

MANITOWOC COUNTY HEALTH DEPARTMENT

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2021 OVERVIEW

Objective

The Manitowoc County Health Department Annual Report provides a snapshot of the health status of our community and the work we do to improve the overall health of Manitowoc County. Our work is done in partnership with individuals, families, organizations, and the public. We focus on all factors that affect health: health behaviors, social and economic factors, clinical care, and the physical environment. The core functions of public health and the 10 essential public health services provide structure to our mission.

2021 Year in Review

The Manitowoc County Health Department continued its mission to serve Manitowoc County residents this last year, with the pandemic again taking a central role in the Department's work. The year opened with intense focus on responding to COVID-19, including the development and operation of mass vaccine clinics. These clinics were hailed by many as a success, and were widely appreciated by the community. A summer lull in cases allowed us to train the many new Public Health Nurses that joined our team, preparing for and responding to the routine responsibilities of a local health department. In fall, a surge in COVID-19 transmission brought back some familiar roles: guiding businesses, schools, and community members through evolving protocols, and calling positive cases and their contacts.

The Environmental Health staff continued to protect public health and safety through inspection and licensing of retail food establishments, campgrounds, swimming pools, and motels. They also responded to notifications of human health hazards, collected water samples, and visited homes of lead-poisoned children.

Women, Infants, and Children (WIC) staff offered both virtual and in-person visits to clients this year, serving people in the way that met their needs best.

The Health Department is served by a team of dedicated people who are passionate about meeting the public health needs of Manitowoc County. The future is bright.

Respectfully submitted,

Stephanie Lambert, MPH

COUNTY of MANITOWOC

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County Executive Chairperson of the County Board

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2021 LTE staff for COVID Response

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Julie Augustine	Melissa Lyon	Mary Beebe	Lynne Kaminski	April Eichmann
Crystal Brey	Kym Denzien	Jonathon Dishinger	Barbara Herrmann	Wendy Lettenberger
Margaret Mertz	Birait Kelly			

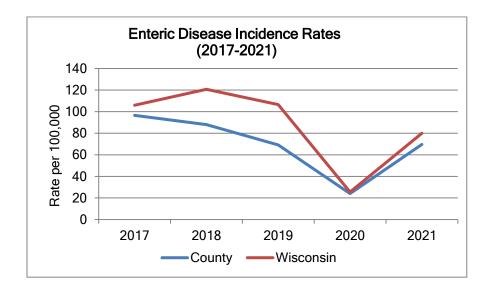
^{*}Retired or left the Health Department in 2021

COMMUNICABLE DISEASE

Statutorily required program to prevent, suppress and control the spread of communicable disease through immunizations, reporting, contact follow up, and assurance of appropriate treatment and community interventions through department surveillance.

Enteric Disease

Both Manitowoc County and the State saw a rebound in enteric infections during 2021, likely due to the increase in social gatherings and relaxation of some precautions that had been practiced earlier in the COVID-19 pandemic. Manitowoc County had slightly fewer cases of enteric disease than the state average in 2021.



Several enteric infections were reported in 2021, including 13 cases of salmonellosis, 6 cases of cryptosporidiosis, 6 cases of giardiasis, and fewer than 5 cases of yersiniosis.

Tick-Borne Diseases

The primary tick-borne infection in Manitowoc County residents in 2021 was Lyme disease (22 cases), with fewer than 5 cases of Ehrlichiosis / Anaplasmosis also detected. Both diseases are transmitted to humans through the bite of infected ticks. If left untreated, infection can spread throughout the body. Steps to avoid tick-bite infections include using insect repellent, removing ticks promptly, and reducing or avoiding tick habitat.

