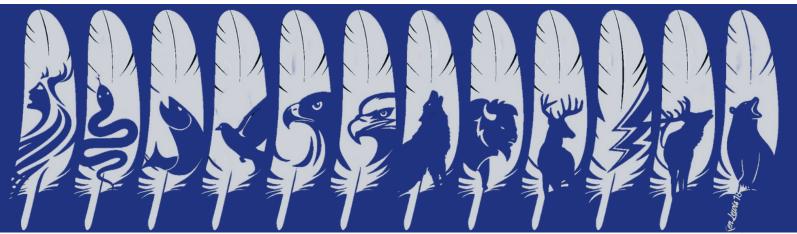
## Ho-Chunk Nation Department of Health



## TRIBAL HEALTH ASSESSMENT

### **WAŽĄ HIGIRAWI**

Building a strong mind, body, and spirit together







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### MESSAGE



Hanjcawira haipj,

We are excited to present the 2025 Ho-Chunk Nation Tribal Health Assessment. This comprehensive health assessment was created with data collected through community conversations and secondary sources such as the CDC and Wisconsin State systems to best understand the health needs within our Hocak communities.

The data presented in this assessment will help identify the areas of health that need improvement and attention over the next 5 years. The goal of this plan is to help inform the health programs and services offered to improve the overall health and well-being of our communities for many generations to come. We invite you to review this assessment and help us take action in improving the health of your community. We cannot be successful without your involvement.

Pinagigiwi

## HOW TO USE THIS ASSESSMENT

### Data from this assessment can be used to:

### **Set Priorities**

Determine which programs, resources, and/or policies to focus on and inform our Health Improvement Plan.

### **Develop Partnerships**

Work better with partners by sharing common goals and information.

### Communication

Keep community members and partners informed and involved in health decisions.

### Plan

Plan programs and services that match the community's needs.

### **Support Funding**

Use community data to support grant proposals based on the needs identified.

### **Track Trends**

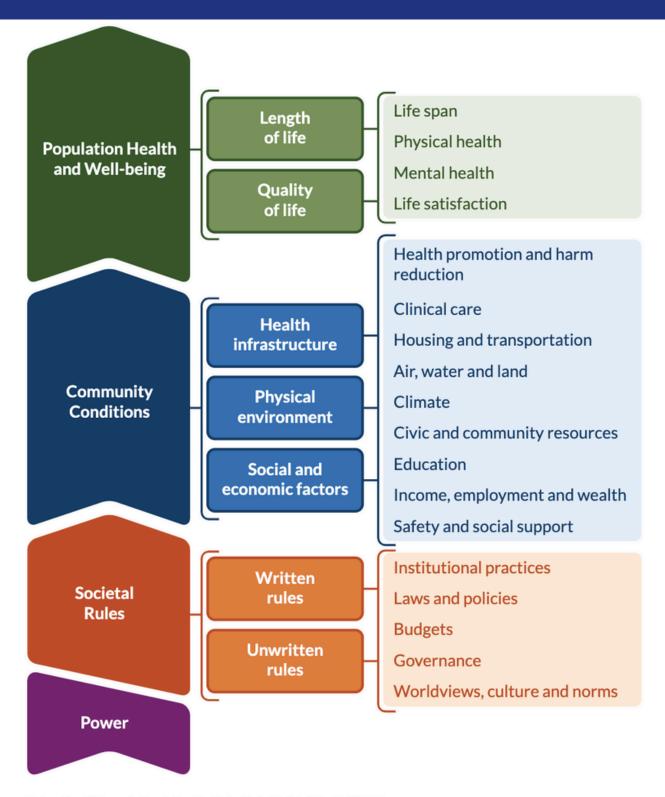
Track progress over time and see what improvements are being made.

## PARTNERS AND ACKNOWLEDGEMENTS

This health assessment could not have been completed without the Ho-Chunk Nation Health Assessment Planning Team and the continued collaboration with other partners, stakeholders, and community members. Pinagigiwi to everyone who assisted with and contributed to this assessment.

