; principal diagnosis  
**Source:** WI DHS Office of Health Informatics  
**Years displayed:** 2022



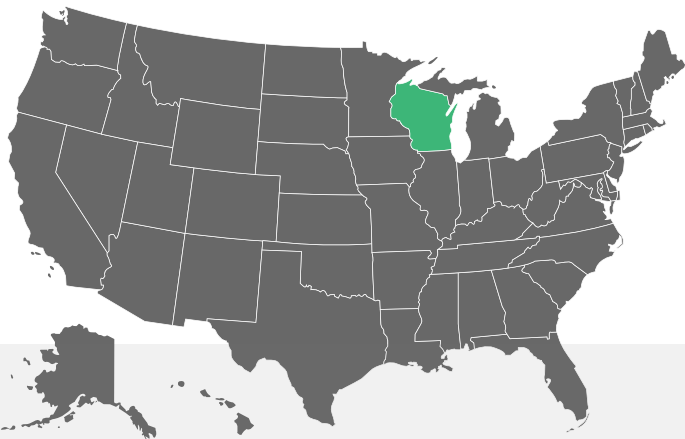
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# Ho-Chunk Nation Death Statistics

The Ho-Chunk Nation Office of Enrollment records tribal member death statistics and receives cause of death information when shared by family members or funeral homes on behalf of families. **The numbers below reflect death statistics for enrolled Ho-Chunk Tribal members from 2018-2022.**

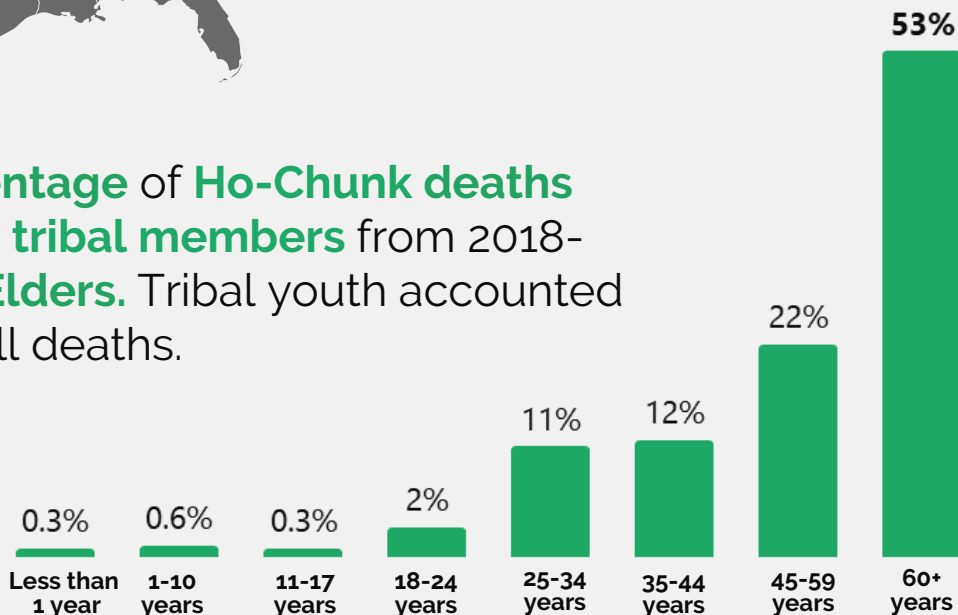


**425**  
deaths  
nationwide

**329**  
deaths  
in Wisconsin\*

\*About 80% of WI deaths live within one of the PRCDA counties

The **largest percentage** of **Ho-Chunk deaths** among **Wisconsin tribal members** from 2018-2022 occurred in **Elders**. Tribal youth accounted for about 1.2% of all deaths.



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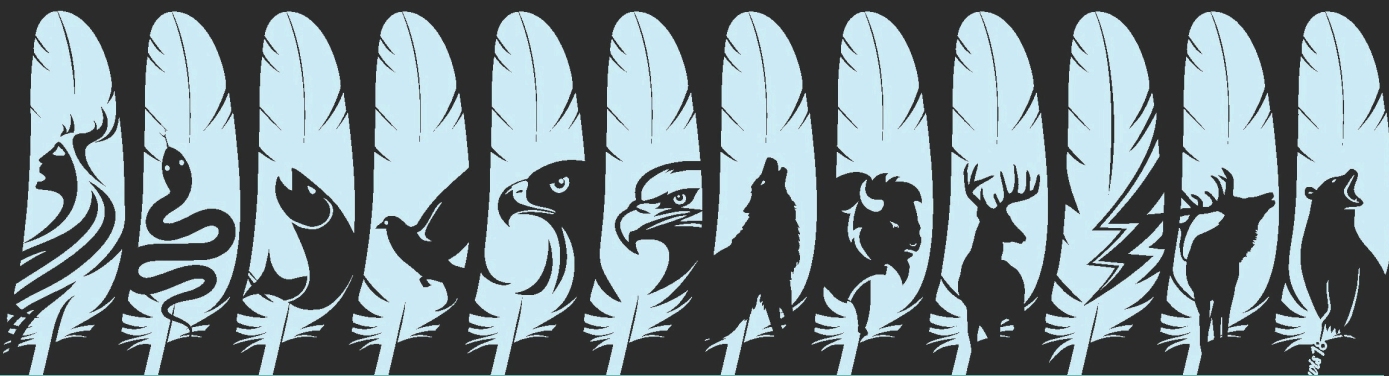
HCN Death Statistics: Deceased population count  
 Source: HCN Office of Enrollment  
 Years displayed: 2018-2022



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## Ho-Chunk Nation Death Statistics cont.

Major cause of death information is determined by the underlying cause of death reported on an individual's death certificate. Note, the information below describes the major cause of death for records who were received by the Ho-Chunk Nation Office of Enrollment for 2018-2022.

About 53% of WI resident deaths had major cause of death information. For deaths outside of WI in the USA, only 16% of deaths had this information.

The top five causes of death of Wisconsin Ho-Chunk Tribal members were:

- 1 Diseases of the heart.** This includes things like coronary artery disease, irregular heartbeats, and heart defects someone is born with (CDC, 2023). It can result in a heart attack, fluttering in your chest, and heart failure among others.
- 2 Malignant neoplasms.** This includes all types of cancer.
- 3 Chronic liver disease and cirrhosis.** This includes long-term liver disease. It can be caused by certain medications, viruses, and alcohol misuse (John Hopkins Medicine, "Chronic Liver Disease/Cirrhosis").
- 4 Accidents.** This includes unintentional injuries like car accidents, drownings, poisonings, falls, and fires.
- 5 COVID-19.** This includes complications from the virus or exacerbations to previous underlying health conditions.

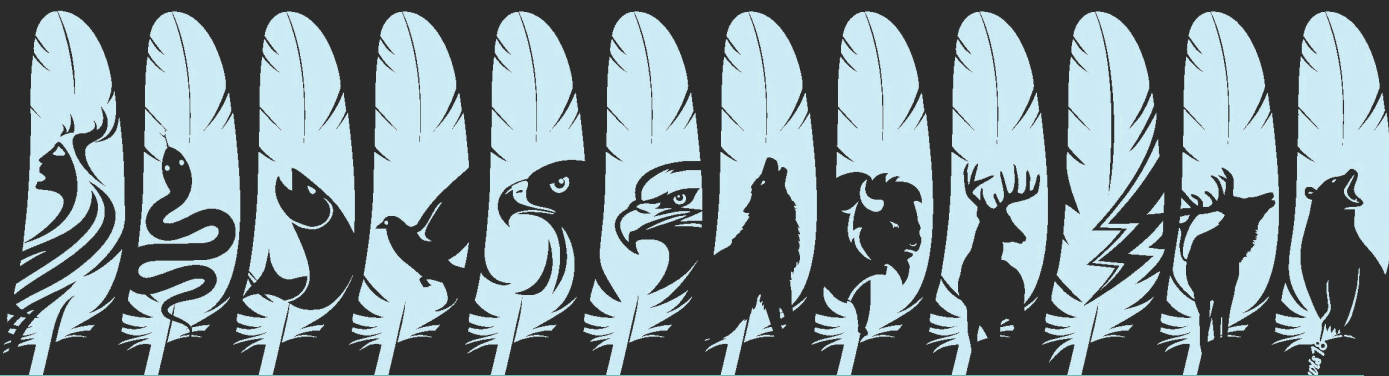
**Major causes of death:** Underlying cause of death- Enrolled HCN tribal, all ages  
**Source:** HCN Office of Enrollment  
**Years displayed:** 2018-2022

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# Ho-Chunk Nation Death Statistics cont.

This table reports **Wisconsin Ho-Chunk Nation tribal resident cause of death** data during **2018-2022**, regardless of where the death occurred.

TOTAL DEATHS	# of deaths
Total deaths	329



**Note:** This information displays select major cause of death information for individuals whose death certificate was received by the Office of Enrollment. Of the 329 deaths reported during 2018-2022, 173 had a death certificate on record.

AGE	# of deaths
Less than 1 year	1
1-10 years	2
11-17 years	1
18-24 years	8
25-34 years	36
35-44 years	38
45-59 years	71
60+ years	172

**Major causes of death:** Underlying cause of death- Enrolled HCN tribal, all ages  
**Source:** HCN Office of Enrollment  
**Years displayed:** 2018-2022

SELECTED UNDERLYING CAUSES	# of deaths
<b>HEART DISEASE</b>	<b>33</b>
Coronary Artery Disease	9
<b>ALCOHOL AND DRUG ABUSE</b>	<b>19</b>
Alcohol	12
Other drugs	7
<b>CANCER (all types)</b>	<b>14</b>
Trachea/Bronchus/Lung	4
Brain/spinal	3
Liver	2
<b>ACCIDENTS/INJURIES</b>	<b>10</b>
Motor vehicle	4
Gun shot wound	2

<b>COVID-19</b>	<b>9</b>
<b>DIABETES</b>	<b>8</b>
<b>RESPIRATORY FAILURE-OTHER</b>	<b>8</b>
<b>SUICIDE</b>	<b>8</b>
<b>PNEUMONIA AND INFLUENZA</b>	<b>8</b>
<b>CEREBROVASCULAR DISEASE</b>	<b>7</b>
<b>INFECTIOUS/PARASITIC DISEASES</b>	<b>7</b>
<b>CHRONIC KIDNEY DISEASE</b>	<b>6</b>
<b>ALZHEIMERS</b>	<b>3</b>

Chronic kidney disease: including causes from things like diabetes, high blood pressure, chronic kidney infections or inflammation  
Cerebrovascular disease: including stroke, brain bleed, brain aneurysm, or carotid artery disease  
Infectious/parasitic diseases: including sexually transmitted infections (STIs), other communicable diseases like salmonella, measles, or hepatitis

**10**



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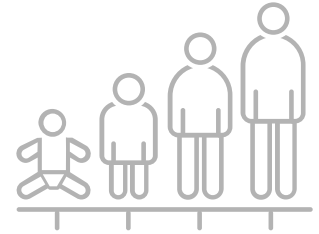




# WI Tribal Death Statistics

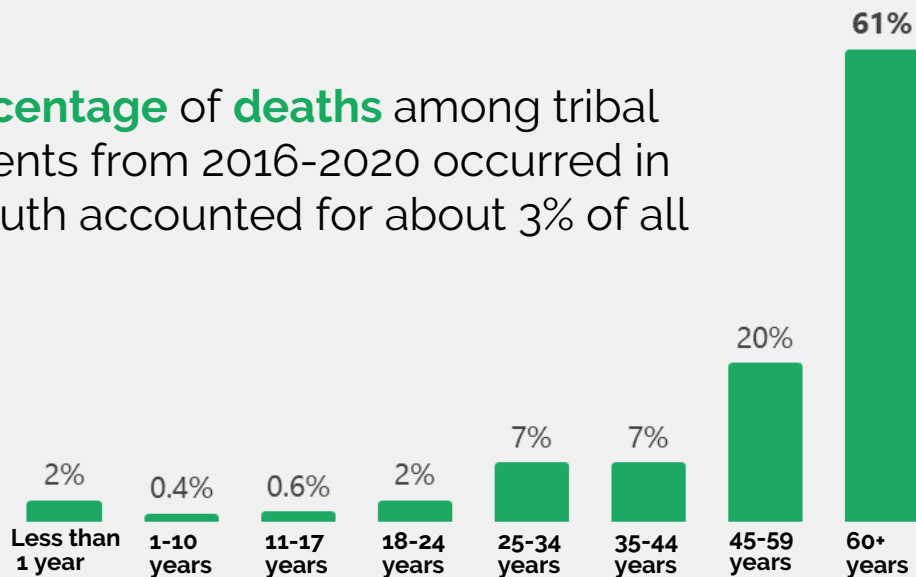
All tribal WI

From 2016-2020, a total of **2,471 deaths** were recorded for all tribal Wisconsin residents, regardless of tribal affiliation. The **top five causes of death** were:



- 1 Malignant neoplasms.** This includes all types of cancer.
- 2 Diseases of the heart.** This includes things like coronary artery disease, irregular heartbeats, and heart defects someone is born with (CDC, 2023). It can result in a heart attack, fluttering in your chest, and heart failure among others.
- 3 Accidents.** This includes unintentional injuries like car accidents, drownings, poisonings, falls, and fires.
- 4 Diabetes.** This includes Type 1 (due to genetics) and Type 2 (due to behavioral and lifestyle choices).
- 5 Chronic liver disease and cirrhosis.** This includes long-term liver disease. It can be caused by certain medications, viruses, and alcohol misuse (John Hopkins Medicine, "Chronic Liver Disease/Cirrhosis").

The **largest percentage of deaths** among tribal Wisconsin residents from 2016-2020 occurred in **Elders**. Tribal youth accounted for about 3% of all deaths.



**Major causes of death:** Underlying cause of death for WI AI/AN, all ages  
**Source:** CDC Wonder  
**Years displayed:** 2016-2020.



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# WI Tribal Death Statistics cont.

This table reports **Wisconsin Tribal resident cause of death** data during **2016-2020**, regardless of where the death occurred.