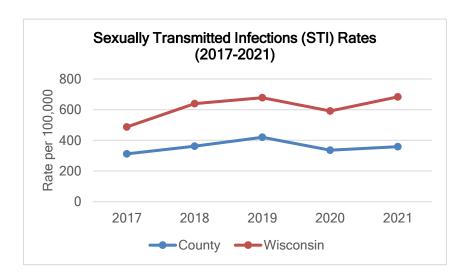
Non-COVID-19 Respiratory Diseases

Some respiratory diseases such as tuberculosis (TB) and certain influenza cases are required to be reported to the Health Department, where the cases are investigated and followed up as necessary. The majority of the reported contagious bacterial respiratory diseases are suspect TB. There were fewer than 5 cases of active TB reported in 2021 and 10 cases of latent TB (LTBI). All cases of active TB initiated or completed treatment, and five individuals with LTBI completed treatment with medication to prevent active TB.

Influenza is only reportable when there is an outbreak, pediatric death or hospitalization identified. There were no respiratory disease outbreaks and 3 influenza-associated hospitalizations reported in 2021.

Sexually Transmitted Infections (STIs)

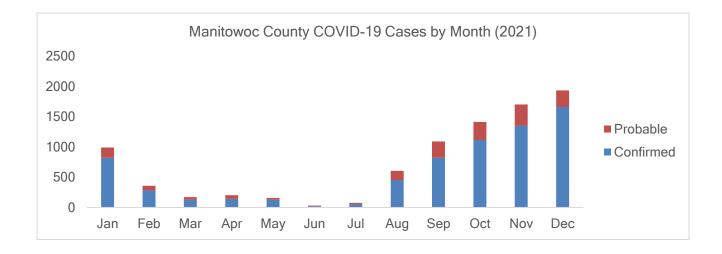
Sexually transmitted infections (STIs) remain an area of concern for Manitowoc County, although rates of infection remain far below the Wisconsin state average. The Health Department follows up on STIs by contacting high risk individuals to educate them about the disease, facilitate treatment, and trace partners to prevent continued spread of the disease.

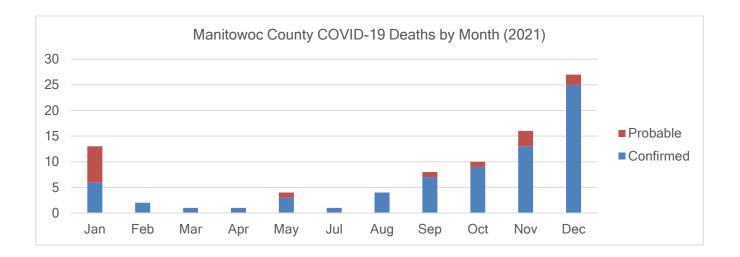


Reported incidence of STIs was slightly higher in 2021 than in the year prior. Chlamydia is the primary disease of concern with 234 cases reported, followed by gonorrhea (41 cases) and syphilis (8 cases).

COVID-19 Disease

COVID-19 continued to be a significant public health threat throughout 2021. Manitowoc County had 8,736 residents test positive, resulting in 494 hospitalizations and 87 deaths. COVID-19 was the third leading cause of death and accounted for 9% of all deaths in Manitowoc County residents in 2021.





Manitowoc County Health Department nurses spent much of 2021 doing disease investigation and household contact tracing for COVID-19. They educated patients on isolation and quarantine guidelines, when and how to seek treatment, and offered referrals for community services as needed. The Health Department also worked with schools, businesses, and individuals to understand and implement guidelines for preventing transmission and keeping the public safe and healthy.

*Confirmed cases are diagnosed with a PCR laboratory test. Probable cases are diagnosed with an antigen laboratory test. Home tests are not included in these data.

COVID-19 Vaccinations

The first COVID-19 vaccinations received FDA Emergency Use Authorization in the last weeks of December 2020. Manitowoc County had been preparing for mass vaccination clinics for months and was ready. On January 6, less than 24 hours of receiving its first shipment of COVID-19 vaccine, Manitowoc County opened its first mass clinic at the Manitowoc Expo. Almost 20,000 vaccines were administered by the Health Department during the first two quarters of 2021. Clinics were well received by the public, and were praised for their ease and efficiency. Governor Evers and DHS Interim Secretary Karen Timberlake toured the clinic on March 5th, 2021

In addition to the mass vaccine clinics, the Health Department offered mobile vaccine clinics at the County jail as well as at employer and community sites. Public Health Nurses also conducted home visits to help homebound individuals become immunized. In fall, the Health Department worked with the Wisconsin National Guard to administer boosters to 3,683 individuals. In sum, the Health Department helped administer 23,988 COVID-19 vaccinations in Manitowoc County.