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- Ronelle McKernan, Public Health Nurse
- Ruth Garvin, Behavioral Health Director
- Samantha Casey, Community Health Director
- Sarah Thryselius, Epidemiologist
- Community Conversation Participants
- Ho-Chunk Nation Health Department Board of Directors
- Ho-Chunk Nation Institutional Review Board
- Ho-Chunk Nation Office of the President
- Ho-Chunk Nation Tribal Aging Units
- Ho-Chunk Nation Youth Services
- National Indian Health Board
- Wisconsin Institute for Public Policy and Service

## FACTORS THAT INFLUENCE HEALTH



## INDIGENOUS FACTORS THAT INFLUENCE HEALTH

### **Language and Identity**

- Indigenous identity is rooted in the idea that everything and everyone around us is connected.
- Cultural practices, languages, beliefs, prayer, and traditions are to be passed on to new generations.

### Indigenous Knowledge

• Healing practices, language, shared experiences, and traditions.

### **Land and Kinship**

- Land is sacred and is to be respected.
- When the environment is disrupted, the health of the people is also disrupted.
- There is a connection between all people and generations, past and present.

### Sovereignty

 The governance of tribal land and people revolves around wellness and traditions to support people and the environment

### **Structural and Systemic Factors**

- Historical trauma, racism, discrimination, microaggressions, and colonialism have all impacted health.
- Emphasizing language, practices, and traditions are important to create cultural connectedness.

Source: Seven Directions, 2023



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 2023.



5,361 members in Wisconsin

51% female 49% male

By age	All HCN Triba	al in Wisconsin
0- 4 years	92	
<b>5-11</b> years	468	
<b>12-17</b> years	570	Among
<b>18-24</b> years	668	vulnera youth.
25-34 years	975	These
35-44 years	857	to heal impact
45-59 years	956	HCN Community
60+ years	775	Source: HCN Office Years displayed:

**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.

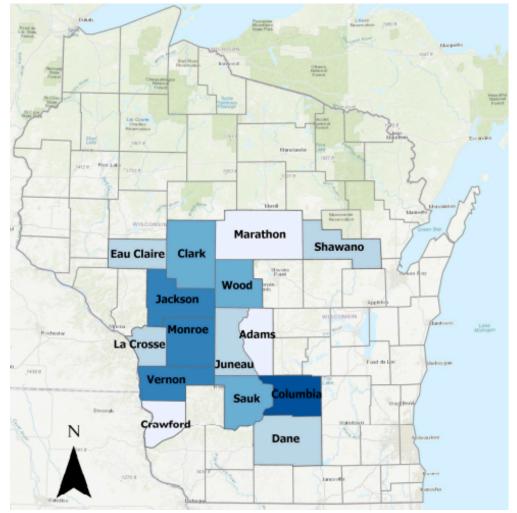
**HCN Community Profile:** HCN tribal enrollment, October 2023. **Source:** HCN Office of Enrollment

Years displayed: 2023

### **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 **1 county in Minnesota** which make up the **HCN DOH PRCDA**:



- Adams
- Clark
- Columbia
- Crawford
- Dane
- Eau Claire
- Jackson
- Juneau

- La Crosse
- Marathon
- Monroe
- Sauk
- Shawano
- Vernon
- Wood



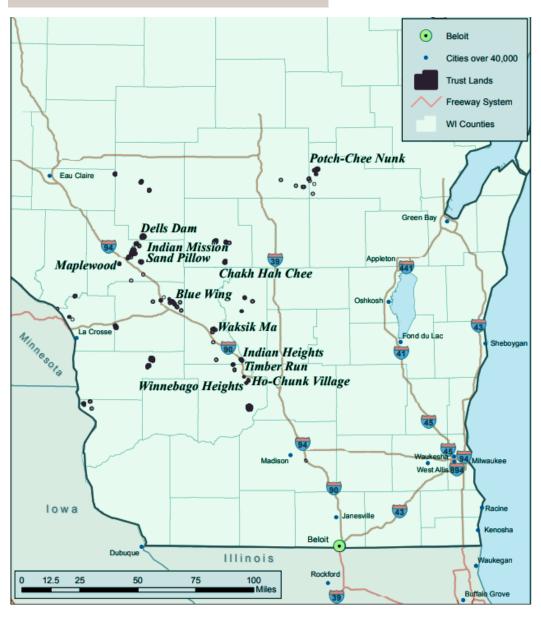
Houston

**4,165**enrolled members in PRCDA area

### **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.

### **Ho-Chunk Nation**Community & Trust Lands



### 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

### COMMUNITY CONVERSATIONS

The Ho-Chunk Nation Department of Health held 10 Community Conversation sessions from July-August 2024. Sessions were held virtually and in person. The sessions were facilitated by the Wisconsin Institute for Public Policy and Service.