TOTAL DEATHS	# of deaths
Total deaths	2,471

AGE	# of deaths
Less than 1 year	37
1-10 years	11
11-17 years	14
18-24 years	47
25-34 years	168
35-44 years	169
45-59 years	506
60+ years	1,519

## SELECTED UNDERLYING CAUSES

<b>CANCER (all types)</b>	<b>443</b>
Trachea/Bronchus/Lung	127
Colorectal	46
Breast	24
<b>HEART DISEASE</b>	<b>399</b>
Coronary Artery Disease	286
<b>ACCIDENTS/INJURIES</b>	<b>305</b>
Motor vehicle	65
Falls	35
<b>ALCOHOL AND DRUG ABUSE</b>	<b>288</b>
Alcohol	126
Other drugs	162

**Major causes of death:** Underlying cause of death for WI AI/AN, all ages

**Source:** CDC Wonder

**Years displayed:** 2016-2020.



**DYK?** The top causes of death for youth include:



**Conditions originating in the perinatal period\***

*\*occurring before birth up to 28 days after birth*



**Accidents**

<b>DIABETES</b>	<b>150</b>
<b>LOWER RESPIRATORY DISEASE</b>	<b>109</b>
<b>CEREBROVASCULAR DISEASE</b>	<b>90</b>
<b>INFECTIOUS/PARASITIC DISEASES</b>	<b>82</b>
<b>COVID-19</b>	<b>75</b>
<b>SUICIDE</b>	<b>66</b>
<b>ALZHEIMERS</b>	<b>42</b>
<b>PNEUMONIA AND INFLUENZA</b>	<b>30</b>

Lower respiratory: including chronic obstructive pulmonary disease (COPD, asthma, bronchitis, or emphysema)

Cerebrovascular disease: including stroke, brain bleed, brain aneurysm, or carotid artery disease

Infectious/parasitic diseases: including sexually transmitted infections (STIs), other communicable diseases like salmonella, measles, or hepatitis

**12**



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**(We care)**



# All Tribal: Socioeconomic Factors

Socioeconomic (SES) status is often measured by education level, income, occupation, or wealth: It is tied to health behaviors, resources, and community conditions. SES status is highly influential on health status because of its ability to impact key resources and types of exposures (Phelan, Link, & Tehranifar, 2010).

## Education

## Household income

 % with a HS degree or lower

 Median income past 12 months

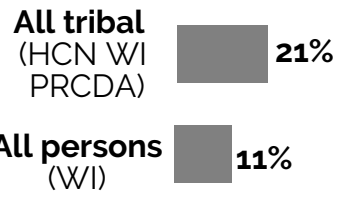


## Poverty

## Cost of living

 % below poverty level

 Average survival budget for family of 4



 Same or better than state value  Worse than state value  Data suppressed or not available



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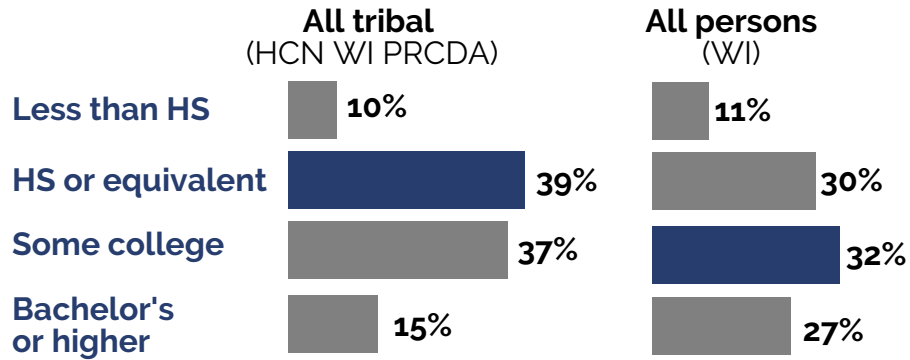
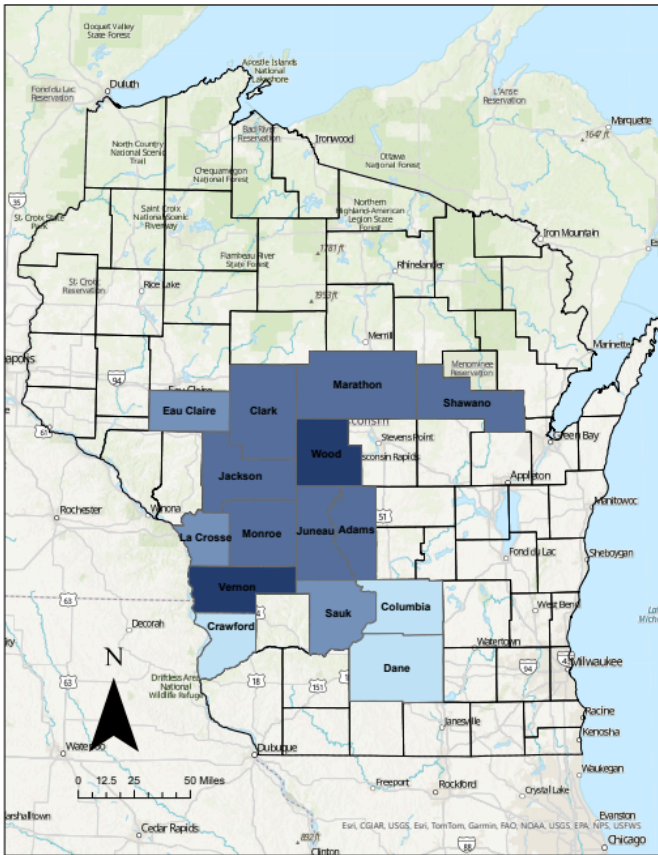




# Education

All tribal  
WI HCN DOH PRCA

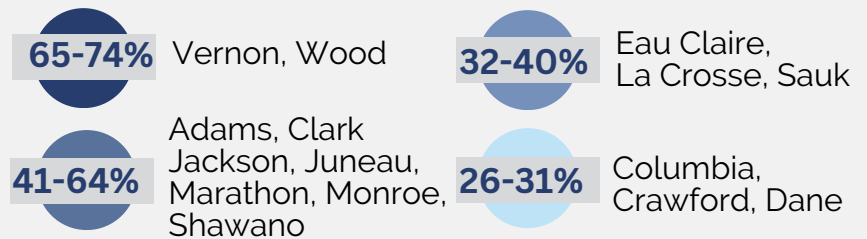
Of those aged 25 years and older, **HS or equivalent** has the **greatest educational attainment percentage** for both all tribal groups. About 49% of WI tribal members living in the PRCA counties have a high school degree or lower in comparison to 41% of all Wisconsin residents.



**Education:** Educational attainment those 25 years and older  
**Source:** American Community Survey  
**Years displayed:** 2017-2021

About **63% of the counties** have a **higher percentage of tribal members (50% or more)** with a **high school degree/equivalent or less**.

### % of tribal population with a HS degree or less



Higher → Lower

**DYK?** Of tribal members living in the PRCA counties, females have higher educational levels when compared to males.



Bachelor's or higher :

Female  
19%

Male  
11%

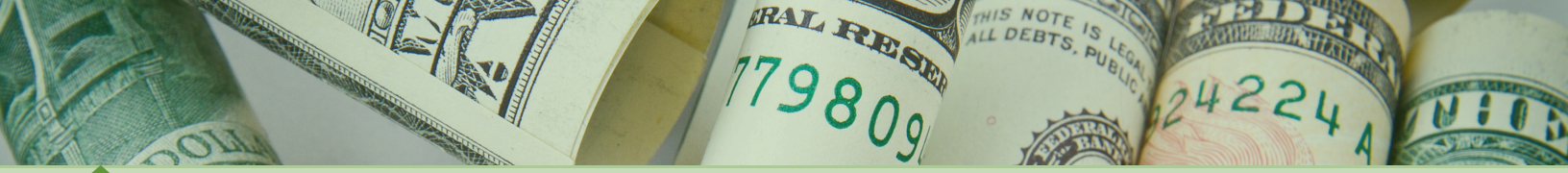


14



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# Household income

## All tribal WI HCN DOH PRCDA\*

\*excludes Crawford, Eau Claire, Marathon & Vernon County due to limited sampling

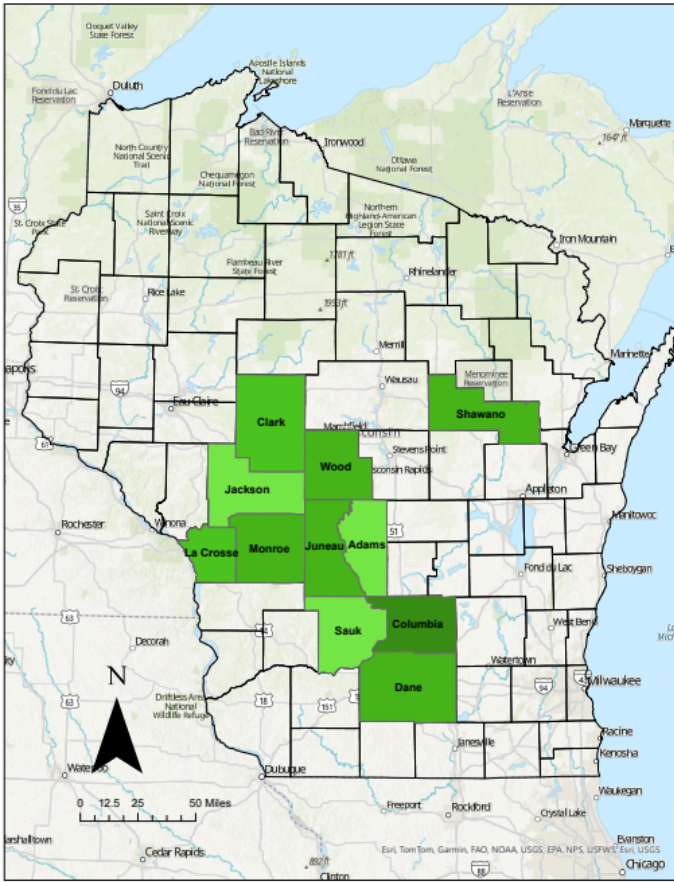
Tribal PRCDA household incomes are \$4,777 higher when compared to all tribal members statewide but \$6,850 less when compared to all persons in those same counties. Statewide, **Wisconsin tribal households make \$18,940 less when compared to all Wisconsin residents.**

**All tribal (HCN WI PRCDA)**  **\$52,917**

**All persons (HCN WI PRCDA)**  **\$59,767**

**All tribal (WI)**  **\$48,140**

**All persons (WI)**  **\$67,080**



**Household income:** Median household income in the past 12 months (in 2021 inflated dollars)

**Source:** American Community Survey

**Years displayed:** 2017-2021

### Among Wisconsin Tribal Residents:

**Lowest household income**  
Adams County: \$23,125


**Highest household income**  
Columbia County: \$94,000

**Greatest difference among tribal and all persons**  
Sauk County: \$31,631


**Tribal:** \$36,071  
**All persons:** \$67,702


About **45%** of the counties have a **median household income lower** than the **HCN WI PRCDA median household value (\$52,917)**.

### Median household income

 **\$58,751-\$94,000**  
Columbia

 **\$36,072-\$50,515**  
Clark, La Crosse, Shawano

 **\$51,516-\$58,750**  
Dane, Juneau, Monroe, Wood

 **\$23,125-\$36,071**  
Adams, Jackson, Sauk

**15**

Higher  Lower



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# Poverty

All tribal  
WI HCN DOH PRCDA

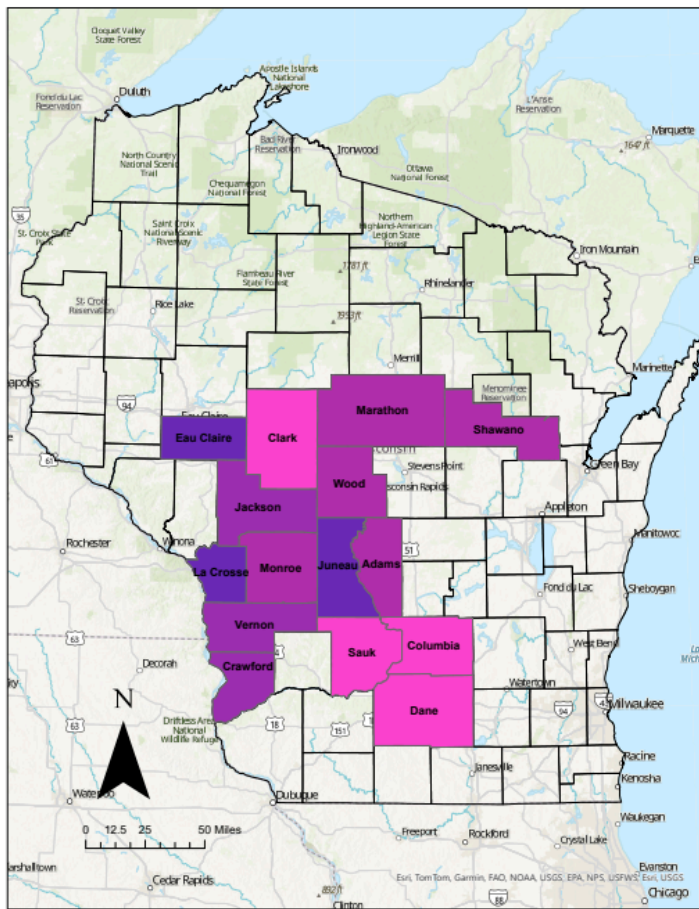
The percentage of Wisconsin tribal members living below the poverty level is slightly higher when compared to tribal members living in the PRCDA counties (21%). However, there are **10% more tribal members** in the PRCDA and **12% more tribal members statewide living in poverty compared to all Wisconsin residents**. The Healthy People 2030 goal is to reduce the percentage of persons living in poverty down to 8%.

