

Public Health

Ottawa County Department of Public Health

2019 ANNUAL REPORT

Environmental Sustainability

Enhanced program aimed at stopping natural resource depletion and maintaining environmental stability

Why Ottawa Wells are in **DANGER** of **TAPPING OUT**

Water is Not Free

PFAS

What we know about this Emerging Health Threat

Behind the Scenes of a PUBLIC HEALTH RESPONSE

How a Community Plan is Addressing **3** TOP HEALTH PRIORITIES



VISION
Healthy People

MISSION
Working together to
assure conditions
that promote and
protect health.

VALUES
Equity
Integrity
Excellence

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Children's Special Health Care Services
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Maternal & Infant Health Program
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Health Promotions

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Pathways to Better Health
www.miOttawa.org/OPBH

Sexual Health Education
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Substance Use Disorder
www.miOttawa.org/SUD

Environmental Health
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ecoOttawa
www.miOttawa.org/eco

Food Safety Program
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On-site Services
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Letter from the HEALTH OFFICER



Each year is filled with new strategies that address the complex issues that contribute to population health. These strategies focus on improving health behaviors, accessing health services and addressing environmental factors that contribute to health. In 2019, to address the increasing access to care needs, our department, in partnership with My Community Dental Centers, opened a new dental clinic in Grand Haven. This has provided better access to dental services for people with Medicaid, uninsured or underinsured. The work of the Ottawa County Department of Public Health (OCDPH) positively impacts the lives of every Ottawa County citizen. In the 2019 Annual Report, you will find examples of how we protect you against disease and environmental threats; communicate timely and credible health information you can use; offer new services that address the needs our community members have identified and how OCDPH works closely with community partners to protect your health and the environment. You will also find information on how we are using technology to improve the efficiency and effectiveness of our service delivery. I invite you to meet Flu Granny and learn about where to go for affordable dental services. I encourage you to read about Brett's health journey and how his life has changed. I ask that you read how Ottawa County is protecting vital water resources and join us in expanding environmental sustainability.

As your Administrative Health Officer, I am honored to serve you and our Ottawa County citizens with programs and services that are designed to protect your health. I thank the Ottawa County Board of Commissioners for their support and commitment to the health and safety of each Ottawa County resident. I also commend the exceptional knowledge, skills and customer services of our public health staff who promote the mission, vision and values of our department in all that they do.

Sincerely,

Lisa Stefanovsky, M.Ed
Administrative Health Officer

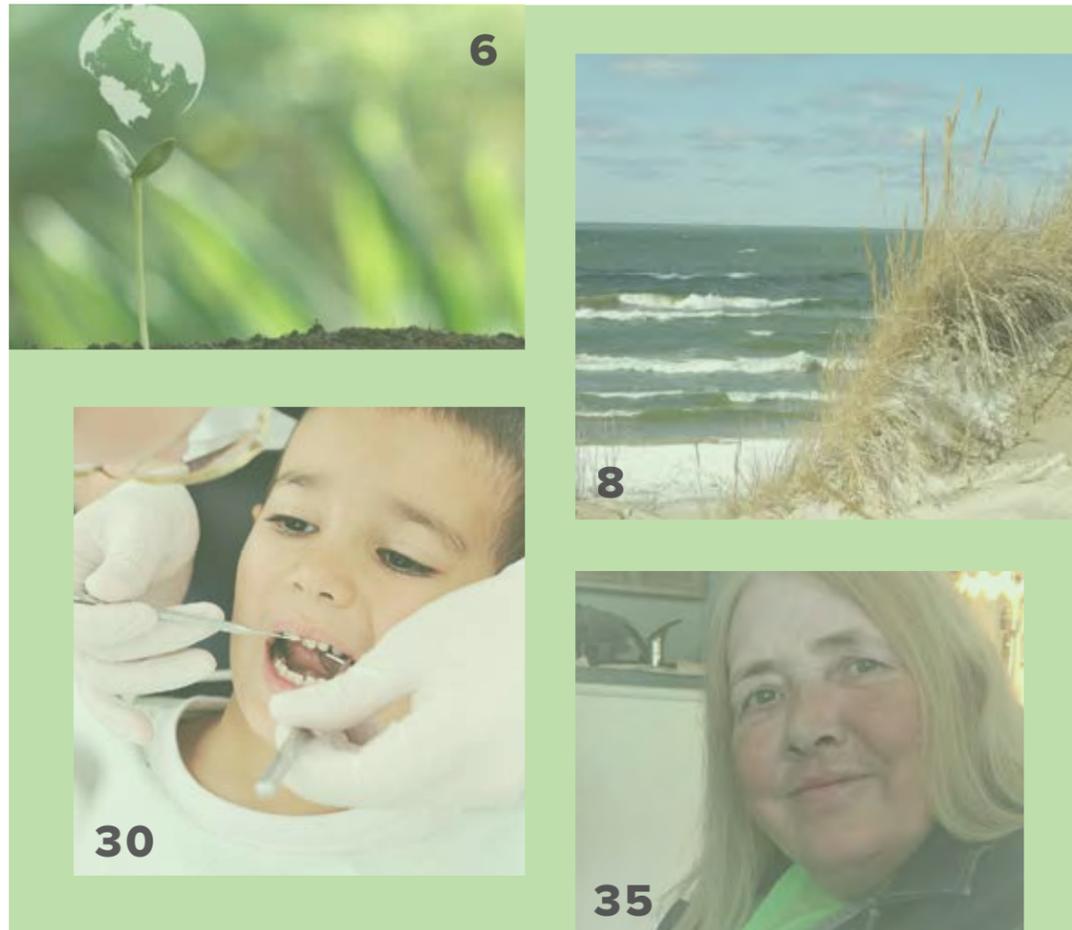
I am honored
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THE ACTIVITIES OF THIS DEPARTMENT ARE BROUGHT TO YOU BY THE OTTAWA COUNTY BOARD OF COMMISSIONERS

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FEATURES

A big thank you to the Ottawa County Department of Public Health team and community members who contributed to this publication. Your stories speak volumes, touch lives and make a difference!



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Under the Public Health Code Act 368 of 1978, a local health department shall continually and diligently endeavor to prevent disease, prolong life and promote the public health through organized programs including prevention and control of environmental health hazards; prevention and control of diseases; prevention and control of health problems of particularly vulnerable population groups; development of health care facilities and health services delivery systems; and regulation of health care facilities and health services delivery systems to the extent provided by law. The Ottawa County Department of Public Health (OCDPH) is required by state mandate to perform a variety of specific services. Provision of these services is reviewed through a state accreditation process. In addition to, and ideally within the mandated services, OCDPH builds programs and services around community and customer/client needs. These needs are defined through community research. The OCDPH uses a variety of collected information to guide program development. This includes the Behavioral Risk Factor Survey, Youth Assessment Survey, Community Health Needs Assessment and the ongoing collection of epidemiological surveillance data and information.

IMPROPERLY
MANAGED
WASTE
POSES A
SERIOUS
HEALTH
THREAT.



By Kimberly Wolters, REHS
Environmental Sustainability Team Supervisor



Environmental SUSTAINABILITY

MATERIALS THAT ARE NOT STORED OR DISPOSED OF PROPERLY CAN CAUSE SPILLS, LEAKS, FIRES AND CONTAMINATION OF SOIL AND DRINKING WATER. THIS RESULTS IN HARMFUL EFFECTS ON HUMAN HEALTH AND THE ENVIRONMENT¹.

Beginning in 2019, the Ottawa County Waste Management Program evolved. We are not simply talking about waste, rather stopping natural resource depletion and maintaining environmental stability. The goals of the program are to protect the environment by educating the public, properly disposing of materials and keeping recyclable materials out of landfills. In 2018, the program kept more than 260 tons **of materials from landfills** and in 2019, more than 278 tons. To better represent our program's vision and goals, we renamed it the Environmental Sustainability Program. We help Ottawa County residents become more environmentally aware by providing informative resources and offering services at no charge such as collecting and properly disposing of household hazardous waste, used oil and antifreeze, old and unused medications, used sharps and scrap metal, along with offering residential recycling for a small annual fee. Additionally, the Michigan Department of Environment, Great Lakes, and Energy (EGLE) Rural Electronic Recycling Grant enabled us to expand electronic waste recycling so we could accept projection TVs, Cathode Ray Tube (CRT) TVs and CRT computer monitors at the Ottawa County Resource Recovery Service Centers. Electronics often contain hazardous materials that should not be landfilled or incinerated. They also contain precious metals, glass and plastics that can be recycled. Recycling electronics conserves natural resources and avoids air and water pollution. The nearly \$27,000 EGLE grant was used to purchase equipment to assist in collecting electronic waste and a structure to house them at no cost to residents since many retail stores charge fees to recycle electronics. Because of this grant, we went from collecting about 11 tons of electronic waste each year to 32 tons in 2019—nearly a **200% increase**. Also in 2019, the Environmental Sustainability Program had a **26% increase** in household hazardous waste collection—keeping even more waste out of landfills.

278
Tons

To expand our sustainability efforts in 2020, we will be collecting organic materials for composting. Additionally, we will be collecting scrap tires because of a \$14,500 EGLE grant we received. The funds will be used for storage equipment at a permanent drop-off location versus only having one-day drop off events and proper recycling of scrap tires. Small changes in behavior can have a big impact on our planet. We can dramatically reduce the amount of trash thrown away by reducing the number of materials we use, reusing materials and recycling whenever possible. When we think about what we're using and how to reduce the waste we produce, we help create cleaner land, air and water, and better health².

REDUCE | REUSE | RECYCLE

A Water Shortage in Michigan?

Groundwater issues aren't an 'out-west' problem anymore. Seven years of scientific study reveals that drinking water in the deep bedrock aquifer below Ottawa County isn't being replenished as quickly as it's being removed.



“With a dedicated group of partners, we've created an index that outlines the many ways we can tackle this groundwater issue,” said Paul Sachs, Planning and Performance Improvement Department Director. “This guidebook goes a long way to not only address the crisis with mitigation strategies, but also to offer common-sense solutions residents and businesses can implement.”

Pictured: Kirk Park in West Olive, Ottawa County

Known as the Great Lakes State, Michigan's abundance of freshwater lakes, streams and coastlines are tied to the state's identity. This creates a false perception that clean drinking water will always be readily available at the tap. Most Michiganders have not put much thought into where their water comes from or considered the possibility that it may one day be at risk¹. It was the mid-2000s when the wells in Allendale Township's Highland Trails subdivision began running out. Homeowners complained of low water pressure and even dry faucets. Area farmers also chimed in stating their soybean leaves were 'burned' because their irrigation water was salty. These reports were concerning, especially since Ottawa County is the fastest-growing county in the state and one of the most agriculturally diverse².

As the county's population continues to grow and its agricultural industry flourishes, access to abundant freshwater is essential. Residents, agricultural producers and businesses in Ottawa County obtain their water from two primary sources; municipal water systems and natural aquifer systems. The county's urbanized areas are served mainly by municipal systems that distribute water processed from Lake Michigan. Its rural areas rely on water that is pumped from the underground geologic aquifer systems. Since 2005, there have been instances in the county where the aquifer system has not had the capacity to support new withdrawals because of the low water levels. There have also been instances where extracted groundwater contains elevated levels of sodium chloride³.