### **Groups sessions:**

- Elders
- Veterans
- Youth

- Parents &
  - **Caregivers**
- General/Open to all

### COMMUNITY CONVERSATION RESULTS

## WHAT DOES HEALTH MEAN TO YOU AND YOUR FAMILY?

### **Balance and Alignment**

"Take care of your body so you can take care of your mental health."

### Influences (Past & Present, Internal & External)

"As people become more connected to culture, wellness follows."

### **Respect for One Another**

"It's okay to be culturally strong and to cry or show your feelings."

# OUR MISSION IS WAŽĄ HIGIRAWI "WE CARE." HOW SHOULD WE HONOR YOUR CULTURAL WAYS IN YOUR OR YOUR FAMILYS HEALTH?

### **Presence**

- Active listening
- Engaging activities
- Inclusion
- Supportive environment

### Knowledge

- Kinship
- Cultural awareness
- Cultural training

### Respect

- Trust
- Individualized healthcare
- Appropriate verbal/nonverbal language
- Communication







# WHAT ARE SOME THINGS IN YOUR COMMUNITY THAT INFLUENCE YOUR HEALTH?

### **Acecss/Equity**

"Access to cigarettes, tobacco, alcohol is easy."

"The nearest grocery store that is cheap is 30 minutes away.

The ones in town are expensive."

"Taking care of parents, jobs, and education. Not a lot of opportunity for leeway, a lot of balance."

"Programs come and go."

### Infrastructure

"Factors affecting personal growth are the products of our environment- drugs, alcohol, domestic violence and suicide."

"in 20s as a young parent, not much to do to gather other than partying."

### **Social and Cultural Connection**

"Laughter is good medicine. We are resistant people."

"We should be rooting for each other and encourage one another."

"Need more examples of people living a healthy lifestyle, not seeing it here at home."

# WHAT MAKES IT DIFFICULT FOR YOU AND YOUR FAMILY TO BE HEALTHY?

### **Social Support**

"Lack of support structure for working individuals through transportation, childcare, wages, and facilities."

### **Balancing Demands**

"Balancing family and work responsibilities can be challenging, especially when dealing with weather changes."

### **Motivation**

"It is difficult to change personal habits and behaviors, outreach and community activities are beneficial."

# IN THE LAST YEAR, WHAT CHALLENGES HAVE YOU AND YOUR FAMILY HAD?

### **Coping Skills**

- Journaling
- Mental health care
- Feelings of guilt



### **Personal Health**

"Personal choice, you have to want to do something better for yourself, easier said than done but I've done it."

"Taught to take bad things that have happened to them, told to 'shut up and man up.'"

"Being active, don't use that a lot."

### Access to Resources and Healthy Choices

"...waiting list for childcare."

"How many elders are falling through the cracks?"

"Access to information, get back to the basics, and make small changes."

# WHAT ARE SOME OF THE WAYS TO DEAL WITH THOSE CHALLENGES?

### **Communication**







"Respect for ones self and others."

### **Environmental Influence**

"Parents are reluctant to have kids labeled as special needs."

### **Centuring Culture**

"Having stuff in our community where we can be involved and have people around, know our culture, and teach us more or express it."

# WHO IN YOUR COMMUNITY DO YOU FEEL NEEDS MORE HELP THAN THEY ARE GETTING?

- Youth/Teens
- Elders
- Single parents
- Male adults
- Those struggling with mental health
- Veterans
- People who are currently healthy
- Those in addiction
- People with disabilities
- Caregivers/Parents
- Teachers
- Those without strong social/community support

"Youth lack a voice."

"Mental health is huge with kids."

"Teens don't really get help, especially the ones that can't drive."

"You can tell they need help, but you can't reach out to them."











## WHAT KIND OF HELP DO THEY NEED?

### **Service Needs**

- Mental Health
- AODA
- Home visits
- Flexibility in scheduling

"Some people don't know what to ask for."

"Some people don't know how to ask for help."

### **Maneuvering Systems**

- Accessing services, programs, and care needed to be healthy
- Navigating cross-departmental needs

"Having to get declination from the county adds stress."

### **Advocacy**

- Not having to ask for help
- Intentional outreach

"Will something be done about it or will it be another ten years?"