All tribal  
(HCN WI  
PRCDA) **21%**

All persons  
(HCN WI  
PRCDA) **11%**

All tribal  
(WI) **23%**

All persons  
(WI) **11%**



**Poverty:** Poverty status in the past 12 months  
**Source:** American Community Survey  
**Years displayed:** 2017-2021

## Among Wisconsin Tribal Residents:

**Lowest % below poverty**  
Columbia: 7%

**Highest % below poverty**  
Eau Claire: 41%

**Greatest difference among tribal and all persons**  
Eau Claire: 28%

**Tribal: 41%**  
**All persons: 13%**

About **60% of the counties** have a **poverty rate above** the HCN WI PRCDA poverty percentage (21%).

## % of tribal population below poverty level

**33-41%** Eau Claire, Juneau, La Crosse

**15-23%** Adams, Marathon, Monroe, Shawano, Wood

**24-32%** Crawford, Jackson, Vernon

**7-14%** Clark, Columbia, Dane, Sauk

**16**



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# Cost of Living

All persons  
HCN DOH PRCDA

Households who meet the definition of ALICE (**Asset Limited, Income Constrained, Employed**) earn too much money to qualify as "poor" (being below the Federal Poverty Level) but are still unable to cover basic household expenses. In 2021, it was estimated **nearly 41% of US households were struggling to afford basic needs**- this includes those below the Federal Poverty Level and those who are ALICE.

Keep in mind, the survival budgets shown below reflect wages for 2021. Since then, cost of living has increased significantly, and the ALICE Survival Budget today is higher than reported. The data below reflects for a family of four.

All persons (WI)  **\$78,204**

All persons (HCN PRCDA)  **\$80,537**

All persons (MN)  **\$80,707**

**Cost of living:** ALICE (Asset Limited, Income Constrained, Employed)  
**Source:** United for ALICE  
**Years displayed:** 2021

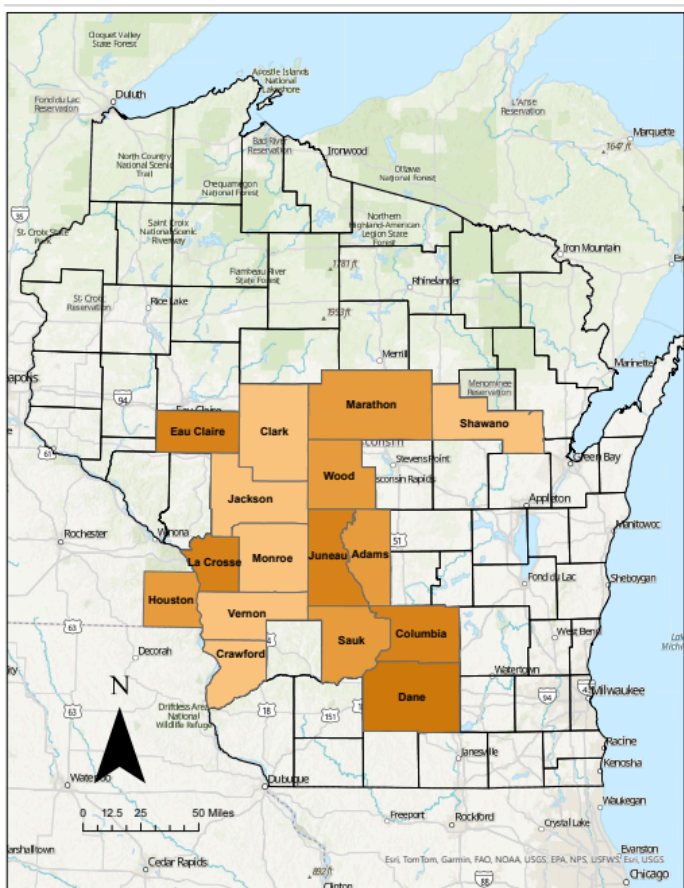
## Among Wisconsin/Minnesotan Tribal Residents:

### Lowest survival budget

WI: Price: \$72,051  
MN: Wilkin: \$71,219


### Highest survival budget


WI: Dane: \$109,616  
MN: Washington: \$118,227




About **31% of the counties** have an **ALICE budget higher** than the HCN PRCDA average value (\$80,537).

### ALICE budget (for a family of four)

 **\$85,947-\$109,616**  
Dane

 **\$76,670-\$80,080**  
Adams, Houston, Marathon, Sauk, Wood

 **\$80,081-\$85,946**  
Columbia, Eau Claire, Juneau, La Crosse

 **\$74,464-\$76,669**  
Clark, Crawford, Jackson, Monroe, Shawano, Vernon

17

Higher  Lower



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# Public Health Summary

The Public Health division provides primary, secondary, and tertiary morbidity and mortality prevention. Programs and initiatives are directed towards communicable and noncommunicable disease prevention and monitoring, connecting community members to health resources, providing health education, and Public Health Accreditation.

Available services to community members include:



**Family Spirit Program**  
Home-visiting program from pregnancy-up to three years  
**Jamie Decorah**  
715-253-4400 ext. 33142



**Communicable Disease Prevention & Follow-up**  
Home-test reporting, disease monitoring, access to prevention materials  
**Ronelle McKernan**  
715-896-2570



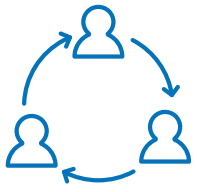
**Maternal and Child Health**  
Care/education to parents and children, Partners in Parenting, Safe Sleep Cribs for Kids, First Breath, community referrals, childhood vaccines  
**Irina Clendenning**  
608-355-1240 ext. 35620



**Women, Infants, & Children Program**  
Breastfeeding support, food benefits, nutrition education, and program referrals  
**Irina Clendenning**  
608-355-1240 ext. 35620



**Child Passenger Safety Technicians**  
CHRs provide education on proper child passenger safety & car seats  
**Wittenberg**  
**Jamie Decorah**  
715-253-2897 ext. 33142



**Resource, Referral, & Transports**  
Connection to county and local resources, transport to medical appointments  
**Jamie Decorah**  
715-253-4400 ext. 33142

**Nekoosa**  
**Lena Walker**  
715-886-5444 ext. 38753

**Baraboo**  
**Wendy Lonetree**  
608-355-1240 ext. 35600

**Black River Falls**  
**Bev Baneck**  
715-284-9851 ext. 35053



**Other Services\***  
**available periodically**  
Summer block parties, community health assessment, chronic disease prevention  
*\*Service availability may be dependent upon funding*  
**Kandyce Dunlap**  
715-284-9851 ext. 35042



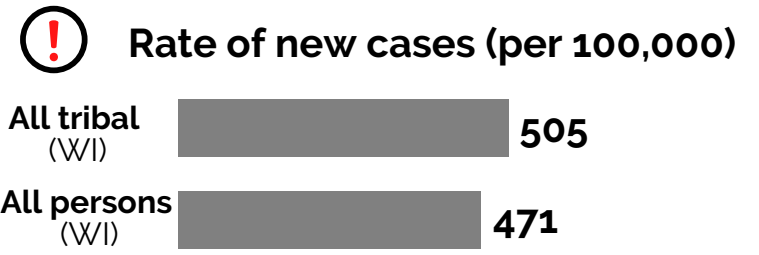
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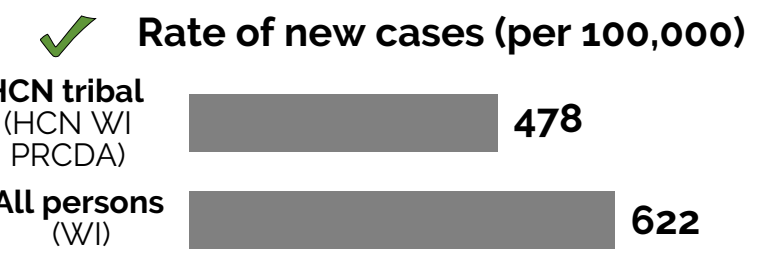
# All Tribal: Public Health Outcomes

The following section describes some public health outcomes like cancer, sexually transmitted infections (STIs), and vaccines. Reported STIs include syphilis, chlamydia, and gonorrhea.

## Cancer

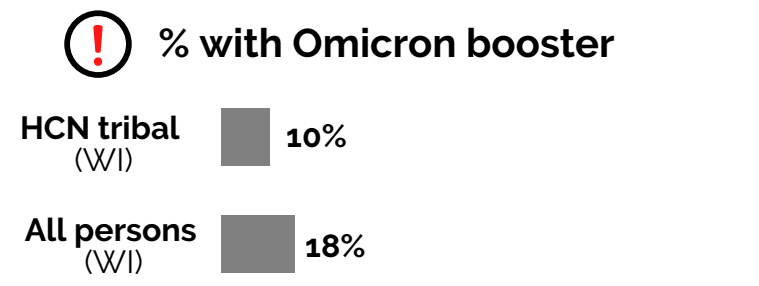


## Sexually transmitted infections

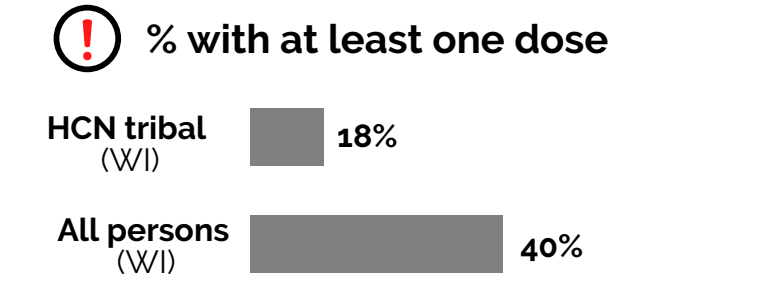



## Vaccines


### COVID-19




### Influenza



 Same or better than state value

 Worse than state value

 Data suppressed or not available



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# All Tribal: Public Health Outcomes cont.

The following section describes various pregnancy health measures, including maternal and infant characteristics.



## Maternal & Child Health



### Prenatal care



% of mothers receiving care in the first trimester



### Low birth weight



% of births with low birth weight (<2,500 grams)



### Pre-term birth



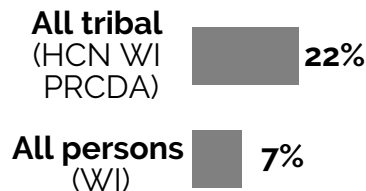
% of births considered pre-term (<37 weeks)



### Maternal smoking



% of mothers who ever smoked during pregnancy



Same or better than state value



Worse than state value



Data suppressed or not available

20



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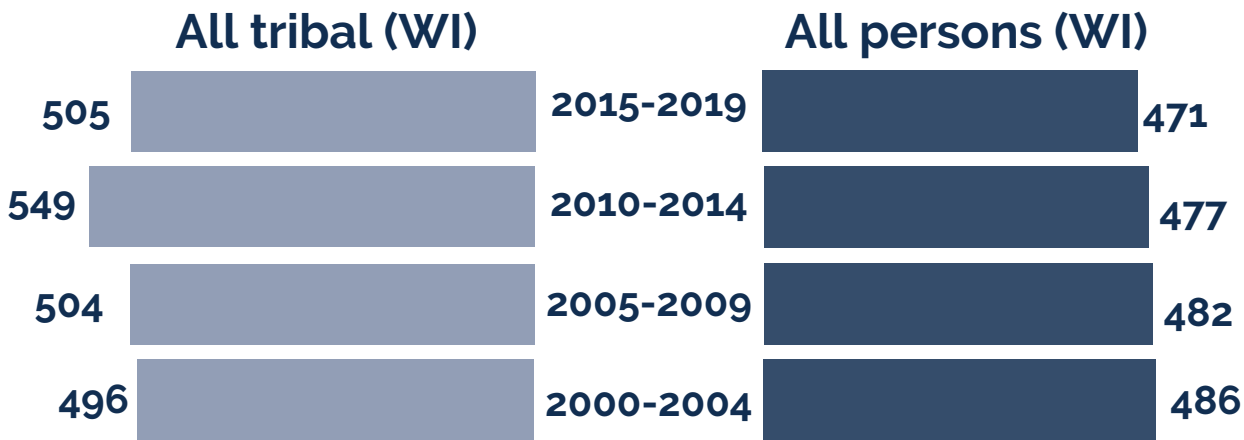


# Cancer (new cases)

All tribal  
WI

This includes all types of cancers, at any stage, when newly diagnosed by year of diagnosis for Wisconsin residents (incidence). Increases in new cancer cases may be due to increased burden (exposure to risk factors like air or water pollution, smoking/alcohol use, tanning bed use, poor diet/exercise, and more) or better ways to detect cancer like increased screening, improved healthcare access, or technology advancements.

The rates below show age-adjusted rates per 100,000 people. When comparing two or more populations, it is important to age-adjust rates so the calculation accounts for differences in age. Meaning, age has a large influence on the probability of developing cancer so it would make sense a population with a greater proportion of older persons would have a higher cancer rate. By using an age-adjusted rate, it makes the comparison more fair by accounting for age differences.