Groundwater Study

As groundwater complaints mounted and to better understand the long-term sustainability of the county's aquifer system, the Ottawa County Board of Commissioners requested a comprehensive, forward-looking study. One goal of the study was to identify areas in the county where continued and increased groundwater withdrawals may negatively impact the sustainability and quality of the aquifer system. Starting in 2012, Michigan State University conducted a two-part groundwater study. Phase I, which was completed in 2013, validated the anecdotal reports; water levels in the deep bedrock aquifer system have been declining for 20 years, and in certain areas, sodium chloride (salt) levels are rising above recommended standards. The Phase II study, which assessed how the groundwater supply could be impacted in the future, was completed in March 2018. Phase II demonstrated parts of the aquifer will continue to decline and sodium chloride levels will continue to increase if proactive steps are not deployed to manage withdrawal rates².

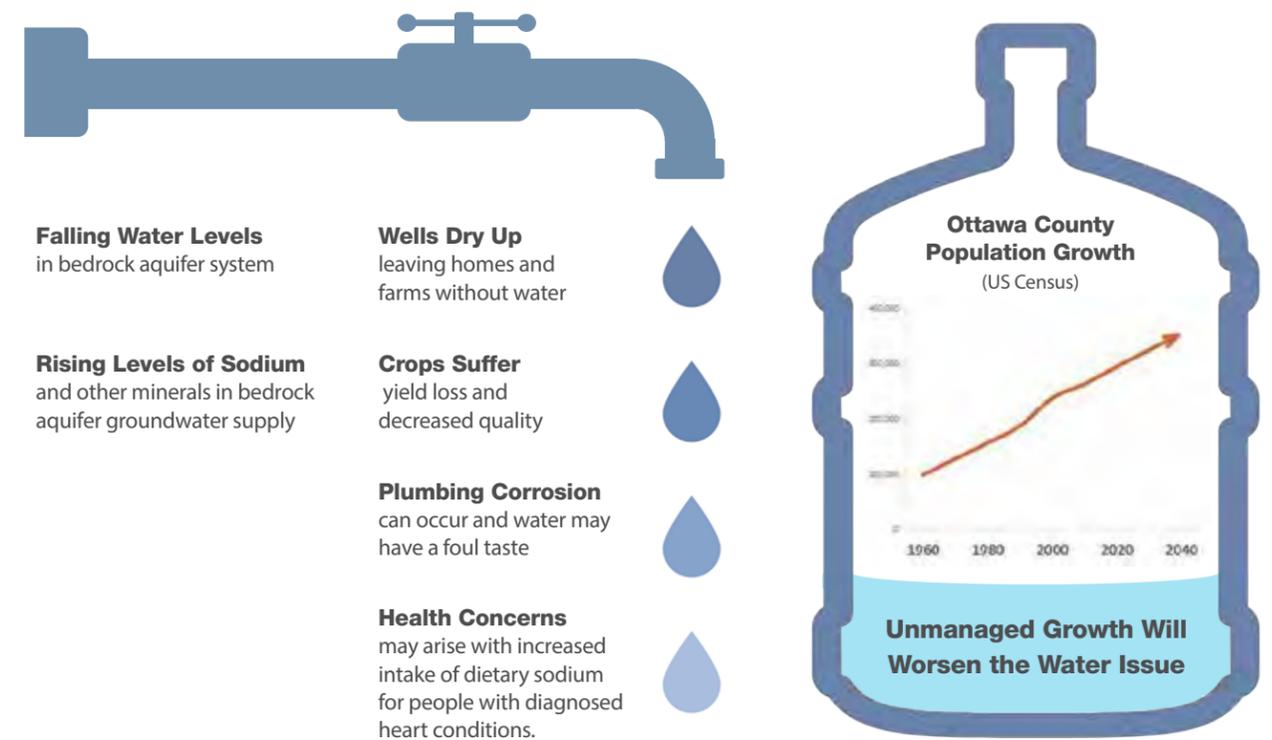
Proactive Strategies

Armed with the data, the Ottawa County Planning & Performance Improvement (PPI) Department developed partnerships with local scientists, policymakers and stakeholders—including the Ottawa County Department of Public Health (OCDPH)—to help develop practical solutions to protect vital water resources. The result—a Proactive Strategies Index—a guidebook that highlights steps to address the water crisis. The OCDPH has been working with PPI, particularly, in education and mitigation strategies by raising awareness of the water issue, conservation strategies and using policy to enhance groundwater sustainability¹.

PROACTIVE STRATEGIES INDEX



WHY IT MATTERS



Educate

Outreach Campaign



CREATE A CULTURE OF CONSERVATION

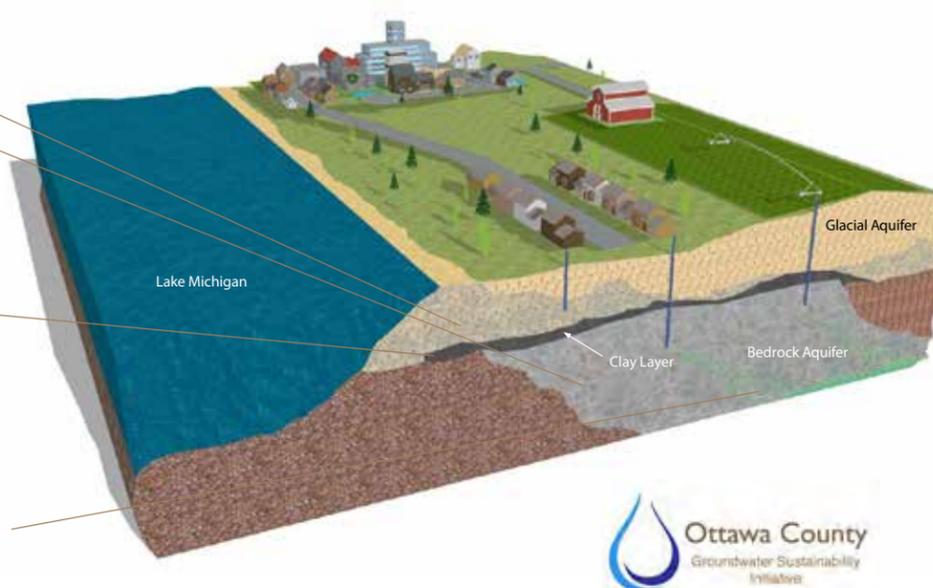
With funding from a \$16,000 grant, PPI and OCDPH developed educational materials to distribute to the public and select stakeholder groups. The goal was to create conservation pieces to start dialogues about the need to change thinking and behavior in regards to water conservation. Outreach materials included:

- Billboards
- Johnny Poster Ads
- Stickers
- Pens
- Water Bottles
- Informative Handouts
- Faucet Aerators
- Shower heads
- Hose Timers
- Soil Moisture Meters
- Event Materials
- Table Cloths/Runners
- Banners/Display Boards
- Exhibitor Attire
- Interactive Tablet Display
- Irrigation Demo Equipment
- Interactive Groundwater Model



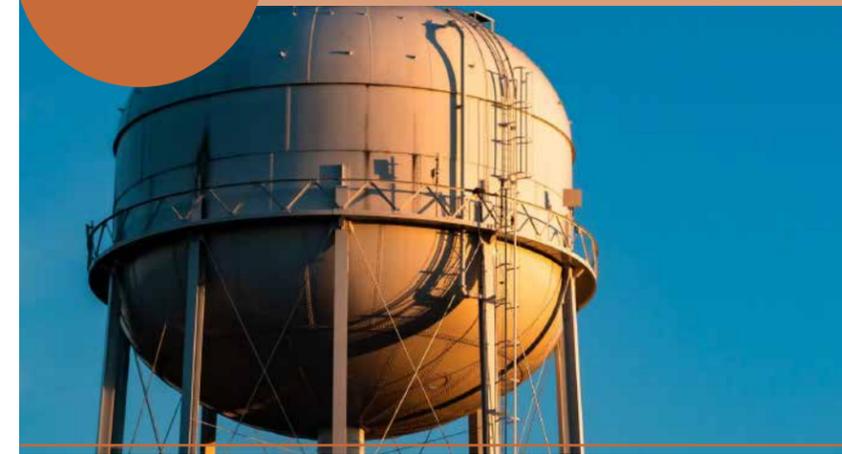
GROUNDWATER CHALLENGES

- Groundwater comes from:
 - shallow aquifer pockets left from glaciers
 - deep aquifers within the bedrock
- Groundwater is typically replenished by rainfall seeping into the ground
- A thick clay layer above bedrock aquifer prevents it from being replenished
- Bedrock aquifer cannot pull water from Lake Michigan because they are not connected
- Geologic conditions, along with pumping rates, are causing:
 - water levels to decline in the bedrock aquifer
 - salt to be pulled up from the bottom of the bedrock aquifer



Mitigate

Groundwater Ordinance



PROTECTING GROUNDWATER THROUGH INNOVATIVE POLICY

The county is researching options and examples for implementing an ordinance that will protect groundwater by managing certain aspects of development and enhancing municipal water access. Innovative techniques used by other jurisdictions include:

- Prioritized development credit programs
- Expanding municipal water infrastructure with new funding sources
- Rebate options for connecting to municipal water

Health Code Revisions & Exploring Policies



STRENGTHENING ENVIRONMENTAL HEALTH REGULATIONS & POLICIES

Environmental health experts, Matthew Allen and Adeline Hambley, along with county officials, Health Officer Lisa Stefanovsky, Administrator Al Vanderberg and PPI Director Paul Sachs are working to revise and enhance existing regulations to accommodate the sensitive nature of the county's geology. Potential revision areas include:

- Minimum separation distances between wells and septic systems
- Minimum distance requirements for new development to connect to municipal water/wastewater infrastructures
- Advanced types of on-site wastewater treatment (e.g. aerobic), where applicable
- Enhanced well drilling records
- Real Estate Transfer Evaluation Program

Water Recycling Strategies



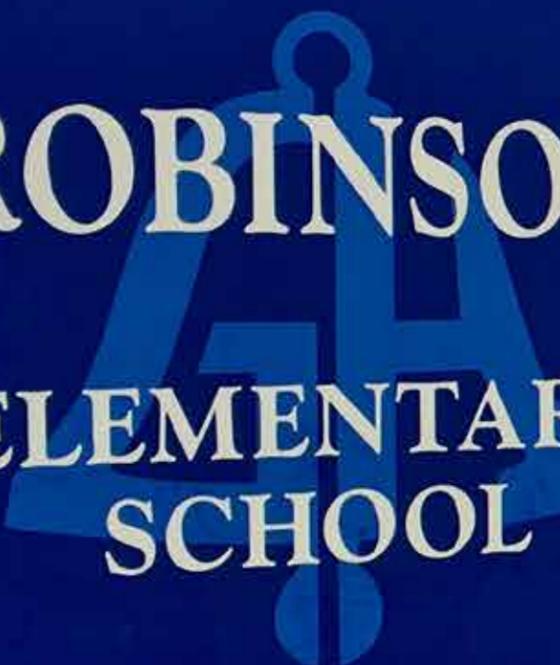
INNOVATIVE SYSTEMS & WAYS TO PERMIT

Opportunities exist for capturing, storing and reusing water from various systems that typically discharge water as a waste byproduct. Recycled water from these systems can be used for irrigation, agricultural or other applications. These systems may require certain types of approval and require significant coordination to implement. Possible sources for water recycling include:

- Household and industrial greywater systems
- Dewatering bags from various sources
- Sump collection systems
- Storm water collection and storage



Grand Haven
Area Public Schools



ROBINSON ELEMENTARY SCHOOL

MOTIVATED TO ACHIEVE



PFAS RESPONSE

By Kristina Wieghmink, M.Ed.
Public Information Officer

On October 29, 2018, Ottawa County Department of Public Health (OCDPH) officials received water test results that measured levels of per- and polyfluoroalkyl substances (PFAS) from Robinson Elementary School's drinking water well. The school's water had PFAS levels above the EPA Health Advisory Level (LHA) of 70 parts per trillion (ppt) for PFOS and PFOA combined.