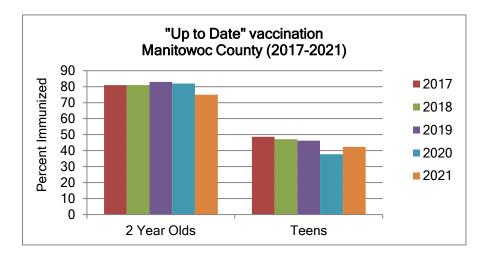


Figure 1. County employees prepare to open mass vaccine clinic

Manitowoc County Health Department would like to thank the following Departments for their assistance and support in this historic effort: Manitowoc County Emergency Services, Manitowoc County Public Works, Manitowoc County Personnel, ADRC of the Lakeshore, Manitowoc County Sheriff's Department. Special thanks also to local healthcare organizations that supported vaccination outreach initiatives, including Advocate Aurora Health, Holy Family Memorial/Froedtert, and Prevea.

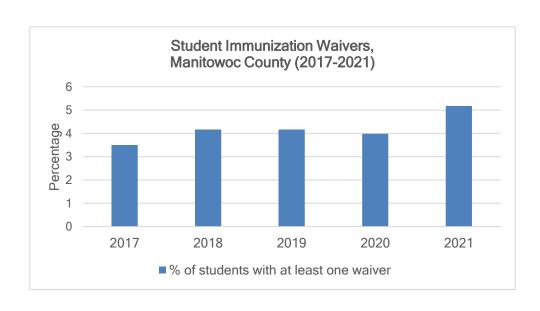
Routine Immunizations

Approximately 90% of children should be immunized to prevent outbreaks of contagious, vaccinepreventable disease and protect those most vulnerable. The Health Department sends reminder notices to the parents of children under the age of 3 who may be in need of vaccination, a proven method for increasing the scheduling and attendance of vaccine appointments. The Health Department resumed offering routine immunizations in May 2021.



Routine vaccination rates have fallen state-wide and in Manitowoc County throughout the pandemic. Increasing vaccination coverage is an identified priority for the State of WI and the Manitowoc County Health Department.

All states allow for medical exemptions to immunization requirements. The State of Wisconsin also allows exemption based on religion or personal convictions. Families who claim exemptions from vaccine for any reason are at increased risk of developing a vaccine preventable disease, and can also increase the risk of outbreaks in the community.



PUBLIC HEALTH INTERVENTIONS

Public health nurses use their extensive knowledge of the community to organize community resources to collaboratively meet the health needs of families and individuals.

Interventions are the core of public health nurse activities which nurses carry out on behalf of individuals, families, systems, and communities to improve or protect health status.

Public health nurses are strong advocates for individuals and families and provide health education, disease prevention and health promotion to improve outcomes. Manitowoc County Health Department resumed clinical services on May 24, 2021. However, COVID-19 Response activities occupied the majority of Public Health Nursing time throughout the year.

Public Health Nurses completed 8,896 disease investigations for 56 different diseases in 2021, including COVID-19 (8,209), chlamydia (235), chronic hepatitis C (53), and gonorrhea (49).

Health Education

Education on communicable disease exposure and control were the topics most commonly discussed with clients, with the pandemic centering COVID-19. Other education topics included non-COVID communicable diseases, chronic disease, occupational health, and head/lice scabies information.