# WHAT HELPS YOU MAKE CHOICES ABOUT YOU AND YOUR FAMILY'S HEALTH?

### **Environmental/External Forces**

- Food
- Water
- Seasonality
- Access to care (clinical and behavioral)

### **Proximity**

- Physical distance/Location
- Connection to social support
- Connection to information/Programs
- In person appointments versus telehealth
- Being outside

### Internal/Interpersonal Factors

- Personal choices
- Self-awareness
- Role modeling
- Betterment of family and friends
- Trusted resources
- Benevolence
- Pets





"Don't want to feed my kids these canned foods, but sometimes you have to."

"I want to do better for myself and my kids."

"Role modeling is even important with siblings."

# WHERE DO YOU GET INFORMATION ABOUT HEALTH?

### Mode

- Bi-directional
- Appropriateness
- Inclusion
- Redundancy
- Frequency
- Personalized

"Meet people where they are at."

"Community events are goodshow up and it's helpful. It is a very connected community up here. People just show up and you don't have to ask for them, they just help."

### Source

- Trust in source/connection to source
- In person, stories, connection to DOH
- Collaboration with other departments

"If your'e worried about it, go to a doctor."

"Health department is a good source of information."

# HOW DO YOU WANT TO GET INFORMATION FROM THE HEALTH DEPARTMENT?

### Mode

- Interactive
- Success stories
- Community champions
- Word of mouth

"Sharepoint for health would be helpful."

"Smaller Facebook group branches."

### Engagement

- Community centered
- Audience specific
- Comprehensive

"Stay connected with community. Get to know families and stories."

"So many opportunities we can be present at."

### Source

- People (family, providers)
- Online (Social media, internet, TOB emails)

"Personal choice not following doctors order."

## COMMUNITY-LEVEL HEALTH DATA

### **Community Conditions**

**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**:



Higher



Household characteristics



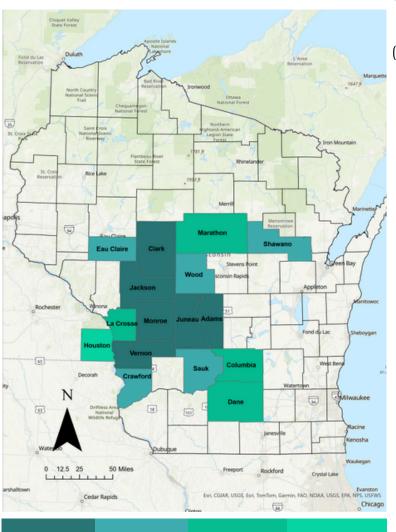
Racial/Ethnic identity



Housing type/ transportation







Lower

All persons (Service area) All persons (Minnesota)

All persons (Wisconsin) **Medium-high** 

Medium

Medium

Community conditions: Social Vulnerability

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.



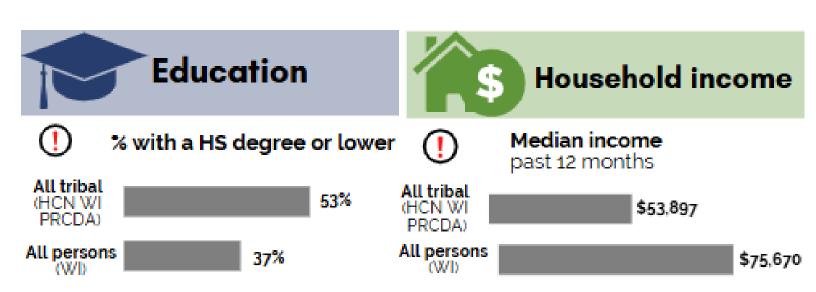
4 counties have a low**medium** rating

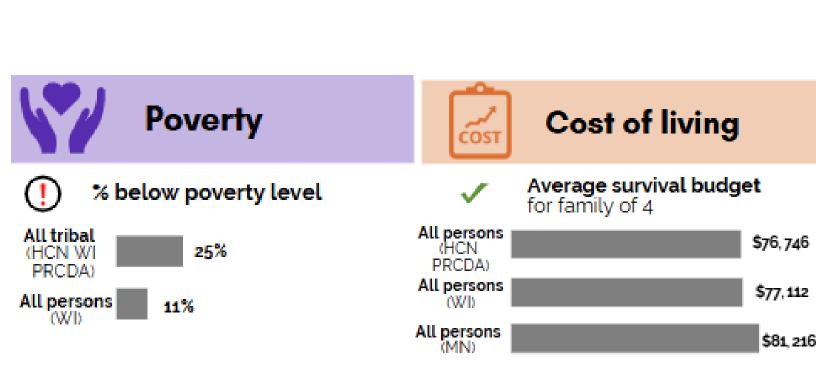


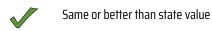
1 county has a low rating.