Immediately upon receiving the test results, OCDPH notified Grand Haven Area Public Schools (GHAPS) who quickly shut off all water fountains and provided the students and staff with bottled water for drinking and cooking.

This launched a multi-agency coordinated response to develop a public health action plan.

SITUATION

Beginning in April 2018, the Michigan Department of Environment, Great Lakes, and Energy (EGLE formerly MDEQ) implemented a statewide program to test Michigan's public water supplies, including schools with wells for PFAS. The initiative was formed by the Michigan PFAS Action Response Team (MPART) to investigate sources and locations of PFAS and protect drinking water and public health¹.

PFAS chemicals have been used globally during the past century in manufacturing, firefighting and thousands of common household and other consumer products. They are persistent in the environment and in the human body. They don't break down and can accumulate over time. In recent years, experts have become increasingly concerned by the potential effects of high concentrations of PFAS on human health, thus making it an emerging public health issue.

The EPA had set a LHA level for two PFAS chemicals in drinking water. The level was set at 70 ppt for PFOS and

PFOA combined². The State of Michigan used 70 ppt for decision-making purposes during this statewide initiative. The testing found that only two supplies in Michigan had



Confirmed PFAS sites in Michigan.

PFOS and PFOA combined over the EPA LHA of 70 ppt. This was the City of Parchment and Robinson Elementary School in Ottawa County.

EGLE collected the school's initial water samples in September 2018. The OCDPH received the results on October 29, 2018, which had PFOS and PFOA combined at 110 ppt and total PFAS at 144 ppt. The results from this rural school were unexpected since other PFAS sites around the state were mainly related to the use of Class B foam at airports and industrial waste sites surrounding tanneries—neither of which are nearby the school.

RESPONSE

Upon EGLE informing the Michigan Department of Health and Human Services (MDHHS), OCDPH and the Governor's Office of Robinson Elementary School's water test results, a series of conference calls began to discuss the results with GHAPS and Robinson Township. OCDPH initiated its incident command system and joint information center with the collaborating agencies. Establishing this multi-agency response was the first step in starting the arduous and extensive work of developing a public health action plan.

Immediately after receiving the test results, GHAPS shut off all water fountains at the school. The Ottawa County Sheriff's Emergency Management Division and OCDPH coordinated and supplied bottled water to students and staff for drinking and cooking. Before school was out for the day, the GHAPS Superintendent Andrew Ingall developed a letter to send home with the children to ensure parents were aware of the situation.

"Our students' wellbeing, including quality drinking water, is our number one priority," stated Ingall. "We are taking every step to ensure this and keep our parents and community informed."

We needed to approach the issue through the eyes of the parents and residents who were affected. People want to know if their families are safe, how the situation affects them, what caused it and who is going to fix it. The same day OCDPH received the school's initial water test results, we held a press conference at the school. We provided the facts on what we knew, what we were doing about it or the process, when people could expect an update and what they could do in the meantime.

It was imperative to develop a coordinated response by all stakeholders to ensure consistent messages to the public and media. All communication content was vetted by all agencies involved; talking points, news releases, press conferences, educational materials and websites. While the state agencies led the testing and investigation, OCDPH made sure to have a local presence with a local voice to address this local issue by distributing the news releases and leading the press conferences and town hall meeting. However, each agency had a lead spokesperson who spoke at these events to articulate their agency's role in the response and also help to address the public's questions and concerns.

What are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a large group of man made chemicals that are fire resistant, and repel oil, stains, grease and water. They are used in fire-fighting foams, stain repellents, nonstick cookware, waterproof clothing and shoes, fast food wrappers, personal care products and many other consumer goods. These chemicals are very persistent and do not break down easily in the environment.

According to the Agency for Toxic Substances and Disease Registry (ATSDR), PFAS are found at low levels in the environment (air, water, soil)³. Because these substances are so widely used and because they move in groundwater and surface water, PFAS may be in some drinking water supplies. Drinking is the primary way PFAS can get into the body. Washing hands and other skin contact is not considered a health concern as PFAS does not move easily through the skin. If you are concerned about PFAS exposure, please contact the MDHHS toxicology hot line at 1-800-648-6942 or visit www.michigan.gov/pfasresponse or www.atsdr.cdc.gov/pfas.

One of the biggest public health communication challenges of this PFAS response was not having enough data to know how these chemicals could affect someone's health. Yet, we still worked to craft and solidify coordinated messages with what information we had.

Key messages

- Drinking is the primary way PFAS can get into the body.
- Washing hands and other skin contact is not considered a health concern as PFAS does not move easily through the skin.
- PFAS health problems are not immediate. If you drink high levels of PFAS chemicals over time you could be more likely than the average person to develop some health problems in the future.

Call-to-action

- If you're concerned about PFAS exposure, contact the state toxicology hot line and reference the MDHHS and CDC resources.
- If you are within the study area, please be available for well testing when we contact you.
- If you are not within the study area and are concerned about your well water, contact the state for residential water testing options.

UPDATE

Robinson Elementary School Water Filtration System



In October 2019, GHAPS received official approval from EGLE to install a water filtration system at Robinson Elementary School. The approval outlined specific testing protocols for PFAS and other chemicals, including lead and copper, to ensure the new filtration system provides safe water at the school. Until the system is fully installed and tested, the school will continue to use bottled water.



AGENCIES



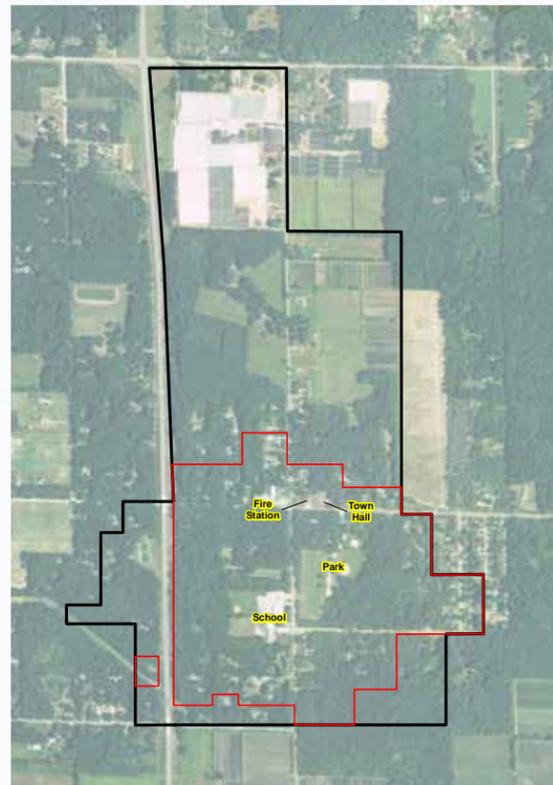
INVESTIGATION

The afternoon of receiving the school's initial water test results, EGLE collected a second confirmation sample at the school as well as samples from the nearby fire station and a daycare center adjacent to the school. EGLE had the testing expedited to receive them back that same week. However, EGLE had already begun the investigation by obtaining historic records for potential sources in the area. They obtained information from the Michigan Geological Survey to identify the groundwater flow direction in the area to determine the next steps in the investigation.

On October 31, 2018, EGLE received the school's confirmation water test results which still indicated levels above the LHA of 70 ppt. The PFOS and PFOA combined tested at 119 ppt and total PFAS at 171 ppt. The other water samples taken from the fire station and daycare center were far below the LHA of 70 ppt. We presented these results at the second news conference held at the county administration board room and shared the next steps in the investigation with the public and media.



The test results from the school's water supply well led to establishing the 120th Avenue PFAS Study Area in Robinson Township. EGLE conducted the study primarily in the area of Robinson Elementary School and the Robinson Township Fire Department (RTFD) and Township Hall to further understand the presence of PFAS in the environment and to potentially identify what caused the PFAS contamination. In November 2018, EGLE collected 23 residential well samples, as well as a sample from the school's irrigation well, the township park's irrigation well, an adjacent daycare, the township hall and fire department, a church and the wellhead at the school (to rule out internal plumbing as a potential source). After receiving these results and based on the data, EGLE proceeded to collect an additional 37 residential well samples. In total, one residential well exceeded 70 ppt for PFOS and PFOA combined.



In February 2019, EGLE began a hydro geological study to understand the vertical and horizontal extent of the PFAS impact and better understand where the source area was potentially located. The hydro geological investigation began with the installation of monitoring wells at the school, the township park, RTFD, as well as two residential properties adjacent to the fire station. It also included sampling of the vertical aquifer and soil sampling.

“Our department has been working closely with MDHHS to carry out the public health action plan,” said Matt Allen, environmental health supervisor with OCDPH. “For every resident who had their drinking water wells tested by EGLE and had any detection of PFAS, we offered and installed point of use water filters.”



On February 8, 2019, in the midst of the ongoing investigation, we pulled together a town hall meeting for residents and the media. Despite a blizzard that day, we had a full house. We wanted the public to have the opportunity to voice their concerns, hear directly from us, learn more about the public health action plan and ask questions. Representatives from all of the response agencies attended and the EGLE district supervisor, state geologist and toxicologist presented the investigation information. People felt heard and could see we were working our hardest to take action and protect public health.

By March 2019, EGLE had collected 24 groundwater samples at 10 locations and conducted soil sampling at four locations. PFAS was found in the groundwater at all 10 locations and in the soil at three of the four locations within the study area. The highest groundwater result was 643.61 ppt for PFOS and PFOA combined and 2,142.27 ppt total tested PFAS. PFAS was detected in the groundwater at Robinson Elementary School with 61 ppt for PFOS and PFOA combined and 409 ppt total tested PFAS.