## Top two cancers with the highest incidence rate in Wisconsin during 2015-2019:

### All tribal

- 1 Lung and bronchus:**  
82 cases per 100,000
- 2 Female breast:**  
73 cases per 100,000

### All persons

- 1 Female breast:**  
70 cases per 100,000
- 2 Lung and bronchus:**  
59 cases per 100,000

Cancer (new cases): Cancer incidence age-adjusted rate  
Source: WI DHS Wisconsin Interactive Statistics on Health  
Years displayed: 2000-2019



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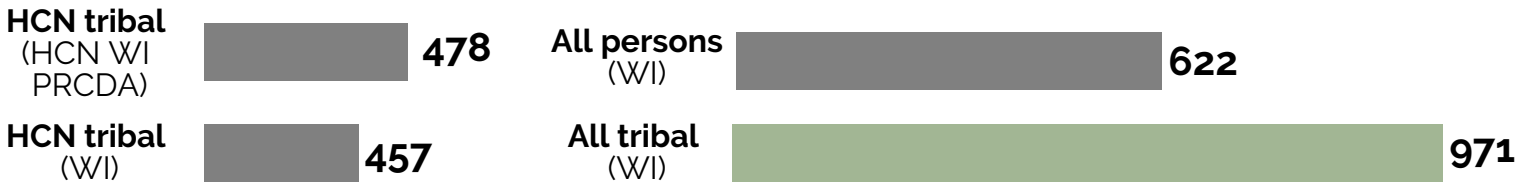




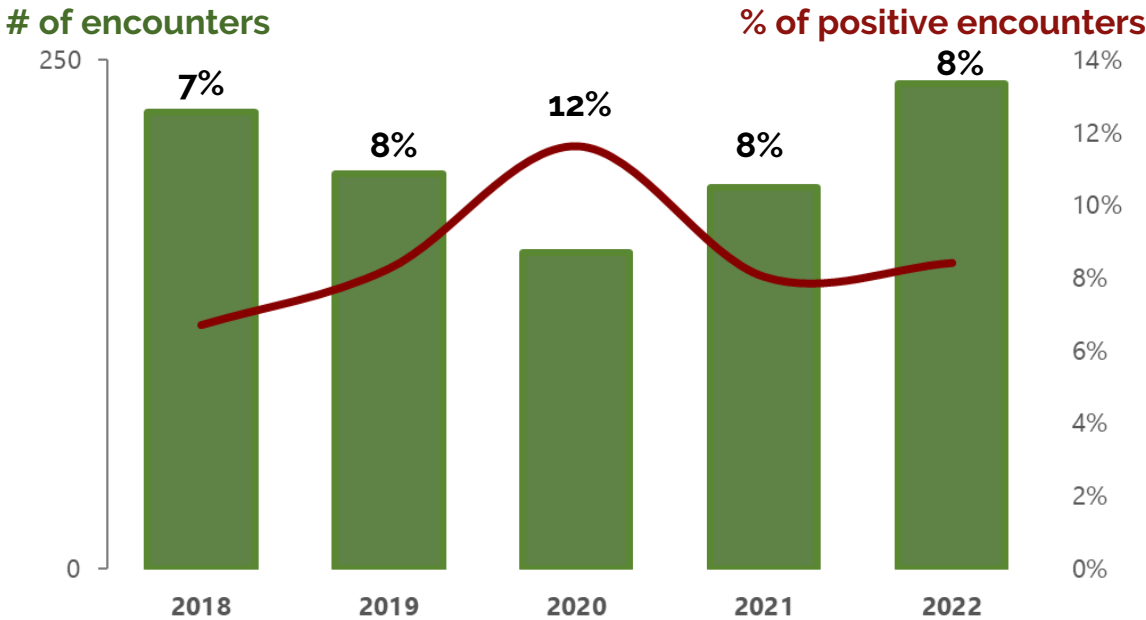
# Sexually transmitted infections

HCN tribal  
WI HCN DOH PRCDA

Sexually transmitted infections (STIs) are infections spread by vaginal, oral, or anal sex. If left untreated, STIs can increase your risk of getting other STIs (like HIV), infertility, organ damage, and certain types of cancer. Using protection (like condoms) and regular screening are the best ways to prevent and stop the spread of STIs (Mayo Clinic, 2022.) In addition, vaccines are available to prevent Human papillomavirus (HPV), Hepatitis A, and Hepatitis B (CDC, 2023). **The rates below reflect per 100,000 persons. Although there are several STIs, this section focuses on common ones like Chlamydia, Gonorrhea, and Syphilis.**



The data below includes **Ho-Chunk Tribal members living within a HCN DOH PRCDA county** who had received a positive STI result, **administered by the HCN DOH or administered somewhere else, and their lab result information was forwarded to us.**



The **5-year average** of positive HCN tribal STI patient encounters is **9%**. Meaning, **9%** of all HCN patients tested for these selected STIs were positive. The highest **percentage** was in **2020 (12%)** but this may be due to less testing.

**22**

**Sexually transmitted infections:** Chlamydia, Gonorrhea, and Syphilis  
**Source:** HCN DOH NextGen; STIs in WI 2022 Reported Cases  
**Years displayed:** 2018-2022;\* 2022

**Note:** This section includes quality updates from last year's report including deactivated codes and expansion of testing criteria. Data may differ from previous reports.



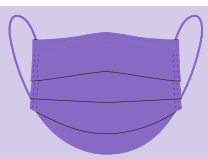
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# Vaccines



## COVID-19

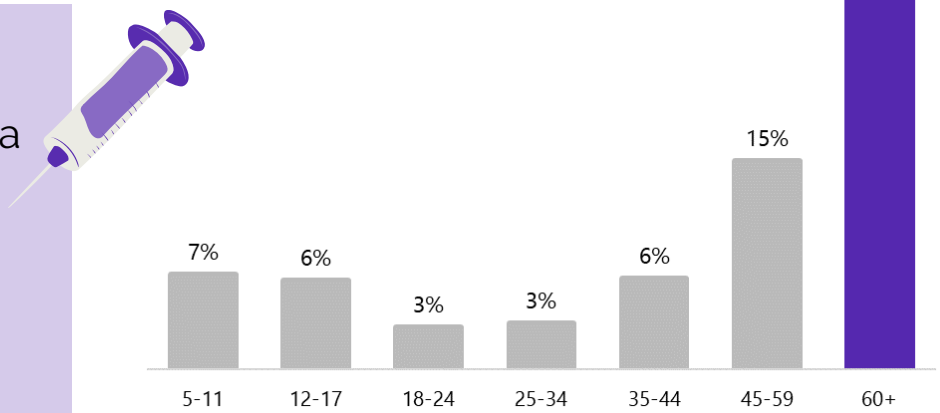
HCN tribal  
WI

COVID-19 is a respiratory illness caused by coronavirus, resulting in moderate to severe illness, including hospitalization or death. Additionally, some may experience long COVID symptoms- this occurs when COVID symptoms continue for at least four weeks after the initial infection. Most recover from post-COVID conditions within a few weeks but some may continue to experience symptoms for weeks or months (WI DHS, 2022). **The data below reflects the Omicron booster of the COVID vaccine.**



The graph below reflects the percentage of **Wisconsin Ho-Chunk Tribal members by age who had received their COVID-19 Omicron booster by the HCN DOH.**

**Elders (60+ years) had the highest percentage of WI Ho-Chunk members with a COVID-19 Omicron booster.** At the time, you needed to have your series complete before receiving the booster dose.



**NOTE:** The original COVID booster (monovalent formula) became available in October 2021. The Omicron booster (bivalent formula) became available in September 2022 for those 5+ years (Pfizer) and 18+ years (Moderna). **This data page displays booster information for the Omicron booster.** Series complete meant two doses of Moderna for those 18+ and two doses of Pfizer for those aged 5+.

**COVID-19 (vaccines):** SARS COV 2 Vaccine Omicron Booster  
**Source:** HCN DOH NextGen; HCN DOH COVID-19 Vaccine Report  
**Years displayed:** 2022



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# Vaccines



## Influenza

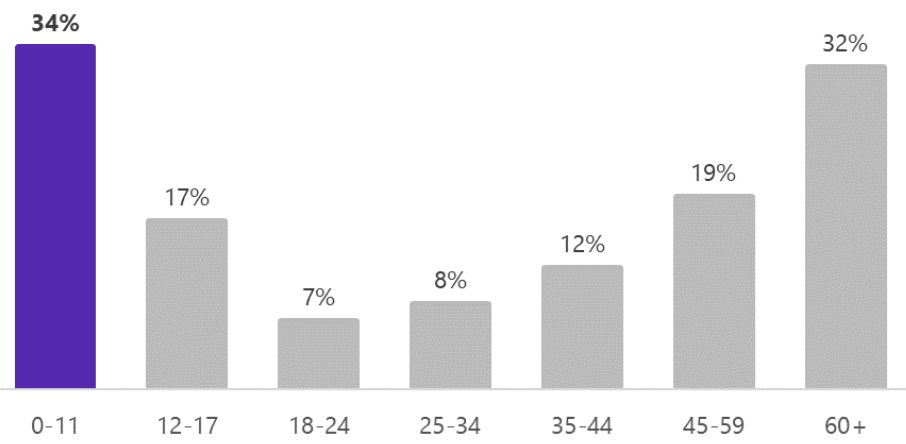
HCN tribal  
WI

Influenza (flu) is an illness caused by influenza viruses. The flu is considered a seasonal illness, where it occurs yearly and during similar months each year. The flu can result in mild to severe illness, including hospitalization or death. Elders, those with an underlying health condition, and pregnant women are at an increased risk for severe outcomes (WI DHS, 2023). The best way to prevent flu is to get your yearly flu vaccine.

**The data below reflects at least one flu vaccine dose.**



The graph below reflects the percentage of **Wisconsin Ho-Chunk Tribal members by age who had received at least one flu vaccine dose during the 2021-2022 flu season by the HCN DOH.**



**Youth (0-11 years)** had the **highest percentage** of Ho-Chunk members with **at least one flu vaccine dose**. Elders were only two percent lower than youth aged 0-11 years.

**NOTE:** Those 6+ months are eligible for a flu vaccine. Most individuals only need one dose of flu, but youth aged 6 months-8 years who have had less than two flu vaccines in the past or don't know if have had less than two doses should get two doses during this flu season (WI DHS, 2022).

**Influenza (vaccine):** Influenza vaccine  
**Source:** HCN DOH NextGen; WI DHS Immunizations: Influenza vaccine data  
**Years displayed:** 2021-2022 flu season



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# Maternal & Child Health



## Prenatal Care

All tribal  
WI HCN DOH PRCDA

A pregnancy includes three trimesters:

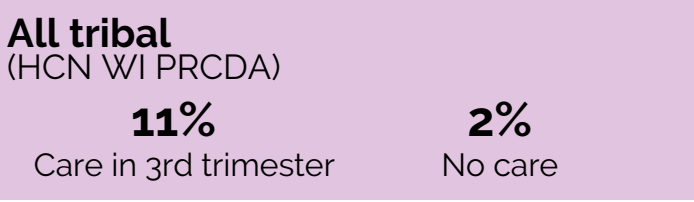
- 1** 0-13 weeks
- 2** 14-26 weeks
- 3** 27-40 weeks

Prenatal care should begin as soon as when someone thinks they're pregnant to protect the health of themselves and the baby. A 2017 study found that the majority of women find out they're pregnant between 5-6 weeks (first trimester). Late pregnancy awareness, or learning someone is pregnant later than average, increased with age and with unintended pregnancies (Branum & Ahrens, 2017).

All persons in the PRCDA counties have the **highest percentage of babies receiving care in the first trimester (78%)**. However, **tribal babies living in PRCDA counties receive this care about 18% less**. All tribal members statewide also receive care later when compared to all Wisconsin residents (14%).



### Of those receiving prenatal care...



25

**Prenatal care:** Trimester prenatal care began  
**Source:** WI DHS Wisconsin Interactive Statistics on Health  
**Years displayed:** 2017-2021



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# Maternal & Child Health

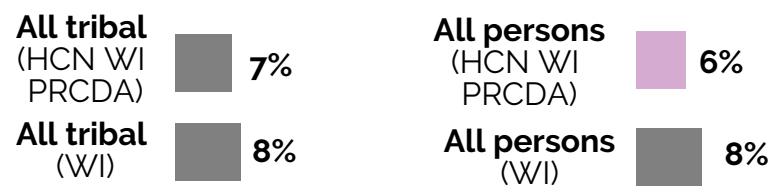


## Low birth weight

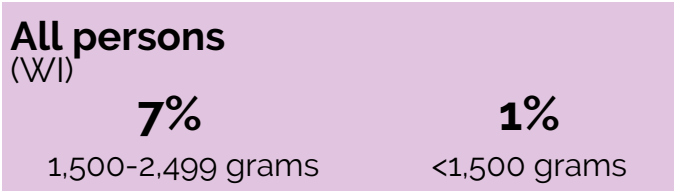
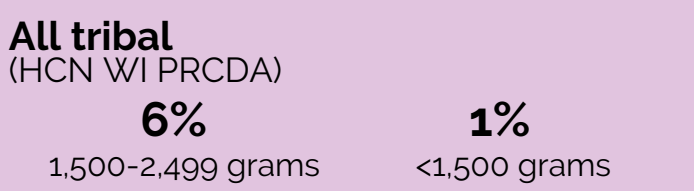
All tribal  
WI HCN DOH PRCDA

The average birth weight in the United States is 3,500 grams or 7.5 pounds. Low birth weight is any baby that weighs less than 2,500 grams or about 5.5 pounds. A baby with a low birth weight is often caused by 1) being born too early (pre-term) or 2) growing too slowly in the womb (poor intrauterine growth) or both. Low birth weight can be influenced by carrying more than one baby (like twins or triplets), smoking or alcohol use, and medical conditions like high blood pressure. Babies with low birth weight may need additional care after birth and/or may have developmental concerns related to their organ systems, immune system, breathing function, and nutrition (Jin, 2015).