### **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).







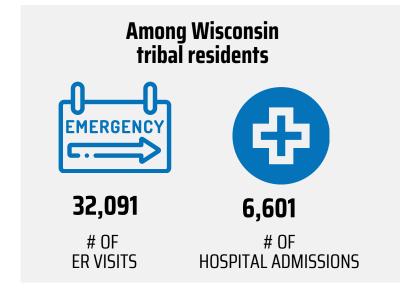


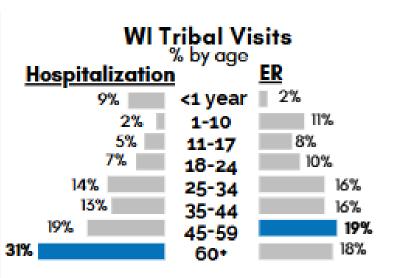
### **Hospitalizations & ER Visits**

### **Emergency Room**

### **Hospital**

TOTAL ER VISITS Total ER VISITS	# of visits 7,477	TOTAL HOSPITALIZATIONS Total hospitalizations	# of visits 1,301
SELECTED PRIMARY CAUSES ACCIDENTS/INJURIES (unintentional) Broken bones Poisonings (any cause) MENTAL/BEHAVIORAL HEALTH Conditions/disorders Alcohol/drug dependence Suicide (intent and self-harm) INFECTIOUS/PARASITIC DISEASES ALCOHOL & DRUG USE Chronic liver disease/cirrhosis Covid-19	1,263 195 77 244 124 63 57 196 157 8	SELECTED PRIMARY CAUSES MENTAL/BEHAVIORAL HEALTH Conditions/disorders Alcohol/drug dependence Suicide (intent and self-harm) INFECTIOUS/PARASITIC DISEASES Coronary Artery Disease ACCIDENTS/INJURIES (unintentional) Broken bones Poisoning (any cause) DIABETES ALCOHOL & DRUG USE Chronic liver disease/cirrhosis	184 112 69 3 141 99 3 91 33 68 33 12





### **Ho-Chunk Nation Death Statistics**

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 2019-2023.

About 54% of WI resident deaths had major cause of death information. For deaths outside of WI in the USA, 30% of deaths had this information.

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

- **Diseases of the heart.** This includes things like coronary artery disease, irregular heartbeats, heart failure, and heart defects someone is born with.
- Alcohol and drug use as a contributing cause. This includes long-term liver disease, cirrhosis of the liver, drug overdoses, and drug misuse.
- **3** Malignant neoplasms. This includes all types of cancer.
- **Accidents.** This includes unintentional injuries like car accidents, drownings, poisonings, falls, and fires.
- **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: 2019-2023

### **Public Health Measures**

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







### **Vaccines**



### COVID-19



% with Omicron booster



### Influenza

**!** % with at least one dose



### **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

### **Environmental Health Measures**

### Community drinking water



### HEALTH MEASURES RELATED TO LEAD EXPOSURE AND AIR QUALITY

Lead







**Copper** 









contaminant limit



**Nitrate** 



### Private well water









Manganese





**Nitrate** 

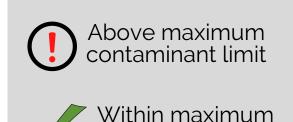




pH level









### WHAT'S NEXT?

From May to August 2025, we will hold a series of feedback opportunities to help prioritize which areas of health to focus on first and identify strategies for improvement.

Input gathered during this period will inform the next phase of the process: the development of the Tribal Health Improvement Plan. During this phase, workgroups will set specific goals and begin implementing actions to improve the prioritized health areas.

Want to be part of the groups and make change in your community? Please reach out!

Contact: Melissa Govek, Public Health Specialist at melissa.govek@ho-chunk.com or 715-284-9851 ext. 35052

### 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

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

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

### **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].

### **Causes of Death**

Ho-Chunk Nation cause of death data summary:

Ho-Chunk Nation Office of Enrollment. (2025, May). Ho-Chunk Nation deceased statistics: 2019 to 2023 [report].

#### 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

#### 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

### 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

#### 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

#### <u>Prenatal care</u>

#### 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

#### 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-

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

### **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].

#### 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/

#### 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-

Ägencies/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

#### <u>Private wells- pH</u>

#### 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

#### 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

#### 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

#### <u>Asthma</u>

#### 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

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

health.ho-chunk.com