Potential Sources

The hydro geologic investigation did not identify a definitive source of PFAS contamination in the area. The presence of PFAS compounds in soil samples and the elevated concentrations of PFAS in groundwater at Robinson Elementary School and the RTFD indicate the PFAS compounds may have been released at both locations. EGLE explored whether this could have been caused by the use of Aqueous Film Forming Foam (AFFF or Class B Fire Fighting Foam). However, the RTFD indicated AFFF is not possessed nor historically used, and the Fire Department does not have any historical knowledge of AFFF being applied in the area. An investigation by EGLE confirmed the foam currently used by the RTFD does not contain PFAS. AFFF has been available since the 1960s, and it is possible that it was applied in the area during an era that pre-dates the knowledge of anyone currently associated with the RTFD. No other potential sources such as illicit dumping or disposal of industrial waste have been identified.

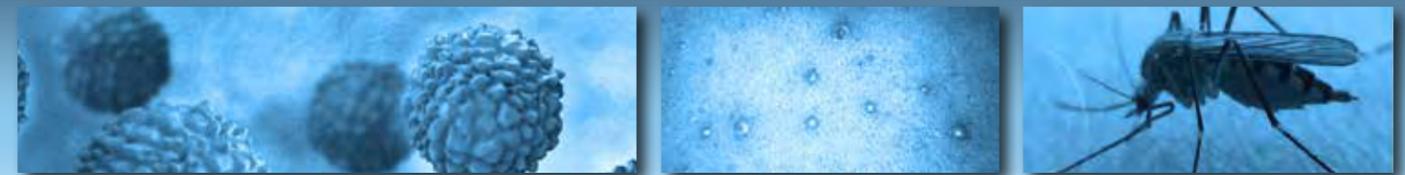
Based on these findings, EGLE will continue to work with Robinson Township and GHAPS to further the investigation and assess the groundwater to the area north and east of the fire station. As information is available, it will be posted at www.miOttawa.org/PFAS.



BEHIND THE SCENES

of a Public Health RESPONSE

By Jennifer D. Sorek, MA, MEP
Public Health Preparedness Coordinator



WHAT IS AN OUTBREAK?

According to the Centers for Disease Control and Prevention (CDC), an outbreak or epidemic occurs when there are more cases of disease or illness than would normally be expected in a specific time and place. It may be a disease that doctors have already seen before just in a new form or in abnormally high numbers, such as foodborne illnesses and vaccine-preventable diseases. It can also be an emerging issue where not much is known, such as PFAS (per- and polyfluoroalkyl substances, EVALI (e-cigarette or vaping product use-associated lung injury) and Triple E (Eastern Equine Encephalitis) virus. All of these scenarios need to be investigated to prevent other people from getting sick or dying and to determine why the outbreak is occurring¹.

Today's world is more connected than ever. In as little as 36 hours, a pathogen from a remote village can spread to all major cities in six continents². That is why it is critical to detect, report and respond to outbreaks in a timely manner. Delays in response activities can lead to outbreaks spreading quickly and spilling over to other communities³.

PREPAREDNESS

The Ottawa County Department of Public Health (OCDPH) officials work behind the scenes and are ready for any type of outbreak by developing policies and action plans before any occurrence. They continue to prepare, test and carry out immediate responses to better protect the community from health hazards. OCDPH's strength in preventing and stopping the spread of diseases lies in its internal collaboration across the multi-disciplinary teams that aid in the surveillance and response. The teams consist of subject matter experts in environmental health (e.g., food safety and water quality), communicable diseases, immunizations, epidemiology, medical, administration, emergency preparedness and communications. They follow a structured incident command system to streamline the investigation and quickly implement control measures (next page). The system is also used by the Federal Emergency Management Agency and the CDC to enable effective and efficient incident management. This allows response teams to identify the key concerns associated with the incident—often under urgent conditions—without sacrificing attention to any component of the response⁴.

To better control infectious disease outbreaks, the Michigan Department of Health and Human Services (MDHHS) requires local health departments, laboratories, emergency departments, schools and childcare settings, long-term care facilities and healthcare offices to report certain communicable diseases⁵. Data collected in the Michigan Disease Surveillance System are monitored by the OCDPH communicable disease and epidemiology teams for disease trends in Ottawa County that include unknown, suspect, probable and confirmed cases of the reportable condition. Increases in any pathogen—like common influenza and chickenpox cases or uncommon measles and drug-resistant tuberculosis cases—prompt investigations. Similarly, an increase in calls to the department and online reporting submissions from the public also prompt investigations. The disease detectives from the environmental health, communicable disease, epidemiological and

immunization teams spring into action to determine the source and size of a possible outbreak by contacting the ill to find out their symptoms and level of immunity (when applicable), identifying the risks of exposure, collecting lab results and connecting with affected facilities such as schools and restaurants. Accurately identifying the risk factors allow public health officials to put in place the appropriate prevention methods such as vaccination, prophylaxis, water filtration, disinfecting, isolation, quarantine, enforcement, sheltering or evacuation. As the investigation develops, the response team expands to include the incident commander—often the health officer who takes the lead on the outbreak response actions—the preparedness coordinator and public information officer. And at times, county emergency management, law enforcement, legal counsel and fiscal services. Each member of the response team works to ensure outbreaks are contained before they can spread by identifying the scope of the incident, implementing control measures, providing education and communicating with the public.

AN OUTBREAK OCCURS WHEN THERE ARE MORE CASES OF DISEASE THAN WOULD NORMALLY BE EXPECTED.

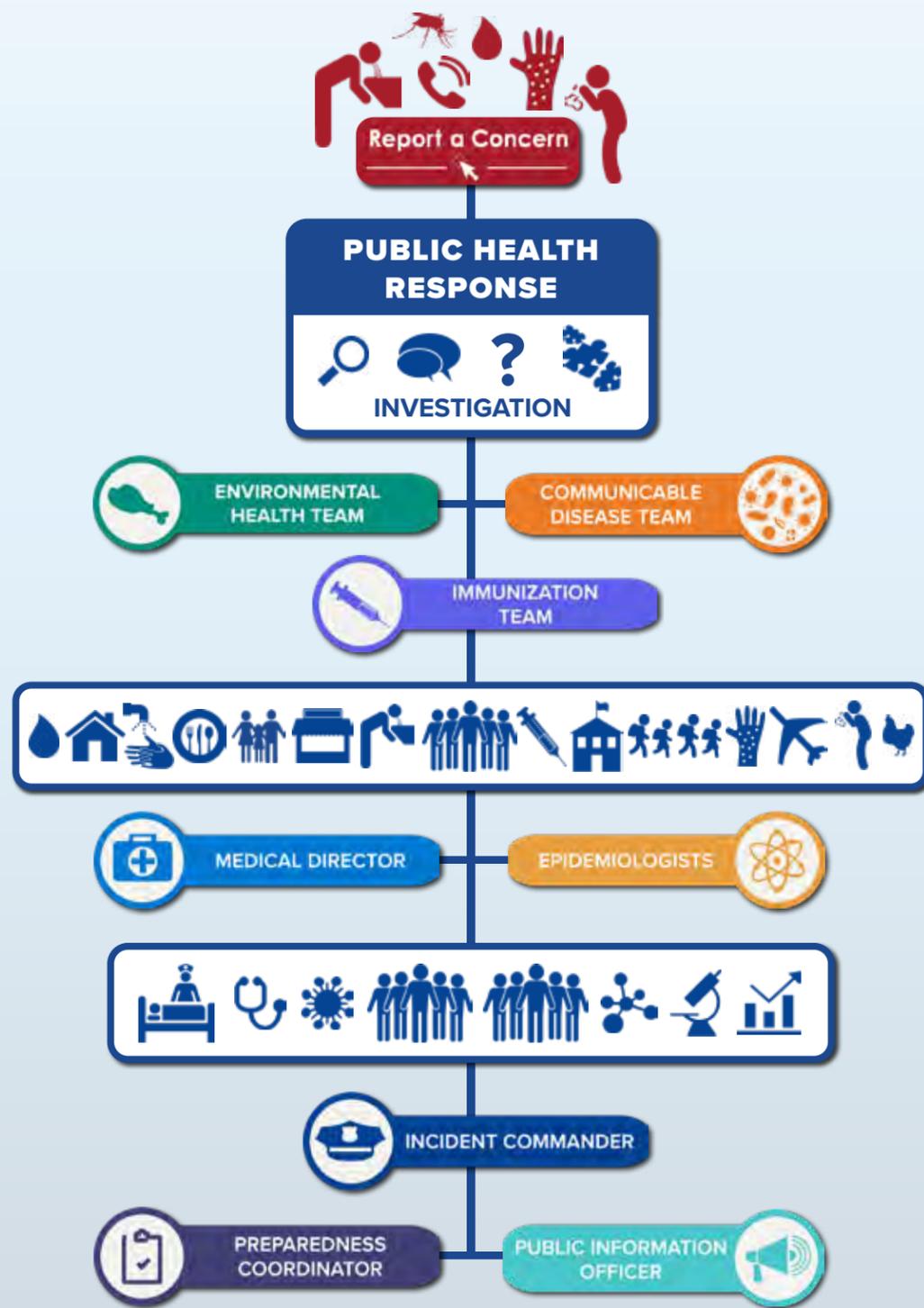
Additionally, incidents don't always occur within county lines. They can often include multiple agencies, multiple jurisdictions and even be a part of national outbreaks. The OCDPH uses the MDHHS Outbreak Management System which effectively facilitates the complex investigation process by notifying and involving other jurisdictions right away. This tool has proven useful in statewide responses to control hepatitis A, norovirus outbreaks and typhoid fever exposures. It is imperative that each stakeholder communicates efficiently and works to develop a coordinated response to minimize the threat of diseases and even death.

PREVENTION

Local public health works to protect and promote the health of the community by carrying out the powers and duties as defined in the Michigan Public Health Code Act 368 of 1978⁶. This includes, but is not limited to:

- Collect and monitor health data to identify health threats.
- Respond and investigate complaints and increases in diseases immediately to prevent an outbreak and additional illnesses in the community.
- Evaluate policies, plans and response efforts for quality improvements.
- Enforce laws and regulations that protect health.
- Develop investigation survey tools.
- Strengthen community relationships with food establishments.
- Provide food safety training.
- Educate providers and schools on vaccine-preventable diseases and disease reporting.
- Communicate regularly with local, regional and state partners.
- Disseminate proactive educational messaging to the public and media about disease prevention such as getting vaccinated and washing hands.

RESPONSE PROCESS



miOttawa Department of Public Health

ROLES & ACTIONS

Depending on the type of contaminant or disease, contagiousness and the risk of exposure, some or all these roles and actions take place for every public health response.