The **percentage of low birth weight tribal babies** in the **PRCDA counties** is **slightly higher** when compared to low birth weight **percentages for all babies in the same area**. However, **tribal PRCDA counties** have **slightly lower percentages** when compared **to all tribal babies and all babies statewide**



### Of babies with low birth weight....



**Low birth weight:** Low birth weight module  
**Source:** WI DHS Wisconsin Interactive Statistics on Health  
**Years displayed:** 2017-2021



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# Maternal & Child Health

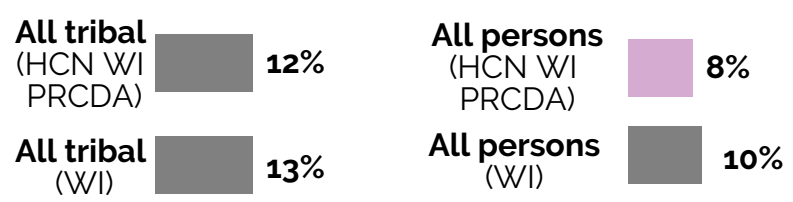


## Pre-term birth

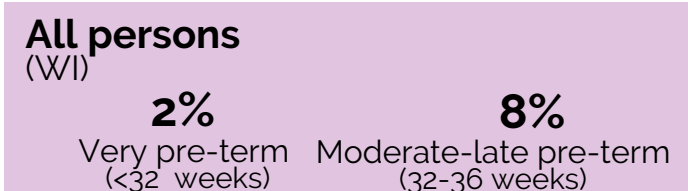
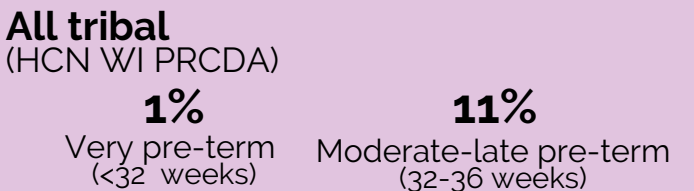
All tribal  
WI HCN DOH PRCDA

Pre-term birth is a baby who is delivered before 37 weeks. The earlier a baby is born, the greater the risk of breathing and digestive issues, brain bleeding, and developmental effects later in life. **In the United States, about 11% of all births were pre-term in 2021 (CDC, 2022a).** Like low birthweight, pre-term birth can be caused by multiple factors including carrying more than one baby (like twins or triplets), smoking or alcohol use, less than 1.5 years in between pregnancies, having a pre-term baby in the past, and any pregnancy complications where the baby must be delivered early (CDC, 2022b).

The **percentage of tribal babies born pre-term is similar when comparing tribal percentages statewide but 2-4% higher** when comparing **percentages in all persons in the PRCDA counties and all persons statewide.** All persons in the PRCDA counties had the lowest percentage of pre-term births.



### Of babies born pre-term...



**Pre-term birth:** Gestational age based on obstetric estimate  
**Source:** WI DHS Wisconsin Interactive Statistics on Health  
**Years displayed:** 2017-2021



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# Maternal & Child Health

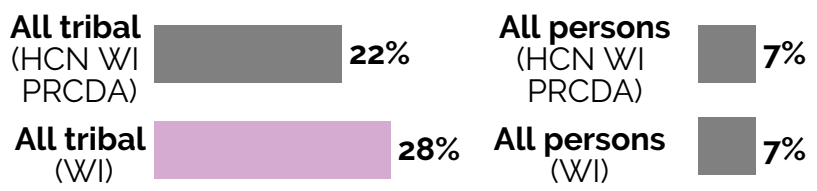


## Maternal Smoking

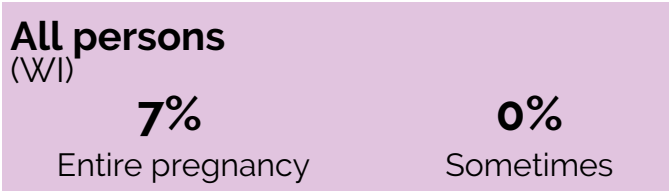
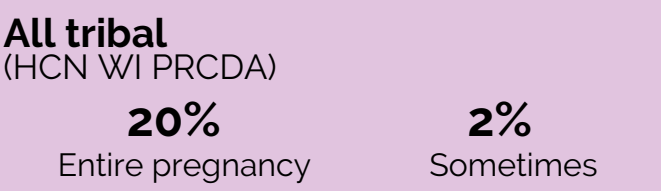
All tribal  
WI HCN DOH PRCDA

Babies can be exposed to smoking directly, by the mother (maternal smoking), or indirectly, by others in the household (secondhand smoking). Mothers who smoke during pregnancy put their baby at risk for miscarriage, pre-term birth, low birth weight, and death from sudden infant syndrome (SIDS). These effects can lead to developmental effects, even later in life (CDC, 2020). In addition, smoking mothers may have pregnancy complications and may have more difficulty becoming pregnant (CDC, 2020).

The percentages below describe the percentage of mothers who smoked during their entire pregnancy and those who smoked sometimes. **Compared to all persons, tribal residents in the PRCDA counties and tribal statewide have a significantly higher percentage of mothers smoking during pregnancy.** Tribal mothers statewide have the highest percentage of mothers smoking during pregnancy when compared to all other groups.



### Of mothers smoking during pregnancy...



**Pre-term birth:** Maternal smoking  
**Source:** WI DHS Wisconsin Interactive Statistics on Health  
**Years displayed:** 2017-2021



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# Environmental Health Summary

The Environmental Health (EH) division works to prevent, identify, and manage environmental hazards through several programs including those related to air, water, and soil. In addition, the EH division oversees emergency preparedness, injury prevention, institutional environmental health, public works, surface water monitoring, wetlands delineation, and assists in public health accreditation.

**Available services to community members include:**



### **Injury prevention**

Car seat and bike helmets  
Free, call for appointments

**Lisa Herritz**  
715-284-9851 ext. 35022



### **Water-private wells**

Free water testing and free well construction\*  
Includes bacteria, nitrate, pH, iron, manganese, arsenic  
Assistance with emergency situations

**Brock Brunstad**  
715-284-9851 ext. 35063



### **Water-private septic\***

Free septic construction  
Assistance with emergency situations

**Brock Brunstad**  
715-284-9851 ext. 35063



### **Air-environmental assessments**

Mold and radon inspections

**Matt Malimanek**  
715-284-9851 ext. 35054



### **Environmental health reporting**

Inspections and testing for complaints  
Includes food, lodging, childcare, food or waterborne illness  
Environmental hazards reporting

**Pam Thunder**  
715-284-9851 ext. 35011



### **Environmental clean up**

Resources to assist in clean-up for community hazards  
Includes dump sites, abandoned homes, hazardous spills, and more

**Adam Meinerz**  
715-284-9851 ext. 35008



### **Water- public water**

Application for use for residential accounts

**Kevin Gunderson**  
715-284-9851 ext. 35060



### **Other services- available periodically**

Clean Sweep Events- hazardous waste  
Rabies vaccine events for pets  
Notices shared via social media

*\*Dependent upon available funding; must be a tribal member, be the first well/septic constructed, and installed at primary residence*



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# Inspections and Testing

Registered Tribal sanitarians conduct inspections among Ho-Chunk facilities and events to ensure public health safety. Inspections are conducted routinely and when complaints are issued.

Inspections occur at the following types of Ho-Chunk facilities:



**Gaming centers**



**C-stores**



**Head Start**



**Daycare**




**Food warehouse**



**Pools**



**Campground**



**Hotels**



**Tribal Aging Unit**

Food protection inspections and other testing also occur for:

- 1** Mass gatherings
- 2** Foodborne/waterborne illness investigations
- 3** Institutional environmental health



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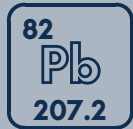


# All Tribal: Environmental Health

The following section describes various environmental health measures including public drinking water conditions.



## Community drinking water



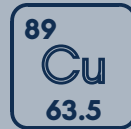
### Lead



Average ppb

All persons  
(HCN WI COMMUNITIES) **2.6**

All persons  
(WI COUNTIES OF HCN COMMUNITIES) **2.6**



### Copper



Average ppb

All persons  
(HCN WI COMMUNITIES) **110.4**

All persons  
(WI COUNTIES OF HCN COMMUNITIES) **212.42**



### Nitrate



Average ppm

All persons  
(HCN WI COMMUNITIES) **1.8**

All persons  
(WI COUNTIES OF HCN COMMUNITIES) **1.8**



Within maximum contaminant limit



Above maximum contaminant limit



Data not available or suppressed

31



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# All Tribal: Environmental Health cont.

The following section describes various environmental health measures including private drinking water (well) conditions.



## Private well water

### Primary contaminants



#### Bacteria

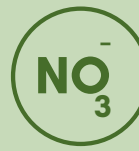


% positive

HCN tribal  
(HCN WI  
PRCDA)



All persons  
(HCN WI  
PRCDA)



#### Nitrate



Average ppm

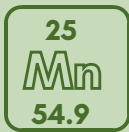
HCN tribal  
(HCN WI  
PRCDA)



All persons  
(HCN WI  
PRCDA)



### Secondary contaminants



#### Manganese



Average ppm

HCN tribal  
(HCN WI  
PRCDA)



All persons  
(HCN WI  
PRCDA)



#### pH level



Average level

HCN tribal  
(HCN WI  
PRCDA)



All persons  
(HCN WI  
PRCDA)



Within maximum contaminant limit

Above maximum contaminant limit

Data not available or suppressed

32



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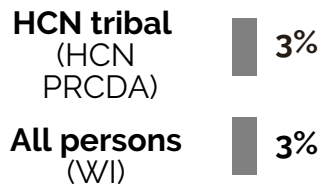


# All Tribal: Environmental Health cont.

The following section describes various environmental health measures related to health outcomes associated with lead exposure and air quality.

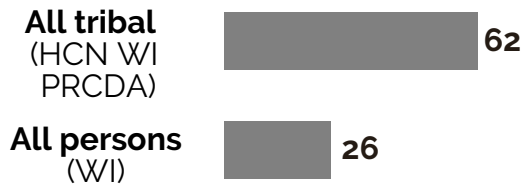
## Blood lead levels

 % of youth (0-6 years) with value  $\geq 5 \mu\text{g/dL}$





## Asthma

 rate ER visits (per 10,000)



 Same or better than state value

 Worse than state value

 Data not available or suppressed

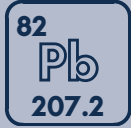


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# Community Drinking Water



## Lead

All persons  
WI HCN tribal communities

Lead gets into the drinking water from corrosive plumbing materials. This occurs when metal wears away due to a chemical reaction in the water; this can be caused by the temperature in the water, existing minerals, or the acidity/alkalinity of the water. The Lead and Copper Rule issued by the Environmental Protection Agency (EPA) states that water treatment facilities must take action to make "drinking water less corrosive to the materials it comes into contact with on its way to consumers' taps." It is estimated lead exposure through water makes up a minimum of 20% of total lead exposure.

Lead exposure can be potentially harmful for all persons but especially for children and pregnant women. In children, the effects of lead include behavioral and developmental issues. Similarly, pregnant women with lead exposure can result in pre-term birth or reduced growth of the fetus (EPA, 2023).

<b>Lead summary</b>	<b>Maximum contaminant level (MCL):</b> Highest level allowed in drinking water; Requires action if 10% or more samples exceed value	<b>15 ppb</b>
	<b>Maximum contaminant level goal (MCLG):</b> Level for at which there is no known or expected risk for health	<b>0 ppb</b>

During 2020-2022 in the HCN community water system, lead reads included Jackson, Sauk, and Wood counties. The Wisconsin counties for all residents reflects these same counties and their reads during this period.

	All persons (HCN WI COMMUNITIES)	All persons (WI COUNTIES OF HCN COMMUNITIES)
<b>% water reads over lead MCL:</b>	<b>0%</b>	<b>3.9%</b>
<b>Range of lead reads:</b>	<b>0.62-4.3 ppb</b>	<b>0-60 ppb</b>

**Public drinking water:** Water Quality Report; Drinking Water System Portal  
**Source:** HCN DOH EH Division; WI Department of Natural Resources  
**Years displayed:** 2020-2022

**34**



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# Community Drinking Water



## Copper

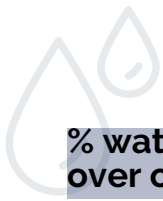
All persons  
WI HCN tribal communities

Copper is naturally found in water but it can also come from corroded household plumbing sources. Using hot water or water that has not been used can increase the risk of copper exposure. The Lead and Copper Rule issued by the Environmental Protection Agency (EPA) states that water treatment facilities must take action to make "drinking water less corrosive to the materials it comes into contact with on its way to consumers' taps" (2023).

Usually, copper does not cause health effects in healthy individuals. However, exposure to high levels can cause headaches, gastrointestinal issues, liver damage, and kidney disease. Babies (< 1 year) are at an increased risk for copper exposure because their bodies cannot get rid of it easily (MN Department of Health, 2023).

<b>Copper summary</b>	<b>Maximum contaminant level (MCL):</b> Highest level allowed in drinking water; Requires action if 10% or more samples exceed value	<b>1,300 ppb</b>
	<b>Maximum contaminant level goal (MCLG):</b> Level for at which there is no known or expected risk for health	<b>1,300 ppb</b>

During 2020-2022 in the HCN community water system, copper reads included Jackson, Sauk, and Wood counties. The Wisconsin counties for all residents reflects these same counties and their reads during this period.



	All persons (HCN WI COMMUNITIES)	All persons (WI COUNTIES OF HCN COMMUNITIES)
<b>% water reads over copper MCL:</b>	<b>0%</b>	<b>0.8%</b>
<b>Range of copper reads:</b>	<b>11.5-207.5 ppb</b>	<b>1.4-1,600 ppb</b>

**Public drinking water:** Water Quality Report; Drinking Water System Portal  
**Source:** HCN DOH EH Division; WI Department of Natural Resources  
**Years displayed:** 2020-2022

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# Community Drinking Water



## Nitrate

All persons  
WI HCN tribal communities

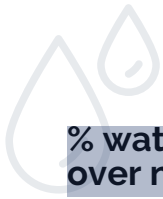
Nitrate is naturally found in plants and animals. However, excess nitrate gets in the water from fertilizers and animal/human waste.

High levels of nitrate increase your risk for colon cancer and thyroid disease. Babies and pregnant women are at an increased risk for nitrate effects. In babies, nitrate increases their risk of blue baby syndrome (methemoglobinemia) where their skin turns a blue/gray color. This color change occurs because nitrate affects how blood carries oxygen; reduced blood oxygen levels can also result in fatigue, dizziness, and a higher heart rate. In pregnant women, excess nitrate exposure can cause birth effects, like neural tube defects (this includes birth defects of the brain, spine, and spinal cord) (WI DHS, 2023).

### Nitrate summary

<b>Maximum contaminant level (MCL):</b> Highest level allowed in drinking water; Requires action if 10% or more samples exceed value		<b>10 ppm</b>
<b>Maximum contaminant level goal (MCLG):</b> Level for at which there is no known or expected risk for health		<b>10 ppm</b>

During 2020-2022 in the HCN community water system, nitrate reads included Jackson, Sauk, and Wood counties. The Wisconsin counties for all residents reflects these same counties and their reads during this period.