Health Teaching Topic	No. of Activities
Communicable Disease	8,209
Exposure/Control (COVID-19)	8,209
Communicable Disease	687
Exposure/Control (non-COVID)	087
Chronic Disease	80
Occupational Health	58
Head Lice/Scabies	25
Agency Services	7
Contraception	7
Lead Testing/Prevention	5
Family/Community Health	4
Medication Information	2

Referral and Follow Ups

Public Health Nurses determine the most appropriate referral based on the need and availability of effective strategies and resources in the community. Most of the referrals were made to various community partners, including food and housing assistance programs.

Referral Type	No. of Activities
Community resources	300
Food/nutritional resources	11
Contraception services	7
Child Protective Services	5
Access to care	3
Housing assistance resources	3
Badger Care	2
Prenatal education services	2
Medical care, primary	2
Medical care, prenatal	1

Other Public Health Activities

Despite the challenges of the pandemic, Public Health Nurses continued to offer a variety of services to the public. This includes providing routine childhood immunizations, administering TB skin tests, distributing well water test kits for households with pregnant women and infants, ad hoc walk-in visits, childhood lead tests, and blood pressure checks.

Public Health Activity	No. of Activities
Immunizations	86
TB tests/results	86
Well Water test kits pregnant women/children	17
Nurse walk ins	15
Lead tests	2
Blood pressure checks	1

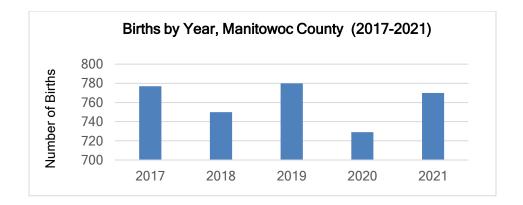
MATERNAL AND CHILD HEALTH

Healthy birth outcomes and early identification and treatment of health conditions among infants can prevent death or disability and enable children to reach their full potential.

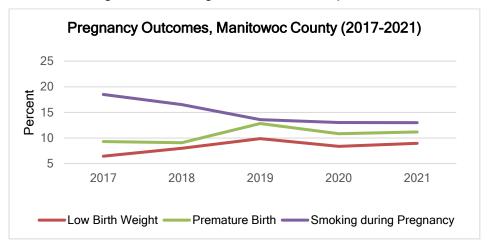
The Health Department offers pregnancy testing and child blood lead testing. These screenings contribute to healthy birth and early childhood development outcomes. The COVID-19 pandemic caused a temporarily halt to these in-person screenings from April 2020 through May 24, 2021.

Pregnancy and Birth Outcomes

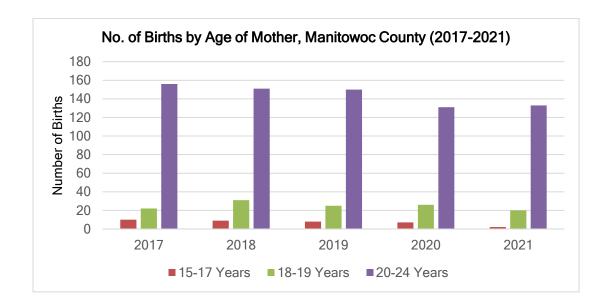
Healthy outcomes are increased by providing parents of all children born in Manitowoc County with ageappropriate information.



Smoking rates negatively impact premature birth and low birth weight. The number of women who smoked during pregnancy remained stable in 2021. Nurses offer referral to tobacco cessation resources as well as to the WIC programs. Two PHNs became certified facilitators for Freedom from Smoking clinics over the summer, though the fall resurgence of COVID-19 prevented them from hosting a clinic.