ENVIRONMENTAL HEALTH TEAM

- ENFORCES HEALTH CODE
- Develops Community Partnerships
 - Receives and Evaluates Complaints
 - Collects Food Samples
 - Determines Exposure Probability
 - Contacts and Inspects Facilities
 - Provides Food Safety Education
 - Gives Regulation Guidance
 - Inspects and Tests Water Supplies
 - Issues Correction Orders
 - Notifies Surveillance Team
 - Engages State Partners
 - Contributes to Determining Outbreak
 - Implements Control Measures

MEDICAL DIRECTOR

- PROVIDES MEDICAL OVERSIGHT
- Reevaluates Case Definitions
 - Provides Medical Recommendations
 - Notifies Medical Community
 - Contributes to Determining Outbreak
 - Advises on Control Measures
 - Compiles Emergency Incident Report

PREPAREDNESS COORDINATOR

- COORDINATES RESPONSE
- Coordinates Response
 - Develops Incident Action Plan
 - Establishes Community Partnerships
 - Engages Local and State Partners
 - Distributes Health Alerts
 - Ensures Completed Objectives
 - Evaluates Response Efforts
 - Prepares After Action Reports
 - Educates and Trains Staff and Community Partners

PUBLIC

REPORTS ILLNESSES & IMPLEMENTS HEALTHCARE RECOMMENDATIONS

- Individuals
- Schools/Childcare Centers
- Emergency Departments
- Infection Control
- Medical Offices
- Long-term Care Facilities
- Pharmacies
- Restaurants

COMMUNICABLE DISEASE TEAM

- INVESTIGATES DISEASES
- Receives/Investigates Disease Reports
 - Enters into Disease Surveillance System
 - Notifies Surveillance Team
 - Interviews Ill and Non-ill Exposures
 - Conducts Contact Investigations
 - Provides Disease Education
 - Gives Treatment Recommendations
 - Engages Local and State Partners
 - Applies Case Definitions
 - Contributes to Determining Outbreak
 - Implements Control Measures

EPIDEMIOLOGISTS

- MONITORS DISEASES
- Monitors Disease Activities
 - Conducts Analytical Studies
 - Creates Data Collection Tools
 - Reviews Trends and Analyzes Data
 - Notifies Response Team
 - Coordinates Surveillance Objectives
 - Engages State Partners Using Outbreak Management System
 - Develops Outbreak Case Definition
 - Determines Source of Exposure
 - Contributes to Determining Outbreak
 - Recommends Response Actions
 - Prepares Final Outbreak Report

IMMUNIZATION TEAM

- VACCINATES AGAINST DISEASES
- Develops Community Partnerships
 - Provides Disease Education
 - Develops Response Guidance Documents
 - Administers Vaccines
 - Partners with Schools/Medical Offices
 - Provides Vaccine Recommendations
 - Implements Control Measures

INCIDENT COMMANDER

- ESTABLISHES COMMAND
- Leads Response Team
 - Assesses Situation
 - Creates Response Objectives
 - Determines an Outbreak
 - Activates Outbreak Response Plan
 - Notifies County and State Officials
 - Assigns Incident Action Items
 - Approves Release of Information
 - Authorizes Control Measures

PUBLIC INFORMATION OFFICER

- COORDINATES INFORMATION
- Communicates Strategies to Partners
 - Activates Crisis and Emergency Risk Communications Plan
 - Ensures Coordinated Response
 - Develops Communication Materials
 - Designates Spokesperson
 - Gathers and Disseminates Accurate and Timely Information
 - Engages with the Public
 - Follows up with Media Inquiries
 - Coordinates Press Conferences and Media Interviews
 - Logs Communication Activities

CALL-TO-ACTION



Awareness • Vaccination • Prophylaxis • Filtration • Disinfecting • Isolation • Quarantine • Enforcement • Sheltering • Evacuation



The best way to
**PREVENT
FLU**
is to get a
flu vaccine
each year.

By Toni Bulthuis, BSN, RN
Immunization Team Supervisor

INFLUENZA (FLU) is a contagious respiratory illness caused by influenza viruses. It can cause mild to severe illness. Serious outcomes of flu infection can result in hospitalization or death. Some people, such as older people, young children and people with certain health conditions, are at high risk of serious flu complications. The Centers for Disease Control and Prevention (CDC) estimated the burden of illness during the 2017-2018 season was **48.8 million people** who got sick with flu in the United States. On average, more than 200,000 people in the United States are hospitalized each year for respiratory and heart conditions illnesses associated with flu virus infections and 36,000 people die from flu-related complications. During past seasons, approximately 80 percent of flu-associated deaths in children have occurred in children who were not vaccinated¹.

Schools, licensed childcare centers, healthcare providers and long-term care facilities report flu-like illnesses to the Ottawa County Department of Public Health (OCDPH) on a weekly basis. With this information and data from the Michigan Disease Surveillance System of flu-like illnesses reported by Ottawa County hospital emergency department visits, more than **35 thousand people** had flu-like illnesses during 2018 in Ottawa County².

How Flu Spreads

Most experts believe flu viruses spread mainly by tiny droplets made when people with flu cough, sneeze or talk. These droplets can land in the mouths or noses of people who are nearby. Less often, a person might get flu by touching a surface or object that has flu virus on it and then touching their own mouth, nose or possibly their eyes. The best way to prevent getting sick with flu is to get a flu vaccine each year³.

Flu Vaccine

The CDC conducts studies to measure the benefits of seasonal flu vaccination each flu season to help determine how well flu vaccines are working. These vaccine-effectiveness studies regularly assess and confirm the value of flu vaccination as a public health intervention and monitor ways to improve their benefits. Over the last five flu seasons, the flu vaccine was anywhere between 19 to 48 percent effective⁴.

Flu vaccine coverage for adults has been increasing over the last five flu seasons. Across the nation, it has gone from 41 to 45 percent. Ottawa County's flu vaccine coverage for adults is usually lower than the national average but is improving over the years from 28 to 39 percent. This is still higher than the state's average which has risen from 20 to 30 percent⁵.

Symptoms

Flu can cause mild to severe illness, and at times can lead to death. Flu is different from a cold. Flu usually comes on suddenly. People who have flu often feel some or all of these symptoms:

- fever or feeling feverish/chills (not everyone with flu will have a fever)
- cough
- sore throat
- runny or stuffy nose
- muscle or body aches
- headaches
- fatigue (tiredness)
- some people may have vomiting and diarrhea (this is more common in children than adults)

Problems to Address

- Low influenza vaccination rate.
- Misconceptions that the flu shot isn't necessary or it causes sickness.
- Getting flu isn't that big of a deal or it only affects me.



Flu Granny Solution!

Flu Granny was so popular in earlier years that she made a return! She made her debut in 2006 where she captivated audiences with her satirical and scolding tone. Flu Granny has

revived thanks to funding from the Michigan Association of Local Public Health who provided \$40,000 to OCDPH. This awareness campaign was a cross-jurisdictional sharing project with Kent, Muskegon, Kalamazoo, Calhoun and Allegan Counties to promote flu prevention messages across the region and provide campaign materials to health departments statewide. The objectives were to increase the number of people getting vaccinated before the start of the flu season and to help people understand getting flu can be serious. It's not just about them getting sick for a few days, rather it can affect vulnerable people around them.

The campaign collaboration began in February 2019 and completed by October 2019. The project went through several phases; developing a communications plan, budgeting, creating campaign materials, reserving ad space, monitoring social media and evaluating the campaign's performance. Flu Granny saturated the region via website resources, social media posts and ads, community events, cable and digital ads, radio ads, magazine ads, indoor and outdoor billboards, college campus posters and banners, promotional products (t-shirts, hand sanitizers, pens, tissue packs, magnets and bandage dispensers), bus ads and flu bulletins.

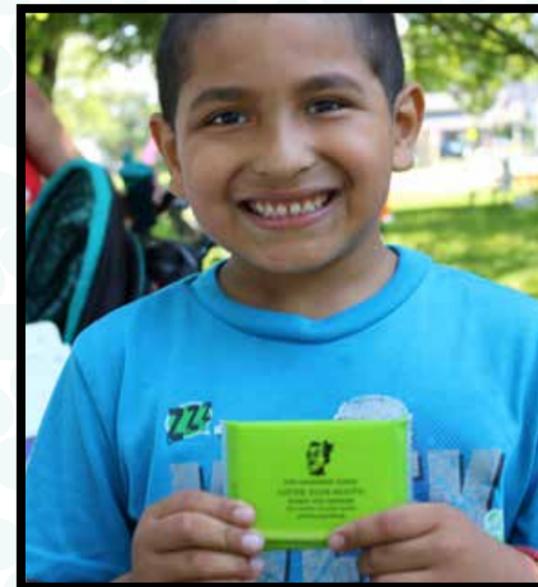
Granny says . . .



Granny Swag



Events



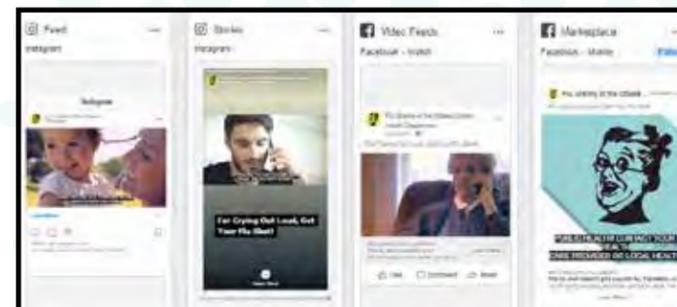
Billboards



Banners



Digital Ads



CAMPAIGN TOTAL
5,075,256
 Estimated Impressions

Priority: Empower Citizens with Credible and Timely Health Information.
 - Ottawa County Department of Public Health 2020-2023 Strategic Plan

Public Health COMMUNICATIONS

The study and use of communication strategies to inform and influence decisions and actions to improve health.

- Centers for Disease Control and Prevention

By Kristina Wiegink, M.Ed.
 Communications Specialist

Public health communication plays a critical role in providing the right message at the right time to reach the right people. Government agencies must strengthen public trust and transparency by clearly and strategically communicating with the public.

Messages must be coordinated and consistent with stakeholders and response agencies. Messages can be proactive to change behaviors for healthier outcomes and they can be reactive to respond to public concerns and media inquiries during times of emergencies or outbreaks.

Messages must be conveyed using empathy and using a health equity lens to reach diverse populations. When we have the public's trust, we empower people to act on our information effectively. Whichever the situation, public health communicators organize, create and disseminate credible and timely messages to help ensure the health and safety of our community.

Goal: To Maintain and Enhance Communication with Citizens, Employees and Other Stakeholders.
 - Ottawa County Strategic Plan and 2018-2019 Business Plan

EFFECTIVE COMMUNICATIONS:

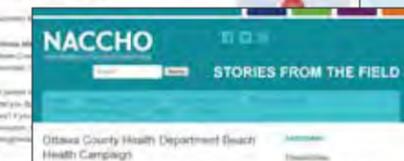
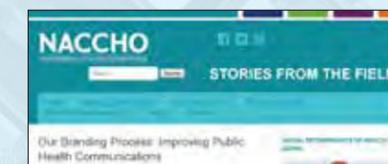
- Saves Lives
- Provides Consistent Messages
- Changes Behaviors
- Increases Healthy Outcomes
- Reaches Diverse Populations
- Addresses Concerns
- Tells a Story
- Expresses Empathy
- Forms Partnerships
- Enhances Public Trust
- Saves Money and Resources

HOW WE REACH PEOPLE:

- News Releases
- Public Service Announcements
- Annual and Community Reports
- Public Forums and Events
- Infographics
- Brochures and Flyers
- Promotional Products
- Television and Radio
- Social Media Posts and Videos
- Billboards, Posters and Banners
- Newspapers and Magazines



MODEL THE WAY





In 2019, departments within Ottawa County started using a single platform for data collection called Qualtrics.