	All persons (HCN WI COMMUNITIES)	All persons (WI COUNTIES OF HCN COMMUNITIES)
<b>% water reads over nitrate MCL:</b>	<b>0%</b>	<b>0%</b>
<b>Range of nitrate reads:</b>	<b>0.24-3.8 ppm</b>	<b>0-7.1 ppm</b>

Public drinking water: Water Quality Report; Drinking Water System Portal  
Source: HCN DOH EH Division; WI Department of Natural Resources  
Years displayed: 2020-2022



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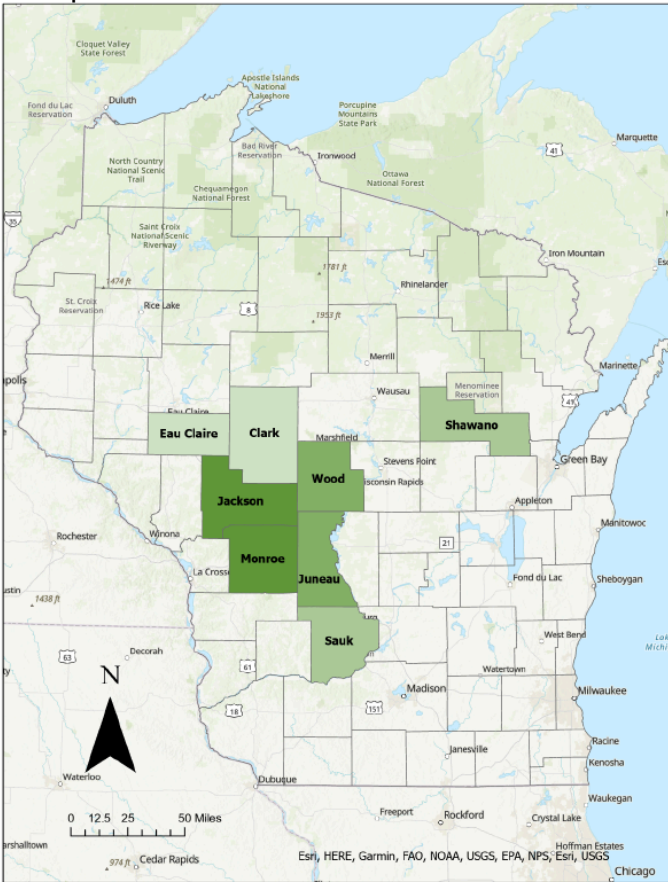
# Private well water



## Bacteria

All persons  
WI HCN tribal communities

Bacterial tests in well water check if there are bacterial coliforms present. When coliforms are present, it means the water has been contaminated by soil or feces (poop); this contamination often occurs due to well/septic systems that are not maintained or due to the transport of human/animal feces through groundwater or runoff (WI DHS, 2018). Some coliforms can cause symptoms like diarrhea, vomiting, cramps, nausea, headaches, fever, and fatigue (MN Department of Health, 2018).



The data reflects households who have had their well water tested by the EH division. The map reports the number of samples that had a bacteria well test, positive or negative. There were too few positive samples to display them geographically.

### # of bacteria well tests

- 7-9 Jackson, Monroe
- 4-6 Juneau, Wood
- 3 Sauk, Shawano
- 1-2 Clark, Eau Claire

If a positive bacterial coliform is found, a follow-up sample is taken. If the second sample is positive, the well is disinfected by the EH Division.

### % of wells with positive bacteria



**NOTE:** No bacteria well samples have been taken in Adams, Columbia, Crawford, Dane, La Crosse, Marathon, or Vernon County during 2019-2021.

# 37

Higher  Lower

Private well water: Water sampling data; WI Well Water Quality Viewer

Source: HCN DOH EH Division; UW Stevens Point

Years displayed: 2019-2021; 1988-2021



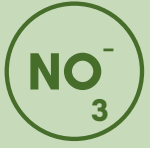
## WAŽA HIGIRAWI (We care)







# Private well water



## Nitrate

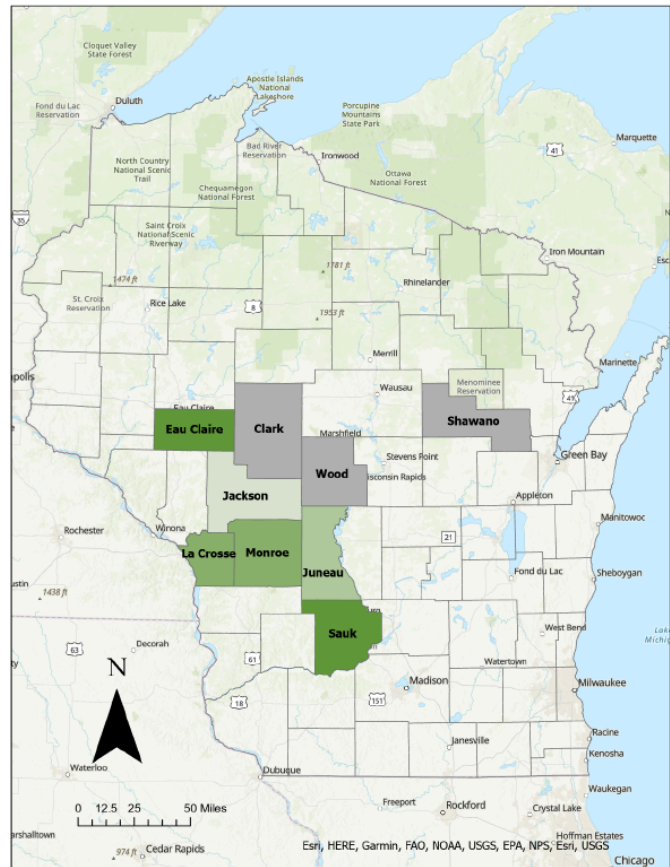
All persons  
WI HCN tribal communities

\* A grayed out county in the map means there were not enough tests to display the average (< 2 tests)

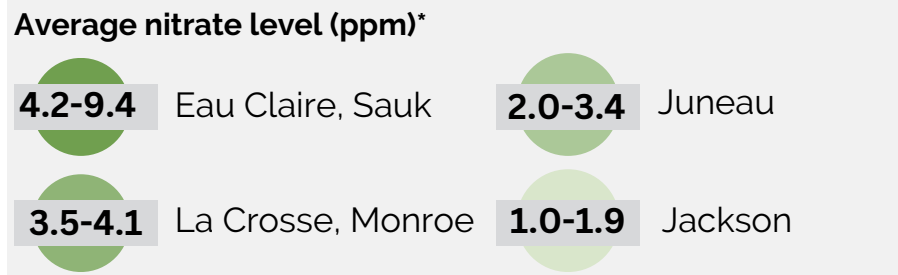
Nitrate is naturally found in plants and animals. However, excess nitrate gets in the water from fertilizers and animal/human waste. In wells, excess nitrate moves through the groundwater and runoff (WI DHS, 2023). High levels of nitrate increase your risk for colon cancer and thyroid disease.

**HCN tribal**  
(HCN WI PRCDA) **3.53**

**All persons**  
(HCN WI PRCDA) **4.17**

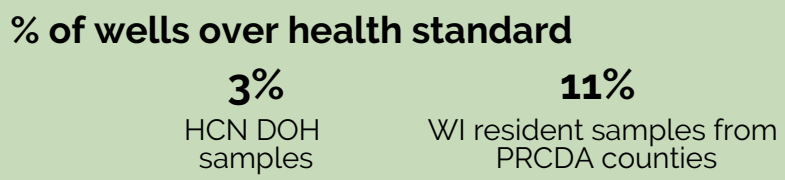


The data reflects households who have had their well water tested by the EH division. The map reports the average nitrate level (by ppm).



**Health standard- 10 ppm**  
Level of nitrate should not exceed this level to avoid human health hazards.

If a nitrate value exceeds the health standard, the EH division will provide treatment in the form of reverse osmosis.



**NOTE:** No nitrate well samples have been taken in Adams, Columbia, Crawford, Dane, Marathon, or Vernon County during 2019-2021.

**38**

Higher → Lower

Private well water: Water sampling data; WI Well Water Quality Viewer

Source: HCN DOH EH Division; UW Stevens Point

Years displayed: 2019-2021; 1988-2021



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# Private well water

25 Mn 54.9

## Manganese

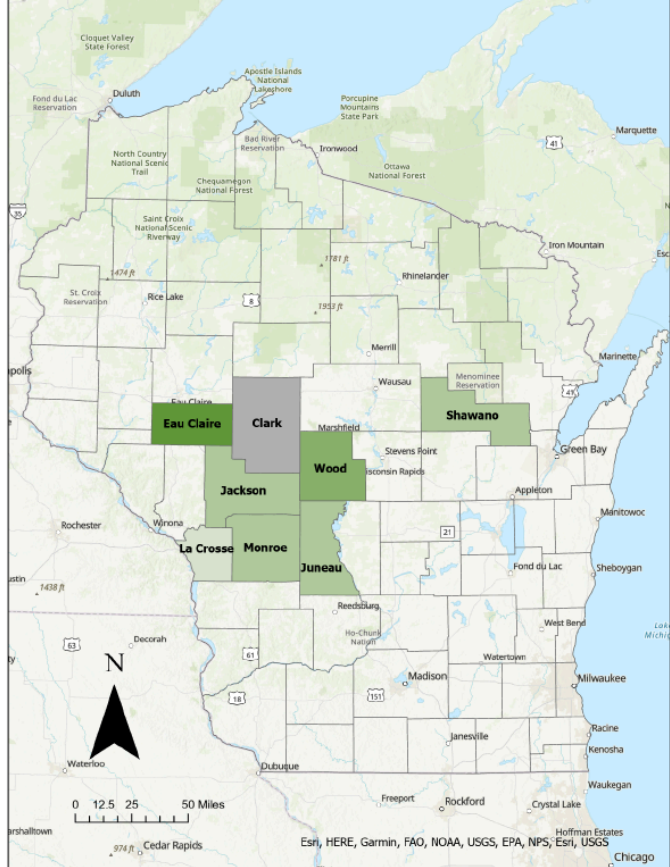
All persons WI HCN tribal communities

\*A grayed out county in the map means there were not enough tests to display the average (< 2 tests)

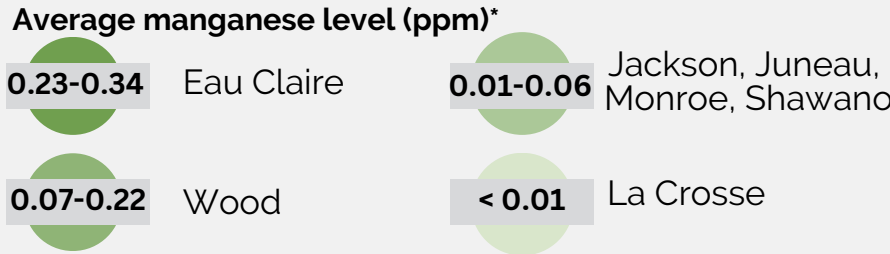
Manganese naturally occurs in rocks, soil, groundwater, and surface water. At manganese levels of 0.05 ppm, you may notice a brownish-red stain on plumbing fixtures, and an off-taste or odor. Excess manganese may cause health effects such as neurological effects or developmental effects in babies (CT Department of Health, nd).

HCN tribal (HCN WI PRCDA) | **0.08**

All persons (HCN WI PRCDA) | **0.05**

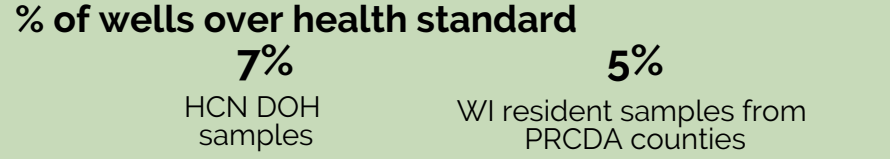


The data reflects households who have had their well water tested by the EH division. The map reports the average manganese level (by ppm).



**Health standard- 0.3 ppm**  
Level of manganese should not exceed this level to avoid human health hazards.

If a manganese value exceeds the health standard, the EH division will provide education on manganese removal.



**NOTE:** No manganese well samples have been taken in Adams, Columbia, Crawford, Dane, Marathon, or Sauk, Vernon County during 2019-2021.

**39**

**Higher** → **Lower**  
Private well water: Water sampling data; WI Well Water Quality Viewer  
Source: HCN DOH EH Division; UW Stevens Point  
Years displayed: 2019-2021; 1988-2021



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# Private well water



## ph level

All persons  
WI HCN tribal communities

\*A grayed out county in the map means there were not enough tests to display the average (< 2 tests)

The pH of water measures how acidic or how basic it is, ranging from 0-14 (7 is neutral, less than 7 is more acidic, and greater than 7 is more basic). Although the pH of water is not necessarily a health concern, it remains an important measure of water quality. Water that is too acidic can result in corrosive plumbing materials, which can result in lead or copper entering your water. The desirable level of pH is in the range of 6.5-8.5 (WHO, 2007).

HCN tribal  
(HCN WI  
PRCDA) **6.8**

All persons  
(HCN WI  
PRCDA) **7.5**

The data reflects households who have had their well water tested by the EH division. The map reports the average pH level.

### Average pH level

**7.6-7.9** La Crosse

**6.2-6.8** Monroe, Wood

**6.9-7.5** Jackson, Juneau, Shawano

**<6.2** Eau Claire

### Desirable range-6.5-8.5

Level of pH should not be below or above this range

If a pH value exceeds the health standard, the EH division will conduct additional water testing.