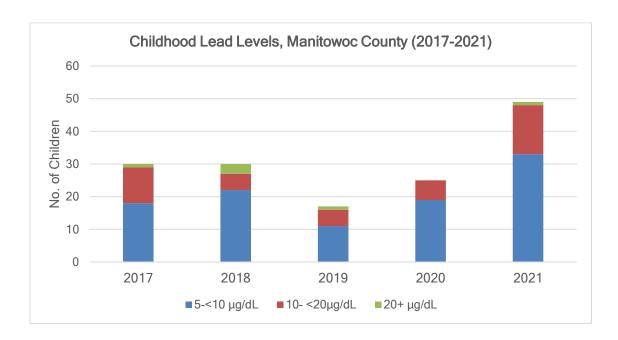
Young pregnant women are at a much higher risk of having serious medical complications. Nurses refer people at risk of becoming pregnant to providers to prevent unplanned pregnancies and refer high-risk pregnant individuals for appropriate case management to resources such as WIC. The number of young women delivering babies continues to decline.



Childhood Lead Exposure

No safe blood lead level in children has been identified. Because lead exposure often occurs with no obvious symptoms, it frequently goes unrecognized and can affect neurological development of the child. Lead screening is provided along with follow up and case management in children with blood lead levels $\geq 5 \,\mu\text{g}/\text{dL}$ with intensive services for children that have levels $\geq 20 \,\mu\text{g}/\text{dL}$.

The number of children with elevated blood lead levels rose in 2021. This may be due to increased time at home during the pandemic (where children may be exposed to lead paint), as well as increased detection in 2021 as students returned to school, day cares, and other social services following pandemic-related closures.



Manitowoc County Health Department has a robust program for preventing and addressing lead poisoning in children.* Public Health Nurses provide educational phone calls, letters, and home visits to children who test positive for lead poisoning. They are also able to provide a nursing assessment and developmental assessment of the child, as well as a referral to Birth to 3. Environmental Health staff provide information on improving environmental safety, conduct home visits, and can perform Environmental Lead Hazard Investigations to help make the home safer for lead poisoned children.

^{*}Outreach activities vary depending on the severity of lead poisoning.

ENVIRONMENTAL HEALTH

Environmental Health focuses on the protection and promotion of a healthy environment by preventing, assessing, correcting and controlling agents in the environment which could have adverse effects on the health and well-being of individuals and communities of Manitowoc County.

Inspections and Licensing

The Environmental Health Section of the Manitowoc County Health Department licenses and inspects the following facilities within Manitowoc County through contracts with the following Wisconsin agencies: DATCP and DSPS

Manitowoc County Licensed Establishments	License Year 2017-2018	License Year 2018-2019	License Year 2019-2020	License Year 2020-2021
Restaurant and Retail Food Facilities	418	419	445	439
School Food Service (non-licensed)	19	19	18	19
Lodging	64	61	88	93
Campgrounds	11	11	11	12
Recreation and Educational Camps	7	6	6	6
Body Art	8	8	9	7
Swimming Pools, Whirlpools and	35	33	37	34
Therapy Pools				
Mobile Home Parks	13	13	11	14
Temporary Restaurants	52	47	46	15
Total	627	617	671	639

Safe Housing, Indoor Air, and Human Health Hazard

The Environmental Health Section receives complaints regarding poor plumbing, insects, indoor air, toxic chemicals, garbage and refuse, mold, health hazards, lack of heat, and generally unfit dwellings. State Statute requires that the local health officer orders the abatement or removal of human health hazards and if the order is not complied with, arranges for the hazard to be abated. The Department also works with local building inspectors, police, Planning and Zoning, Aging and Disability Resource Center, and Human Services Departments to identify and correct poor living conditions.

Radon Information Center

Environmental Health staff provides radon information and outreach for Brown, Door, Kewaunee, Manitowoc and Calumet Counties in Northeastern Wisconsin through a grant from the State of Wisconsin and EPA. Radon is a naturally occurring radiological gas that has been linked to lung cancer. We provide information and test kits to citizens. Short term and long term test kits were offered for sale at cost from the Manitowoc County Health Department.

Test Kits Distributed	2017	2018	2019	2020	2021
Short Term Kits	189	187	281	158	225
Long Term Kits	28	52	44	40	44

Radiation Protection

Through a contract with the State of Wisconsin, environmental health staff collects environmental samples, such as air, milk, and water, around the area of the nuclear plants. Three staff members serve on the State Emergency Response Team which train yearly. The staff participate in the nuclear exercises with a field team, in the EOC, and in the emergency shelter assisting with dosimetry.