The Ottawa County Department of Public Health (OCDPH) uses this web-based software to easily create surveys, collect data using forms and generate advanced reports without having data management or statistical analysis expertise. The department customized these tools to align with its brand and developed program-specific templates that showcase their logos. The OCDPH collaborates internally and externally to develop survey questionnaires that are HIPAA compliant and have built-in survey translation. The Qualtrics tools enable the department to more efficiently reach respondents via mobile devices, desktop computers, SMS texting and much more. It also has improved insights with predictive intelligence and powerful real-time statistical analysis to boost response rates and get better quality data.



"During the 2019 cycle of the Youth Assessment Survey (YAS), we used Qualtrics to collect survey data from students across Ottawa County. In the past, we used different software that limited the number of survey responses we could accept at one time. To overcome this issue, schools were assigned different one-week windows to take the YAS. This created an inflexible schedule that limited the number of student responses. In 2019, Qualtrics allowed us to collect an unlimited number of responses at any time. We opened the YAS to all schools for an entire month. The number of students' responses increased from about 4,300 in 2017 to nearly 6,500 in 2019. This is an increase of almost 51%! The schools had more time to plan and deploy the survey; creating a better customer experience that resulted in much more participation." - Senior Epidemiologist Derel Glashower



"We used Qualtrics to create a complaint questionnaire so the public could report a concern or submit a question at their convenience at any time of the day and not solely during business hours. Once a complaint has been submitted, the system sends an automatic notification to all members of the surveillance team. This online process standardizes our approach in collecting data and saves a significant amount of time from what it normally takes to conduct a phone interview when investigating a foodborne illness. In addition, OCDPH can quickly implement changes to the questionnaire in the event of an outbreak and place it on the department's website. This tool has assisted immensely in the response time of outbreaks all while providing better customer service." - Environmental Health Supervisor Spencer Ballard



"The Miles of Smiles (MOS) mobile dental unit travels to Ottawa County schools and provides comprehensive dental services for Medicaid insured or qualifying uninsured children. Previously, we distributed consent forms to students who were to give them to their parents. Once completed, the parents would then need to rely on their children to return the consent forms back to the school who then gave them back to us to provide dental services. Now, we are piloting Qualtrics at a couple of schools that email a consent form link to parents for them to complete and submit the form electronically. We anticipate this new process will make it possible to serve more students with MOS." - Oral Health Team Supervisor Debra Bassett



"The Ottawa Pathways to Better Health (OPBH) program adopted the Care Coordination Systems (CCS) software to document and report the health and social service needs of at-risk people in Ottawa County. Community health workers coordinate client care by using Pathways in CCS to identify, intervene and measure outcomes for their at-risk clients. The reporting capabilities of CCS allow OPBH to collect, analyze and report outcomes in response to identified community health needs." - OPBH Nurse Supervisor Susan Keen



"The immunization and sexual health clinics, along with the community health programs, replaced their legacy Electronic Health Record (EHR) system with a new cloud-based system. The previous system was in service for more than 10 years and had become outdated. The new Patagonia Health EHR system took approximately five months to set up, customize, test and migrate data. It provides better efficiencies, reduces paper waste and standardizes reports. Being cloud-based, Patagonia Health also integrates with the Michigan Care Improvement Registry for bi-directional immunization lookup, pharmacies for prescription orders, lab test results, and insurance verification for real-time status. To continue quality improvements and customer service, we're working to develop a patient portal to securely communicate with patients and share test results." -Clinical Health Services Manager Helen Tarleton



"As I look at the second full-recycling container holding about 400,000 pages of Ottawa County historical files, I can affirm that 2019 was a transformative year. The OCDPH Field Services Team—which does well and septic permitting, real estate evaluations of septic and wells, along with other services—leaped into the future, by embracing new software and new technologies. With the help of the Information Technologies department, our team left paper behind and is better equipped to meet the needs of Ottawa County residents. We took a process tied to paper files and completely changed it. Developing new software, purchasing new tablets, creating an app and having a team full of devoted employees; we are nearing the point where we can issue reports and permits from the field. Our records are accessible from outside the office which enables us to create, process and email our documents from the field. This directly benefits Ottawa County residents by lowering the turnaround time from when they apply for a service to when they have the report in their hands. This innovative and quality improvement is another way to offer the best customer service to residents." - Environmental Health Supervisor Matt Allen



"The Emocha system enables public health tuberculosis nurses to communicate with patients and provide Directly Observed Therapy. This CDC-endorsed model creates patient accountability by verifying medication adherence remotely through video observation rather than being present with an ill person. Patients can use their mobile phones to record themselves taking medication at their convenience. The asynchronous video recordings are securely viewed by a public health nurse to verify compliance of treatment. Emocha tracks missed and taken doses to provide informative data on treatment to the patient and nurse." - Communicable Disease Clinic Supervisor Tamara Drake



"OCDPH team members most likely travel more than other employees in the county. Creating mileage reimbursement requests can be time-consuming and typically takes about 45 minutes every two weeks. The Environmental Health team worked through a Kata project to analyze and select a mileage-tracking app that would automatically record and track mileage using a smartphone, along with being able to track team members in the field in the event of an emergency. After implementing an app, reimbursement requests submission time was down to one minute. This saves about 324 minutes per year. Team members streamlined and automated the review process for more efficient and quicker reimbursements." - Business Analyst Tony Benjamin

TECHNOLOGY UPDATES

NEW DENTAL CENTER

expands affordable services for Ottawa County residents



By Debra Bassett RDH, BHS
Oral Health Team Supervisor

The Centers for Disease Control and Prevention states that oral health affects our ability to speak, smile, eat and show emotions. It also affects self-esteem, school performance and attendance at work and school. Oral diseases, which range from cavities to gum disease to oral cancer, cause pain and disability for millions of Americans. Cavities (also called tooth decay) are one of the most common chronic diseases in the United States. Oral health has been linked with other chronic diseases, like diabetes and heart disease. It is also linked with risk behaviors like using tobacco and eating and drinking foods and beverages high in sugar¹.

According to the 2017 Ottawa County Behavioral Risk Factor Survey, almost one in five adults (18.4%) have not visited a dentist in the past year. Of those, more than nine in 10 said the main barrier to accessing needed dental care was related to cost, specifically lack of insurance and the inability to afford treatment².

The Ottawa County Department of Public Health (OCDPH) partnered with My Community Dental Centers Inc. (MCDC) to provide greater access to dental care in Ottawa County by opening a new dental center in Grand Haven. MCDC operates the six-chair center on behalf of the health department. The center provides quality dental care to children and adults enrolled in



This new center fulfills a need in our community-giving residents greater access to affordable dental services.

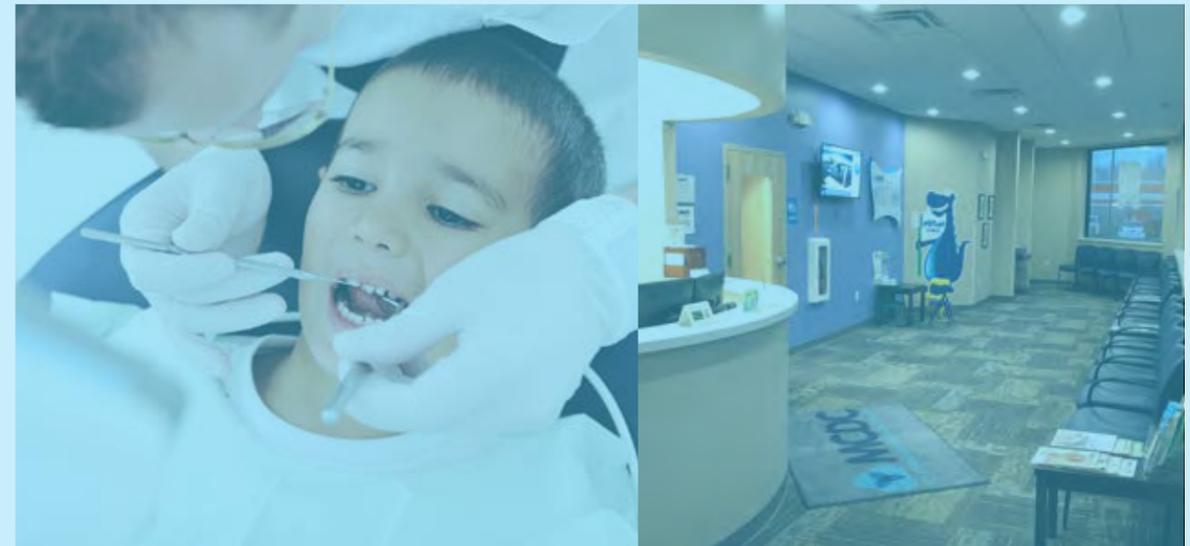
Medicaid, Healthy Kids Dental, Healthy Michigan Plan and private dental insurance. MCDC also offers MyDental Program (MyDP) for people without dental insurance, which provides reduced fees based on household income. The center also uses electronic patient records, digital radiography and state-of-the-art dental equipment. MCDC operates dental centers throughout Michigan and focuses on quality care that is customized for each patient and offered in a patient-centered atmosphere with exceptional customer service. More information at www.mydental.org.

SERVICES OFFERED:

- Dental Exams
- Cleanings
- Fillings
- Tooth Removal
- Partials
- Dentures
- Other Dental Procedures

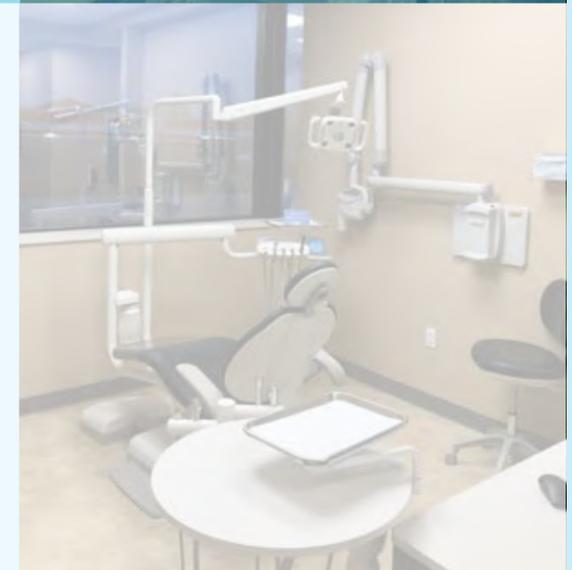
“ I am so happy someone referred me to MCDC! Very friendly staff, received my first cleaning and she did such a good job in making sure I was comfortable. Happy to have found a dentist I feel confident going back to.
-MCDC patient Kristy

I had been putting off going to the dentist for years due to fear of pain and judgement. I finally went and even though I have more work that needs to be done, I'm not dreading it. They made me feel very comfortable.
-MCDC patient Courtney

”

2,539 Office Visits

October 1, 2018 - September 30, 2019



HEALTHY BEHAVIORS

While Ottawa County ranks first, and at times second, in the state for health outcomes, the proportion of our population who are overweight and obese is not better than MI or the U.S., and we continue to grow bigger¹. Not being at a healthy weight contributes to chronic conditions like heart disease and stroke². Unhealthy behaviors, such as lack of physical activity and inadequate daily fruit and vegetable consumption, remain a growing issue³. The Ottawa County Health Improvement Plan's strategies⁴ include supporting the efforts of Ottawa Food, increasing awareness about low-cost and free opportunities for physical activity, working with health care professionals to reduce barriers for patients and creating educational campaigns. Through this work, we collaboratively help create a Healthy Ottawa for residents to live healthier and happier lives.