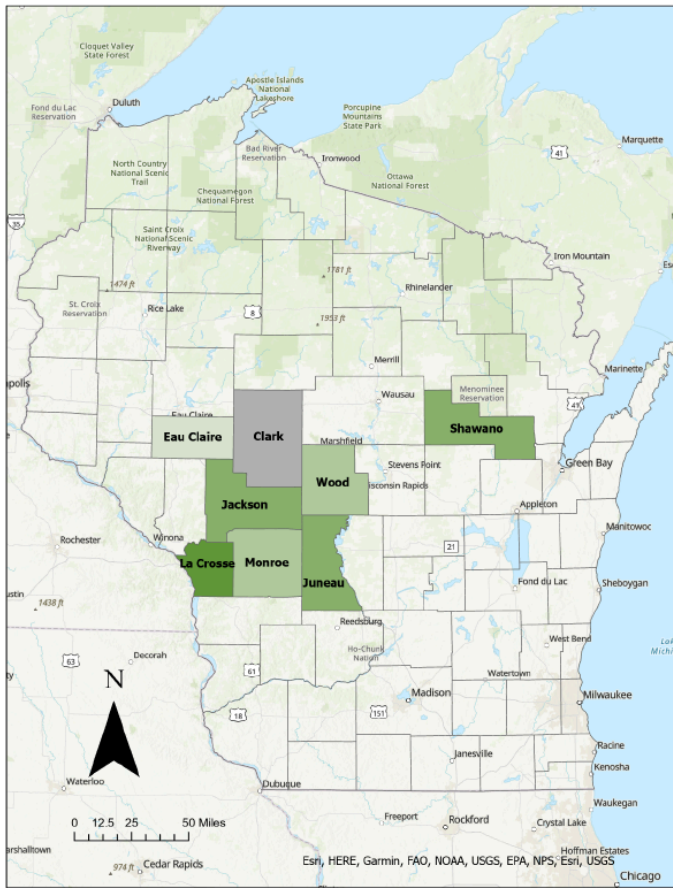
### % of wells outside range

**25%**  
HCN DOH  
samples

**N/A**  
WI resident samples  
from PRCDA counties

**NOTE:** No pH well samples have been taken in Adams, Columbia, Crawford, Dane, Marathon, or Sauk, Vernon County during 2019-2021.

**40**



Higher → Lower

Private well water: Water sampling data; WI Well Water Quality Viewer

Source: HCN DOH EH Division; UW Stevens Point

Years displayed: 2019-2021; 1988-2021



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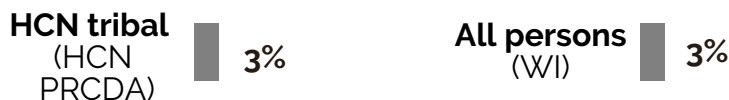


# Blood lead levels

HCN Tribal  
HCN DOH PRCDA

Lead poisoning happens when lead builds up in the body. To check for this, blood lead level tests are used. Lead exposure occurs through dust from paint containing lead (inhalation or hands to mouths), drinking water from corroded plumbing fixtures, touching soil with leaded gasoline, and through other products like toys, jewelry or others. Lead poisoning can result in developmental delays, learning disabilities, and kidney or nervous system damage (WI DHS, 2023). **Children (less than 6 years) and pregnant women are most at-risk for harmful lead effects.** Lead exposure in pregnant women can result in pre-term births, development effects, and miscarriage (CDC, 2022).

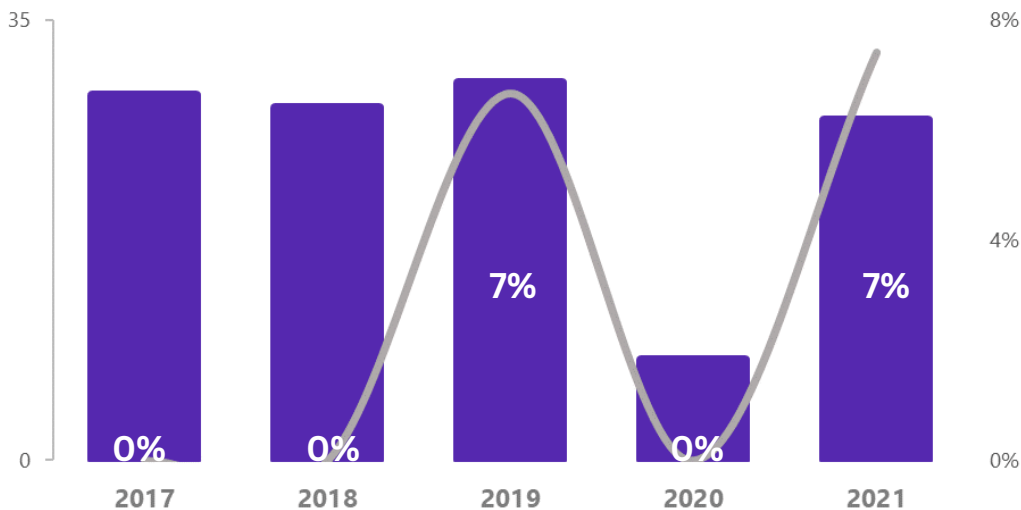
The value below reflects the percentage of blood lead tests exceeding the health standard of 5 µg/dL .



The data below reflects **Ho-Chunk Tribal youth (6 years or less) who have received a blood lead level test at any of the HCN DOH clinics or other HCN DOH services.**

# of blood tests

%with a value of >5 µg/dL



**HCN Tribal Youth (0-6 years)**

% blood lead level test value in **2017-2021**

<b>95%</b>	<b>1%</b>	<b>3%</b>
<3.5 µg/dL	3.5-4.9 µg/dL	>5 µg/dL

**NOTE:** Previously, lead poisoning was defined as a blood lead level of 5 µg/dL. Later in 2021, the Centers for Disease Control & Prevention (CDC) updated this value to 3.5 µg/dL. However, no amount of lead exposure is safe. **This reporting year uses the old value as the action level (5 µg/dL).**

**Blood lead levels:** Blood lead level tests & results; Childhood lead poisoning  
**Source:** HCN DOH NextGen; WI Environmental Health Tracking Program  
**Years displayed:** 2017-2021; 2021

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# Asthma

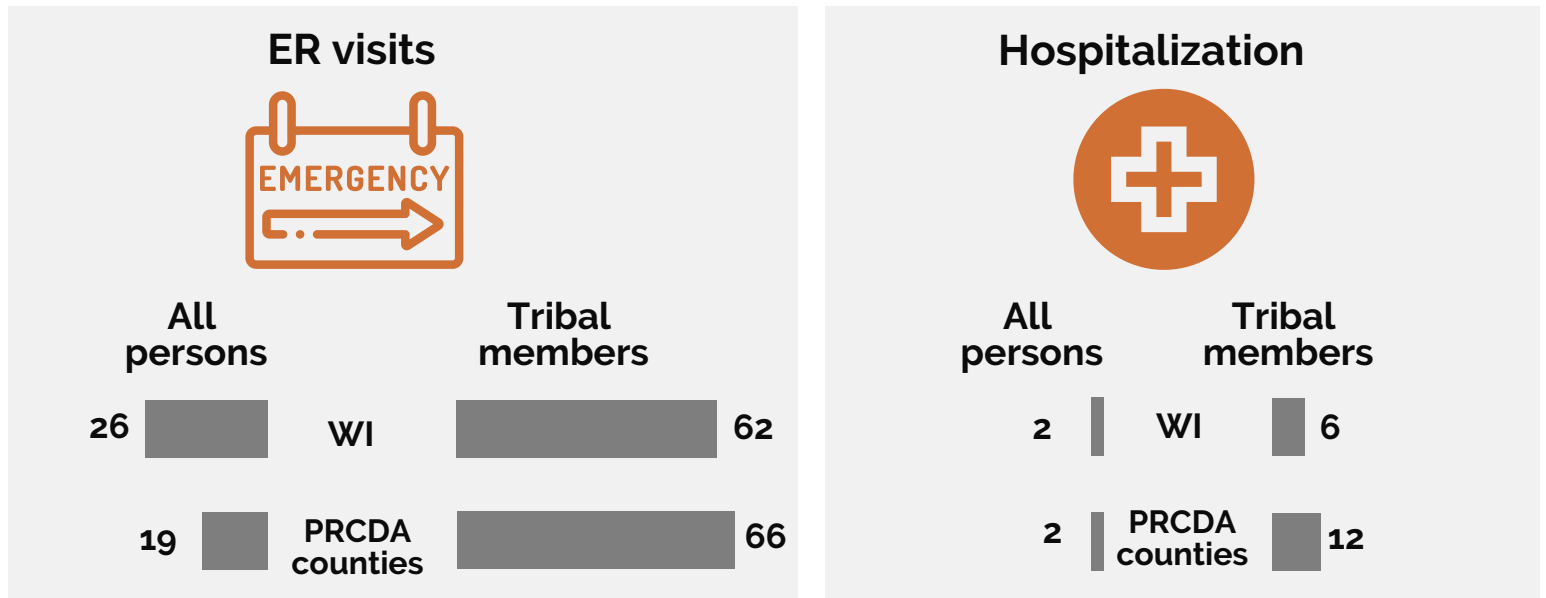
All Tribal  
WI HCN DOH PRCDA

Asthma is a health condition that affects your lungs. It can be caused by environmental factors, such as smoking, mold, other allergens, air pollution, and by things like lung infection or family history. Asthma can cause coughing, wheezing, chest tightness, and breathlessness. When something significantly triggers your asthma, you can have an asthma attack- asthma attacks happen when your lungs swell, the airways shrink, and mucus clogs the airways. **ER visits and hospitalizations for asthma often occur due to asthma attacks** (CDC, 2021).

It is estimated that **10% of all Wisconsites** (CDC, 2022) and **19% of Ho-Chunk Tribal members** (Suryanarayanan, 2019) **have asthma**.

The numbers below describe the **rate** (per every 10,000 people) of Wisconsin persons either **hospitalized or seen in the ER for asthma** in Wisconsin, Minnesota, or Iowa.

## During 2022...



**Asthma** Primary cause of admission- ER and hospitalization; Asthma  
**Source:** WI DHS Office of Health Informatics; WI Environmental Tracking Program  
**Years displayed:** 2022

42



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# References

## Ho-Chunk Nation Community Profile

Ho-Chunk Nation Office of Enrollment. (2022, June). *Ho-Chunk Nation tribal enrollment-May 2022* [report].

## Purchased Referred Care Delivery Area

About PRCDA:

Centers for Disease Control and Prevention, Division of Cancer Control and Prevention (2022, October 26). *Interpreting race and ethnicity in cancer data*.

[https://www.cdc.gov/cancer/uscs/technical\\_notes/interpreting/race.htm](https://www.cdc.gov/cancer/uscs/technical_notes/interpreting/race.htm)

Ho-Chunk Nation Population Statistics: See Ho-Chunk Nation Community Profile citation

## Community Conditions

### Social Vulnerability Index

About SVI Index:

Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry (2022, October 26). *CDC/ATSDR SVI fact sheet*.

[https://www.atsdr.cdc.gov/placeandhealth/svi/fact\\_sheet/fact\\_sheet.html](https://www.atsdr.cdc.gov/placeandhealth/svi/fact_sheet/fact_sheet.html)

SVI levels by county data summary

Center for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry (2023, December 1). *CDC/ATSDR Social Vulnerability Index (SVI) overall SVI by county 2022* [map].

[https://www.atsdr.cdc.gov/placeandhealth/svi/interactive\\_map.html](https://www.atsdr.cdc.gov/placeandhealth/svi/interactive_map.html)

## Hospitalization and ER Visits

Wisconsin Department of Health Services, Office of Health Informatics (2023, December). *Hospital discharge visits (inpatient and ER) for American Indian/Alaska Native during 2022* [report].



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**V**



# References cont.

## Causes of Death

Ho-Chunk Nation cause of death data summary:

Ho-Chunk Nation Office of Enrollment. (2024, May). Ho-Chunk Nation deceased statistics- 2018 to 2022 [report].

WI Tribal cause of death data summary:

Centers for Disease Control and Prevention WONDER (2023, January 11). 1990-2020: *Underlying cause of death by bridged-race categories (Wisconsin American Indian/Alaska Native)*.

<https://wonder.cdc.gov/ucd-icd10.html>

About heart disease:

Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division for Heart Disease and Stroke Prevention. (2023, March 21). *About heart disease*.

<https://www.cdc.gov/heartdisease/about.htm>

About chronic liver disease/cirrhosis:

John Hopkins Medicine (n.d.). *Chronic Liver Disease/Cirrhosis*.

<https://www.hopkinsmedicine.org/health/conditions-and-diseases/chronic-liver-disease-cirrhosis>

## Socioeconomic Factors

About socioeconomic status:

Phelan, J.C., Link, B.G., & Tehranifar, P. (2010). Social conditions as fundamental causes of health inequalities: Theory, evidence, and policy implications. *Journal of Health and Social Behavior*, 51(S), S28-S40.

Educational attainment:

United States Census Bureau American Community Survey (ACS). (2023, September 27). *Sex by educational attainment for the population 25+ years for American Indian/Alaskan Native alone in selected Wisconsin counties from 2017-2021* [table]. <https://www.census.gov/programs-surveys/acs/data.html>

Household income:

### Tribal populations:

United States Census Bureau American Community Survey (ACS). (2023, September 27). *Median income in the past 12 months (in 2021 inflation-adjusted dollars) in selected Wisconsin counties for American Indian/Alaskan Native alone from 2017-2021* [table]. <https://www.census.gov/programs-surveys/acs/data.html>

### All persons:

United States Census Bureau American Community Survey (ACS). (2023, September 27). *Median income in the past 12 months (in 2021 inflation-adjusted dollars) in Wisconsin for all races from 2017-2021* [table]. <https://www.census.gov/programs-surveys/acs/data.html>

vi



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# References cont.