Safe Drinking Water

The Manitowoc County Health Department is involved in 2 aspects of monitoring and testing drinking water in Manitowoc County.

Transient Non-Community Well Program: The Environmental Health Section has a contract with the Wisconsin DNR for the purpose of assuring compliance with the Safe Drinking Water code as it applies to public transient non-community water systems. TNC water systems include rural churches, restaurants, parks and taverns and other businesses that serve over 25 different people 60 days or more per year. Work includes collecting drinking water samples, issuing all required enforcement letters and inspecting each well system every 5 years.

Number of TNC Systems tested for bacteria and nitrates and inspected	101
annually	101

Free Well Water Testing for Houses with Pregnant Women and Infants

Manitowoc County Health Department provides free well water testing for coliform bacteria, nitrates, fluoride and metals for households with pregnant women and infants (up to 12 months old). The results provide information on the general drinking water quality from a metals perspective. Wells with abnormal results were retested after discussing possible parameters that may have contributed to the unsafe reading.

Wells tested	13
Unsafe coliform test	3
Elevated nitrate test	1

Beach Water Monitoring Program

During 2021, a total of 11 Manitowoc County beaches on Lake Michigan were monitored according to EPA standards for water quality and safety. Beach water samples are routinely collected and analyzed for total and fecal coliform bacteria. The beach monitoring program was performed through a cooperative effort between UW-Oshkosh, the Manitowoc County Health Department, the City of Manitowoc, the City of Two Rivers and the Wisconsin DNR. This program was funded through an EPA grant administered by the DNR. Results were posted to the Wisconsin Beach Health website and signage was provided at the beaches indicating to the public the most current available water conditions and any risks associated with swimming in contaminated surface water. Any level over 235 MPN is an advisory, over 1000 MPN is a beach closure.

Beach Name	# of Samples	# of	# of
Deach Name	# Of Samples	Advisories	Closures
Red Arrow	55	10	0
Blue Rail	52	10	5
Neshotah	52	6	0
Memorial Thiede	30	1	0
Memorial Parkway	30	1	0
Hika	26	6	3
Point Beach Lighthouse	26	1	0
Point Beach Lakeshore	26	1	0
Fisher	26	5	3
Memorial Waldo	9	0	0
Point Beach Concessions*	0	0	0

^{*} Point Beach Concessions was not able to be sampled in 2021 due to unfavorable environmental conditions

Rabies Control

Wisconsin law requires that all dogs and cats without current rabies vaccine that bite or scratch a human must be impounded for 10 days under surveillance of a veterinarian. Domestic animals with current rabies vaccinations are required to be home quarantined for 10 days and observed by a veterinarian 3 times throughout the quarantine. Quarantine orders are issued by local law enforcement officials and the Manitowoc County Health Department. The Manitowoc County Health Department also serves as the primary source of rabies information for local physicians, law enforcement officials and veterinarians. Domestic animals that have been exposed to wild animals that have tested positive for rabies, or that are not available for testing, require a special quarantine. These quarantine orders are issued by the Manitowoc County Health Department.

Animal Bites Reported	2017	2018	2019	2020	2021
Dog	145	158	153	151	175
Cat	49	61	61	38	42
Wild Animal (always tested for rabies)	7	10	6	3	1
Other Domestic Animal	2	1	2	0	1
Animal Bites (total)	203	230	222	192	219

WSLH Rabies Tests	2017	2018	2019	2020	2021
Dogs	10	7	3	4	7
Cats	5	11	12	4	8
Wild Animals and Other Domestic Animals	9	11	7	6	16
Total Animals Tested	24	19	22	14	31
Quarantine Order for Domestic Animals	1	1	0	6	7

PUBLIC HEALTH EMERGENCY PREPAREDNESS

Manitowoc County is prepared to respond to all emergencies with a detailed plan of action and a system of communication with community responders. The second year grant cycle was from July 1, 2020 - June 30, 2021 and focused on the Biosurveillance domain including laboratory testing, public health surveillance and epidemiological investigation. We accomplished this mostly through real world events due to the COVID-19 Pandemic.