Pictured: Amara and Anthony at a Meet Up and Eat Up event

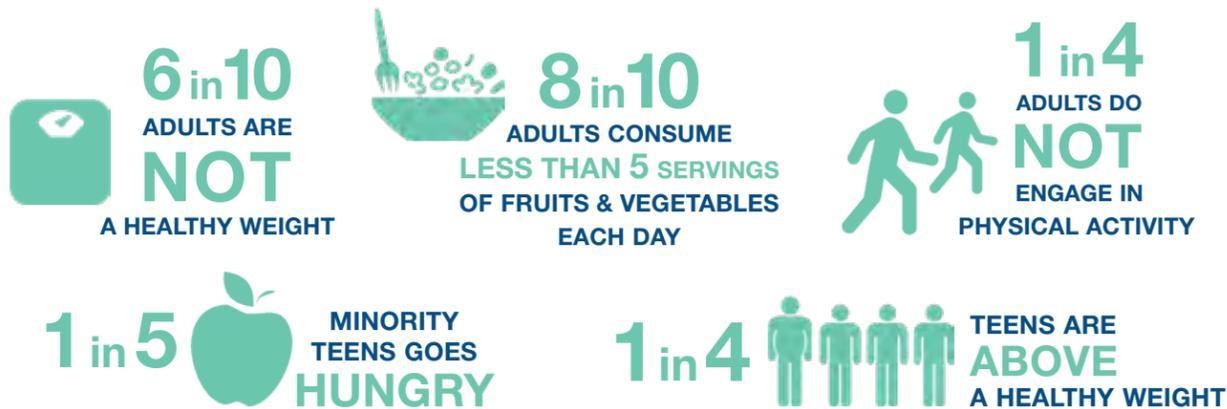


Pictured: Jane DeGroot & Ottawa Walks friends

PROMOTE CONSISTENT HEALTHY BEHAVIOR MESSAGES AND DECREASE BARRIERS TO HEALTHY LIVING.

The 2017 Ottawa County Health Needs Assessment & Youth Assessment Survey State:

Community Health Improvement Plan Strategies - 2019 Accomplishments:



61,645 **36** MEALS SERVED at MEAL SITES
MEET UP and EAT UP

2,038 LBS
Vendors at the Grand Haven Farmers Market donated Fresh Produce to Local Residents in Need

PICK FOR PANTRIES
450 LBS of U-PICK Strawberries, Blueberries and Apples Donated to Food Pantries

172+ million STEPS BY **1,371** PARTICIPANTS
STEP IT UP!

66% of participants reported that their **HEALTH IMPROVED** as a result of their participation!

PRODUCE DONATION PROGRAM
Community members donated **3,110 LBS** of Fresh Fruits & Vegetables to Local Food Pantries



INCREASE
RECOGNITION
AND
TREATMENT
OF MENTAL
HEALTH
CONDITIONS.

MENTAL HEALTH

Awareness of mental health conditions and access to treatment are some of the top priorities that surfaced in the Ottawa County Community Health Needs Assessment. Community members and organizations have been working to increase public awareness of existing mental health treatment models and services, increase community conversations about mental health and educate the community on Adverse Childhood Experiences (ACEs). Thrive Ottawa County, an ACEs initiative, offered Community Champion trainings. Participants included law enforcement, first responders, education, health services, faith-based groups and social services workers. Additionally, as a result of the Youth Assessment Survey, Ottawa County formed the Suicide Prevention Coalition to combat the alarming high rate of teen suicide ideations and attempts.

ACCESS TO CARE

The Ottawa Pathways to Better Health (OPBH) program uses an evidence-based community health worker (CHW) model designed to identify and address individual risk factors. CHWs walk alongside clients to set goals and assist in achieving them. CHWs are trusted members of the communities they serve; sharing common ethnicity, language, culture and life experiences with their clients and connect eligible program participants to health care and social service providers in the community. The program began in 2017 as a strategy from the 2015 Community Health Improvement Plan that identified access to care as one of the top health priorities within the Ottawa County Community Health Needs Assessment. More information about the program is available at www.miOttawa.org/OPBH.

INCREASE
ACCESS TO
A PATIENT-
CENTERED AND
COMMUNITY-
INTEGRATED
SYSTEM OF
CARE.

In Ottawa County:

As of December, 2019:



1 in 5

TEENS THOUGHT
ABOUT SUICIDE⁵
during the past 12 months

65

PEOPLE COMPLETED
THRIVE TRAINING

300+

SCHOOL STAFF COMPLETED
BLUE ENVELOPE TRAINING
*Community collaboration that equips
schools with suicide response protocol.*

1,620

PEOPLE REFERRED



9

COMMUNITY HEALTH WORKERS

32

DEATHS BY SUICIDE⁶
in 2018

17%

of Adults have
DEPRESSIVE DISORDER³

1 in 4

Youth Report
DEPRESSION⁵
in the past year

4,500

STUDENTS IMPACTED



1,029

SOCIAL SERVICE
PATHWAYS COMPLETED

*financial assistance, food, housing, utilities,
transportation, employment and more*



656

MEDICAL
PATHWAYS COMPLETED

*medical referral, specialty referral, dental,
vision, medication assessment/assistance,
behavioral health, pregnancy and more*

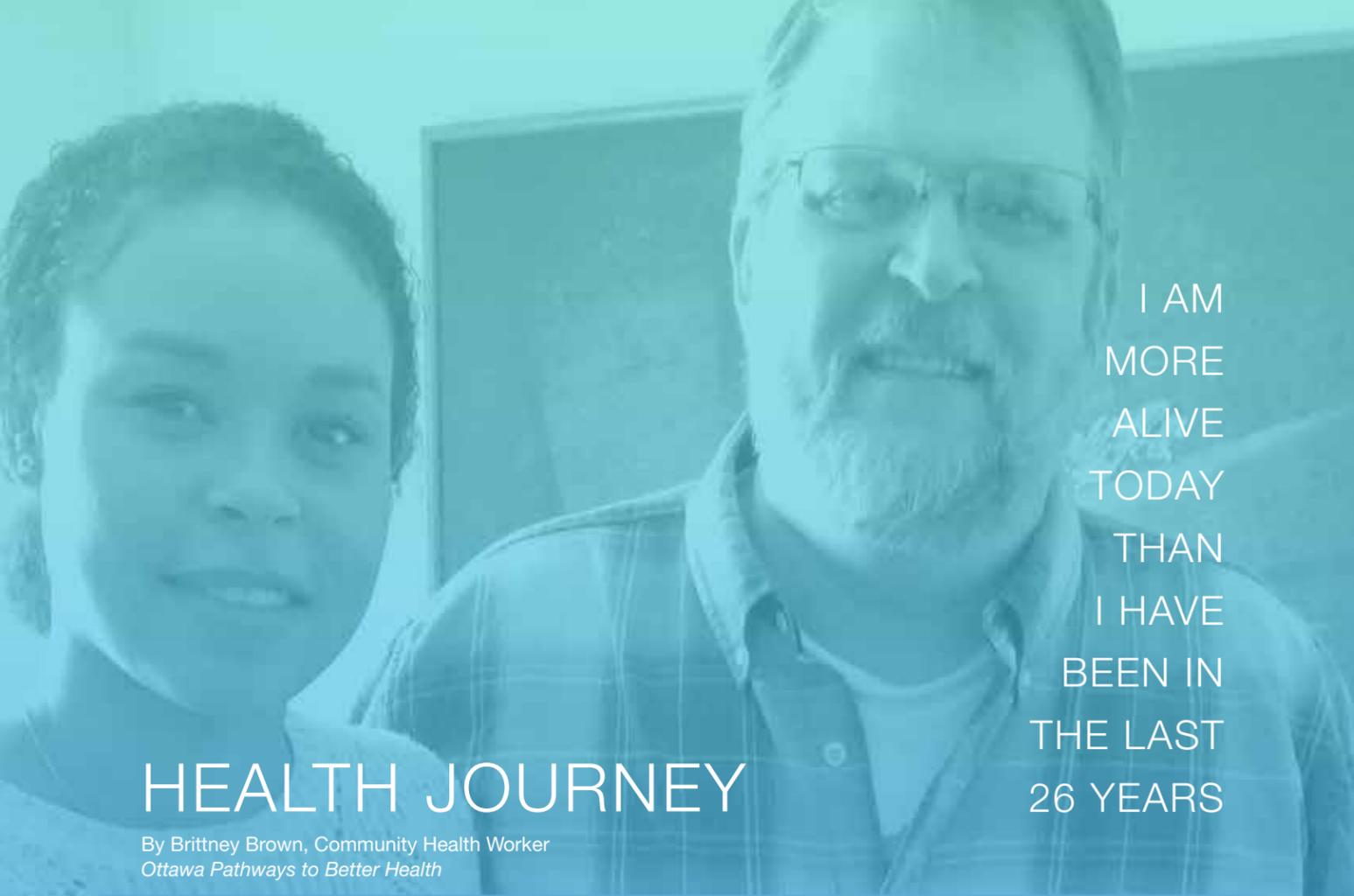


217

OTHER
PATHWAYS COMPLETED

education, health insurance and more





I AM
MORE
ALIVE
TODAY
THAN
I HAVE
BEEN IN
THE LAST
26 YEARS

HEALTH JOURNEY

By Brittney Brown, Community Health Worker
Ottawa Pathways to Better Health

Through the Ottawa Pathways to Better Health program, we journey with people down various paths to help improve their health and wellness. As community health workers, we see how the face-to-face interaction and support we give our clients help them feel and know someone is on their side. The people we work with become more accountable and take a hold of their health when we help provide them with the tools they need to be successful.