## Poverty:

### **Tribal populations**

United States Census Bureau American Community Survey (ACS). (2023, September 27). *Poverty status in the past 12 months in selected Wisconsin counties for American Indian/Alaskan Native alone from 2017-2021* [table]. <https://www.census.gov/programs-surveys/acs/data.html>

### **All persons**

United States Census Bureau American Community Survey (ACS). (2023, September 27). *Poverty status in the past 12 months in Wisconsin for all races from 2017-2021* [table]. <https://www.census.gov/programs-surveys/acs/data.html>

## Cost of living:

### **Wisconsin, family of 4**

United for ALICE. (n.d.). *Wage tool ALICE household survival budget for Wisconsin family of 4 households "all" hourly wage in 2022* [map]. <https://www.unitedforalice.org/wage-tool>

### **Minnesota, family of 4**

United for ALICE. (n.d.). *Wage tool ALICE household survival budget for Minnesota 4 adult households "all" hourly wage in 2022* [map]. <https://www.unitedforalice.org/wage-tool>

## **All tribal: Public Health Outcomes**

### Cancer:

Wisconsin Department of Health Services, Division of Public Health, Office of Health Informatics, Wisconsin Cancer Reporting System. (2022, August). *Wisconsin Interactive Statistics on Health (WISH) data query system, cancer module, cancer incidence*. <https://wish.wisconsin.gov/cancer/incidence.htm>

### Sexually transmitted infections:

#### **About prevention**

Mayo Clinic. (2022, May 5). *Sexually transmitted disease (STD) symptoms*.

<https://www.mayoclinic.org/diseases-conditions/sexually-transmitted-diseases-stds/in-depth/std-symptoms/art-20047081>

#### **About prevention-vaccines**

Centers for Disease Control and Prevention, Division of STD Prevention, National Center for HIV, Viral Hepatitis, STD, and TB, Prevention. (2023, February 22). *How you can prevent sexually transmitted diseases*. <https://www.cdc.gov/std/prevention/default.htm>

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## **STI data summary- Ho-Chunk Nation**

Ho-Chunk Nation Department of Health NextGen. (2022, December). Sexually transmitted diseases- Chlamydia, Gonorrhea, and Syphilis [report].

## **STI data summary- Wisconsin**

Wisconsin Department of Health Services, Division of Public Health, STI Unit. (2023, June). *Sexually transmitted infections in Wisconsin, 2022. Reported cases* [report].

<https://www.dhs.wisconsin.gov/publications/p00415-2021.pdf>

## COVID-19 vaccine

### **About COVID**

Wisconsin Department of Health Services. (2022, July 26). *COVID-19: Post-COVID Conditions*.

<https://www.dhs.wisconsin.gov/covid-19/long-covid.htm>

### **COVID vaccine data summary-Ho-Chunk Nation**

Ho-Chunk Nation Department of Health NextGen. (2023, January). *COVID-19 vaccine CPT code, 2022* [report].

### **COVID vaccine data summary- Wisconsin residents**

Ho-Chunk Nation Department of Health. (2023, January). *COVID-19 vaccine summary report, December 2022* [report].

## Influenza vaccine

### **About flu**

Wisconsin Department of Health Services. (2023, March 7). *About Influenza (Flu)*.

<https://www.dhs.wisconsin.gov/influenza/about.htm>

### **Flu vaccine data summary- Ho-Chunk Nation**

Ho-Chunk Nation Department of Health NextGen. (2022, December). *Influenza vaccine, 2021-2022* [report].

### **Flu vaccine data summary- Wisconsin, all residents**

Wisconsin Department of Health Services (2022, December 20). *Immunizations: Influenza vaccine data, 2021-2022 season*. <https://www.dhs.wisconsin.gov/immunization/influenza.htm>

## Prenatal care

### **About pregnancy awareness**

Branum, A.M. & Ahrens, K.A. (2017). Trends in timing of pregnancy awareness among US women. *Maternal and Child Health Journal*, 21, 715-26.

### **Prenatal care data summary- Tribal and all Wisconsin residents**

Wisconsin Department of Health Services, Division of Public Health, Office of Health Informatics, Birth-Related. (2023, November). *Wisconsin Interactive Statistics on Health (WISH)*

*data query system, birth counts module, trimester prenatal care began, 2017-2021*.

<https://www.dhs.wisconsin.gov/wish/birth/index.htm>

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## Low birth weight

### **Low birth weight effects**

Jin, J. (2015, January 17). *Babies with low birthweight*. JAMA Network.

<https://jamanetwork.com/journals/jama/fullarticle/2091990>

### **Low birthweight data summary-Tribal and all Wisconsin residents**

Wisconsin Department of Health Services, Division of Public Health, Office of Health Informatics, Birth-Related. (2023, November). *Wisconsin Interactive Statistics on Health (WISH) data query system, low birthweight module, 2017-2021*. <https://www.dhs.wisconsin.gov/wish/lbw/form.htm>

## Pre-term birth

### **Pre-term birth causes**

A) Hamilton et al. (2022, May). *Births: Provisional data in 2021 [report]*. Center for Disease Control and Prevention. <https://www.cdc.gov/nchs/data/vsrr/vsrr020.pdf>

B) Centers for Disease Control and Prevention, Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion. (2022, November 1). *Premature birth*.

[https://www.cdc.gov/reproductivehealth/features/premature-](https://www.cdc.gov/reproductivehealth/features/premature-birth/index.html#:~:text=Some%20risk%20factors%20for%20preterm,has%20to%20be%20delivered%20early.)

[birth/index.html#:~:text=Some%20risk%20factors%20for%20preterm,has%20to%20be%20delivered%20early.](https://www.cdc.gov/reproductivehealth/features/premature-birth/index.html#:~:text=Some%20risk%20factors%20for%20preterm,has%20to%20be%20delivered%20early.)

## **All tribal: Environmental Health**

### Community water- Lead

#### **Lead summary**

Environmental Protection Agency (2023, January 27). *Basic information about lead in drinking water*.

<https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water>

#### **Lead data summary-Ho-Chunk Nation**

Ho-Chunk Nation Department of Health, Environmental Health Division (n.d.). *Water quality report, consumer confidence report by Ho-Chunk community, 2020-2022 [report]*.

#### **Lead data summary-Wisconsin residents**

Wisconsin Department of Natural Resources (n.d.). *Drinking Water System Portal, Find contaminants in public water supplies, lead, active municipal community, 2020-2022 in select counties*.

<https://dnr.wi.gov/dwsviewer/ContamResult/Search>

### Community water- Copper

#### **Copper sources**

See lead summary source above

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## **Copper effects**

Minnesota Department of Health, Environmental Health Division (2023, January 9). *Copper in drinking water*. <https://www.health.state.mn.us/communities/environment/water/docs/contaminants/copperfactsht.pdf>

## **Copper data summary-Ho-Chunk Nation**

See lead summary Ho-Chunk Nation above

## **Copper data summary- Wisconsin residents**

Wisconsin Department of Natural Resources (n.d.). *Drinking Water System Portal, Find contaminants in public water supplies, copper, active municipal community, 2020-2022 in select counties*. <https://dnr.wi.gov/dwsviewer/ContamResult/Search>

## Community water-Nitrate

### **Nitrate effects**

Wisconsin Department of Health Services (2023, April 12). *Nitrate in private wells*. <https://www.dhs.wisconsin.gov/water/nitrate.htm>

### **Nitrate data summary- Ho-Chunk Nation**

See copper data summary Ho-Chunk Nation above

### **Nitrate data summary- Wisconsin residents**

Wisconsin Department of Natural Resources (n.d.). *Drinking Water System Portal, Find contaminants in public water supplies, nitrate, active municipal community, 2020-2022 in select counties*. <https://dnr.wi.gov/dwsviewer/ContamResult/Search>

## Private wells-Bacteria

### **Bacteria sources**

Wisconsin Department of Health Services, Division of Public Health, Bureau of Environmental and Occupational Health (2018, April). *Bacteria in private well water* [fact sheet]. <https://www.dhs.wisconsin.gov/publications/p02132.pdf>

### **Bacteria effects**

Minnesota Department of Health, Environmental Health Division, Well Management Section (2019, August 1). *Bacterial safety of well water* [fact sheet]. <https://www.health.state.mn.us/communities/environment/water/docs/wells/waterquality/bacteria.pdf>

### **Bacteria data summary- Ho-Chunk Nation**

Ho-Chunk Nation Department of Health, Environmental Health Division (n.d.). *Water sampling data, 2019-2021* [report].

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## **Bacteria data summary- Wisconsin residents**

University of Wisconsin Stevens–Point, Center for Watershed Science and Education (2022, January). *Wisconsin well water quality viewer* [map].[https://gissrv3.uwsp.edu/webapps/gwc/pri\\_wells/](https://gissrv3.uwsp.edu/webapps/gwc/pri_wells/)

Private wells-Nitrate

### **Nitrate effects**

See *nitrate effects (community water-nitrate above)*

### **Nitrate data summary- Ho-Chunk Nation**

See *bacteria data summary- Ho-Chunk Nation above*

### **Nitrate data summary- Wisconsin residents**

See *bacteria data summary-Wisconsin residents above*

Private wells-Manganese

### **Manganese effects**

Connecticut Department of Health (n.d.). *What you need to know about manganese in private well water* [fact sheet].[https://portal.ct.gov/-/media/Departments-and-Agencies/DPH/dph/environmental\\_health/eoha/Toxicology\\_Risk\\_Assessment/Manganese\\_FINAL.pdf](https://portal.ct.gov/-/media/Departments-and-Agencies/DPH/dph/environmental_health/eoha/Toxicology_Risk_Assessment/Manganese_FINAL.pdf)

### **Manganese data summary- Ho-Chunk Nation**

See *bacteria data summary- Ho-Chunk Nation above*

### **Manganese data summary- Wisconsin residents**

See *bacteria data summary- Wisconsin residents above*

Private wells- pH

### **pH effects**

World Health Organization (2007). *pH in drinking water* [report].

[https://cdn.who.int/media/docs/default-source/wash-documents/wash-chemicals/ph.pdf?sfvrsn=16b10656\\_4](https://cdn.who.int/media/docs/default-source/wash-documents/wash-chemicals/ph.pdf?sfvrsn=16b10656_4)

### **pH data summary- Ho-Chunk Nation**

See *bacteria data summary- Ho-Chunk Nation above*

### **pH data summary- Wisconsin residents**

See *bacteria data summary- Wisconsin residents above*

Blood lead levels

### **Blood lead level sources**

Wisconsin Department of Health Services (2023, March 3). *Lead-safe Wisconsin: What is lead poisoning?*  
<https://www.dhs.wisconsin.gov/lead/clppp-info.htm>

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## **Blood lead level effects**

Centers for Disease Control and Prevention, National Center for Environmental Health, Division of Environmental Health and Practice (2022, July 1). *Childhood lead poisoning prevention, pregnant women*. <https://www.cdc.gov/nceh/lead/prevention/pregnant.htm>

## **Blood lead level data summary- Ho-Chunk Nation**

Ho-Chunk Nation Department of Health, Nextgen (2023, March). *Blood lead tests and levels, 2017-2021* [report].

## **Blood lead level data summary- Wisconsin residents**

Wisconsin Department of Health Services, Environmental public health tracking program (2022, August 30). *Environmental public health data tracker childhood lead poisoning 2021 (statewide)*. <https://www.dhs.wisconsin.gov/epht/lead.htm>

## Asthma

### **About asthma**

Centers for Disease Control and Prevention, National Center for Environmental Health (2021, July 1). *Learn how to control asthma*. <https://www.cdc.gov/asthma/faqs.htm>

### **Asthma Wisconsin prevalence- all residents**

Centers for Disease Control and Prevention, National Center for Environmental Health (2022, December 13). *Most recent asthma state or territory data*. [https://www.cdc.gov/asthma/most\\_recent\\_data\\_states.htm](https://www.cdc.gov/asthma/most_recent_data_states.htm)

### **Asthma Ho-Chunk Nation prevalence- HCN tribal**

Suryanarayanan, S. (2019, December). *Ho-Chunk Nation community health assessment 2017-2019* [report]. Ho-Chunk Nation Department of Health. <https://health.ho-chunk.com/docs/CHA2020.pdf>

### **Asthma data summary- Tribal ER/hospitalization**

*See hospitalization and ER visits above*

### **Asthma data summary- Wisconsin residents**

Wisconsin Department of Health Service, Environmental public health tracking program (2024, May 15). *Environmental public health tracker asthma 2022 (statewide)*. <https://www.dhs.wisconsin.gov/epht/lead.htm>



# Hospitalization & ER Visit Data Definitions

Data included in the hospitalization and ER visit summaries are separated by different health categories. Each health category is created by including specific health outcomes. **Each health outcome is labeled by a specific ICD-10 CM diagnosis code by primary diagnosis.** ICD-10 is the most current diagnosis code set used today- this change was implemented by the Centers for Medicare and Medicaid Services in 2015.

**NOTE:** Health categories were used by following the same set of ICD-10 CM codes listed by the references down below unless otherwise noted. Since the latest WI DHS Public Health Profile (2017) used ICD-9 CM codes that are no longer in use, a converter was used. Please note, some of the older codes do not create a perfect conversion, some codes are a close conversion. This process is also further explained in the WI DHS Public Health Profile appendices.

## ICD-10 CM Health Categories Sources (Code Groupings)

**Wisconsin Department of Health Services:** *Wisconsin Public Health Profile (2017).*

<https://www.dhs.wisconsin.gov/publications/p4/p45358-2017.pdf>

**Michigan Department of Health Services:** *Ambulatory Care Sensitive (ACS) Conditions ICD-9-CM and ICD-10-CM Groupings.*

<https://www.mdch.state.mi.us/OSR/CHI/HOSP/ICD9CM1.HTM>

**American Academy of Professional Coders:** *Convert ICD-9 to ICD-10.*

<https://www.aapc.com/icd-10/codes/>

## Additional Coding/Conversion Notes

### **Accidents/injuries**

- Poisonings: Only when specified as "unintentional"
- Broken bones: Only when "fractured" or "fract" is used

### **Mental/Behavioral Health**

- Suicide: Includes ideation and "intentional" or "self-harm" poisonings
- Conditions/disorders: Includes all other mental/behavioral health outcomes excluding suicide. Codes used include F01-F99.

### **Alcohol & Drug use**

- Includes "use" and "abuse," does not include "dependence"

### **COVID-19**

- Includes infection of, exposure to, and exposure to general communicable disease when COVID is specified. Codes used include B34.2, U071, Z20822

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