2021 PHEP Accomplishments

- Built partnerships through participation in a full-scale nuclear exercise including training for nursing and administrative staff on dosimetry use and distribution
- Assisted with COVID-19 mass vaccination administration and mobile vaccine clinics
- Partnered with key community leaders to complete a Hazard Vulnerability Assessment
- Trained preparedness staff and at a minimum, ensured staff completed the ICS 100, ICS 200 and NIMS 700 classes
- Maintained profiles in the public health emergency alerting system
- Maintained communication with the Healthcare Emergency Readiness Coalition
- Coordinated with local agencies to update the County's Mass Fatality Plan
- Participated in a Region Wide Tabletop Exercise to improve communication and interdepartmental coordination during emergencies

Grant Cycle Objectives

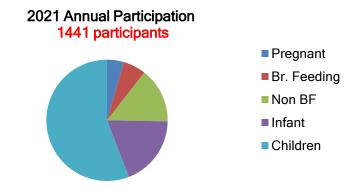
	2017-2018 Year 1	2018-2019 Year 2	2019-2020 Year 3	2020-2021 Year 4	2021-2022 Year 5
DOMAIN	Community Resilience	Information Management	Countermeasures and Mitigation Medical	Biosurveillance	Surge Management
Capabilities	Community Preparedness & Community Recovery	Emergency Public Information and Warning & Information Sharing	Countermeasure Dispensing, Medical Materiel Management and Distribution, Non- pharmaceutical Interventions & Responder Safety and Health	Public Health Laboratory Testing & Public Health Surveillance and Epidemiological Investigation	Medical Surge, Mass Care, Volunteer Management & Fatality Management

WOMEN, INFANTS, AND CHILDREN (WIC)

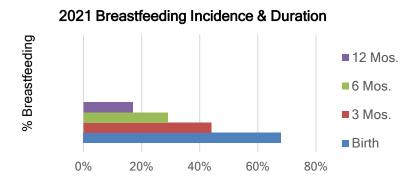
Women, Infants and Children (WIC) is the public health cornerstone for building healthier women, infants, children, families and communities. WIC's goal is to improve the health of pregnant, postpartum, and breastfeeding women, infants, and children up to age 5.

WIC Overview

The WIC Program provides supplemental nutritious foods, nutrition education and breastfeeding information/education for pregnant & postpartum women, infants, and children under the age of 5. WIC staff make referrals to other service providers including health & other government programs.



Breastfeeding education includes how to breastfeed, tools to help return to work/school and continue breastfeeding, and how to obtain and use a breast pump.



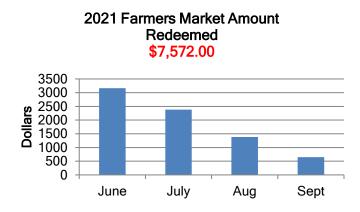
The year 2021 saw continued precautions in how we serve our participants due to the COVID-19 pandemic. WIC appointments continued to be done via phone and text messaging.

WIC Vendors

WIC approved vendors are located throughout Manitowoc County. There are ten locations of grocery stores and pharmacies available to our participants to purchase WIC approved foods.



The WIC Farmers Market Program offers eligible WIC families checks to buy fresh produce from June through October at approved locations. WIC saw a decrease in vender revenue from \$597,948.00 in 2020 to \$588,426.00 in 2021. This decrease may be due to the continuation of online shopping and pick-up options offered by the grocery stores, as well as an increase in Food Share for participants. The state WIC program continues to pursue the utilization of WIC benefit cards for online shopping to increase vendor revenue.



There was a significant increase in redemption of the Farmer's Market checks for the 2021 season. The redemption went up \$2000.00 from 2020 due to the markets resuming their accessibility to the community.