I started working with Brett a little more than a year ago. He was referred to the program by a nurse care manager at his doctor's office. His health was failing and he had multiple chronic medical problems, including a history of surgeries for kidney stones and hernias with more surgeries pending. With his financial limitations, it was difficult for him to afford diabetes medications and food. Brett needed help accessing affordable insulin medication, along with securing health insurance, disability income, in-home support and help to manage his diabetes. When I arrived at Brett's home, he expressed his urgent financial needs. While I listened to his concerns, it was clear he also had underlying anxiety. He was not aware of community resources and services that could help his situation and ease some of his stress. I worked with Brett on many pathways—health insurance, financial assistance, social support, food assistance, medication assistance, family assistance, disability, legal assistance and a flu shot. Before Brett enrolled in the program, he was usually in the emergency department one to two times a month. Since working with him, his last visit there was more than seven

months ago. His nurse care manager said Brett's progress has helped him gain control of his diabetes, lose weight and turn his physical and mental health around. Brett can better cope with his health concerns because he knows he's not alone and I'm there to guide him through his journey. I work to provide and connect him to needed resources to the best of my ability. "Working with Brittney has been more than I ever thought it would be—she is amazing and always goes the extra mile," said Brett. "My doctors are stunned by how much better I look—I smile more and my doctors are proud. This program has been such a help!"

Before starting the program, Brett felt his overall health was poor and his physical and mental health was not good. The challenges he faced affected his ability to do his usual daily activities. Since working with me and successfully completing his pathways, he now states his overall health is good and he's had few to no days where his physical and mental health have kept him from doing usual daily activities. You can't put a price tag on that! We are so proud of Brett and all our clients for their success in the program. The Pathways to Better Health program continues to expand community partnerships by connecting with the health department's Maternal and Infant Health Program and the county's Community Mental Health Department. Our goal is to reach even more people in our community to address physical and mental health needs. It is truly rewarding to work with community members and see how we make a difference so people can live happier and healthier lives!

Pictured: Brittney, Community Health Worker and Brett, OPBH client

2 0 1 9



1,093
Septic & Well
Permits Issued



1,194
Real Estate
Evaluations

SEAL!
MICHIGAN

651
SEALANT
Appointments



Clients Enrolled
1,341
Children's Special
Health Care Services

100%
STUDENTS



Compliant with
Health Code for
IMMUNIZATIONS

Vaccinated or have waivers.
Data through Sept, 2019.

145,000+



Condoms
Distributed

276+
TONS
KEPT OUT
of LANDFILLS



1,173
DENTAL
Appointments
Miles of Smiles
Mobile Dental Unit

2,515



Children & Adult
IMMUNIZATIONS
Clinic Visits

272
TRAVEL
Clinic Visits



2,163
FOOD SAFETY



Inspection
Activities



1,240
Home
Visits

244
Moms &
Babies Served



1,229
Family Planning
Clinic Clients

23,949
VISION

13,693
HEARING

SCREENINGS



10,000
LOCKABLE
Medication Bags
PREVENTING
Misuse & Overdose

31,762



Cases of
Influenza-like
ILLNESSES

6,300+
Pounds



FRESH PRODUCE
Donated by
Farmers, Community
Members & Market
Shoppers



A W A R D S

Our department is filled with so many outstanding team members!
Your excellence and commitment show in your work and in our community!

Hometown Health Hero Award



State Representative Brad Slagh, Public Health Nurse Leanna Kermeen, Michigan Department of Health and Human Services Director Robert Gordon and State Senator Roger Victory

Leanna Kermeen, public health nurse, Ottawa County Department of Public Health, received a 2019 Hometown Health Hero Award presented by the Michigan Public Health Week Partnership. This award recognizes people across the state working tirelessly to maintain and improve the health of their local communities. Kermeen received the award for her dedication to the migrant farm worker program in Ottawa County. When Kermeen clocks out of work, she does not go home or run errands, instead she visits migrant communities to provide sexual health services and education to break down barriers to STD testing and treatment. "Your impactful work to improve the health of migrant workers outside

of your normal working hours is exemplary and we wish you continued success," stated James Koval, Michigan Department of Health and Human Services, in the award letter. During the last two years, Kermeen has worked with public health agencies, private farm owners and growers and a multi-county migrant resource council to identify and treat communicable diseases within the camps; primarily in men 25 years of age and younger. Her work to slow or stop the spread of infections, such as chlamydia, has positively impacted migrant farm workers and the community. She also connects with local food pantries to seek donated food, ensuring the workers have access to fresh fruits and vegetables, clothing, toothbrushes and other necessities.

"Public health is vital to the health of our county, state and nation. An act of public health positively impacts a person but it has a ripple effect to the larger population," exclaimed Kermeen. "It's been my privilege, honor and passion to work in public health. Receiving a Hometown Health Hero Award is humbling and it gives validation for the work being done. This work matters, and it's thrilling to drive public health forward with such a supportive network."

TB Warrior Award



Patty Feenstra received the 2019 Michigan Department of Health and Human Services (MDHHS) TB Warrior Award for her exceptional work with a very complex and challenging case of drug resistant tuberculosis. Patty has been a nurse for 43 years and has been working as a TB nurse for the Ottawa County Department of Public Health (OCDPH) eight of those years. "Patty provides exceptional and compassionate care to Ottawa County residents with tuberculosis," stated Tamara Drake, OCDPH communicable disease supervisor. "Patty always goes above and beyond to make sure they complete the necessary treatment." This award was given at the 2019 MDHHS World TB Day Conference in Lansing, where she also presented Notes from the Field. "Receiving the MDHHS TB Warrior Award at the 2019 MDHHS World TB Day Conference was a special honor for me and I appreciated the recognition for doing the work that I am passionate about," said Patty. "I am proud to be part of a great team here at OCDPH and at the MDHHS TB Control Program that provides awesome care for the TB patients of Ottawa County."

The Mosley Team Award for Extraordinary Community Health Worker Service



The Ottawa Pathways to Better Health community health workers (CHWs) team received a well-deserved honorable mention for their award at the Spectrum Health 12th Annual Community Health Worker Conference. CHWs work within the community and walk alongside clients to set goals and assist in achieving them. They connect eligible program participants to health care and social service providers in the community.

Pictured left: Eliezer Lopez, Nick Parliament, Glorie Orozco, Judy Ketting, Brittney Brown, Dan Gardner, Jamie Fenstermaker, Edwin Villanueva and Traci Rushlow

WE ARE **PUBLIC HEALTH**

RECOGNITION

Ottawa County Emerging Leaders

A group of Ottawa County employees celebrated the completion of their Emerging Leaders course at a graduation ceremony in December 2019. The group engaged in learning opportunities and projects designed to enhance their leadership abilities. They explored skills to speak persuasively, fostered teamwork, built acceptance and resolved disagreements. The participants also conducted a job shadow, prepared a mission and values project and hosted a leadership luncheon and panel session. The course helped to provide a leadership foundation and to prepare participants for their future career goals. Congratulations, graduates!



Public Health Graduates pictured: Jill Bannink-Albrecht (1st on left, front), Judy Ketting (5th from left, front), Rebekah Folkert (6th from left, front), Glorie Orozco (4th from right, front), Derel Glashower (3rd from right, front) and Kris Conrad (2nd from right, front)

Ottawa County Outstanding Customer Service

I want to congratulate and thank the nominees of the Ottawa County Outstanding Customer Service Award for their continuous commitment to our customers. Congratulations to Glorie Orozco, Leanna Kermeen, Hannah Hoeksema, Melissa Doxey, Kelsey DeMull, Toni Bulthuis, Chelsea VanderHoff, Julie Kuiper, Cindy Botbyl, Tonya Barber, Kayla Anderson, Spencer Ballard, Ryan McCarthy, Jessica Behringer, Kevin Hoxsey, Mike Marlowe, Amelia Pratt, Skylar Garrison, Rebekah Folkert, Matthew Allen, Jill Bannink-Albrecht, Brittney Brown, Monique Carey, Drew Shaw, Cecilia Soriano, Kimberly Wolters, Jamie Fenstermaker and Judy Ketting. I also want to thank everyone in the entire department for making customer service a priority and for delivering professional, helpful, respectful and quality service in every encounter. Thank you for all you do to make our department outstanding and to meet the needs of our customers!

- Lisa Stefanovsky, Administrative Health Officer

"Judy truly cares about the well-being of the people she works with in the community and it shows in her efforts to assure she is providing the highest level of customer service," said Nurse Supervisor Susan Keen. "She is consistent, compassionate, reliable and responsive. Judy is a great representative of the Ottawa Way and demonstrates what customer service is all about."



Judy Ketting, recipient of a 2019 Ottawa County Outstanding Customer Service Award

ACHIEVEMENT

Andrea Whittaker



Earned a Masters in Public Administration

Nice Customer Service! Rebekah Folkert

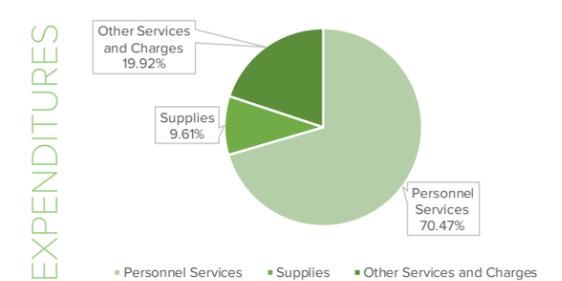
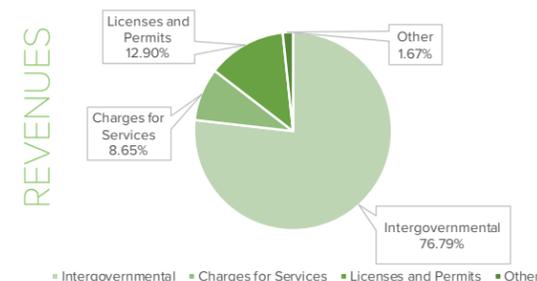


Recognized for 10 nominations and counting!

FINANCIAL

	Budget Amounts		Actual	Variance	2018
	Original	Final	Amount	Positive (Negative)	Actual
Revenues					
Taxes	\$ -	\$ -	\$ -	\$ -	\$ -
Intergovernmental revenues	4,118,177	5,635,930	6,269,557	633,627	4,365,076
Charges for services	896,630	893,630	705,870	(187,760)	650,523
Fines and forfeits	-	-	-	-	-
Investment earnings	-	-	-	-	-
Licenses and permits	1,189,660	1,189,660	1,052,855	(136,805)	1,027,568
Rental income	-	-	-	-	-
Other	11,510	112,788	135,976	23,188	81,322
Total revenues	6,215,977	7,832,008	8,164,258	332,250	6,124,489
Expenditures					
Current operations					
Personnel services	8,293,070	8,335,710	7,868,542	467,168	7,417,469
Supplies	874,317	1,177,456	1,072,513	104,943	820,367
Other services and charges	2,210,166	2,347,186	2,224,038	123,148	2,027,884
Debt service					
Principal retirement	-	-	-	-	-
Interest and fiscal charges	-	-	-	-	-
Capital outlay	-	-	-	-	11,313
Total expenditures	11,377,553	11,860,352	11,165,093	695,259	10,277,033
Revenues over (under) expenditures	(5,161,576)	(4,028,343)	(3,000,835)	(1,027,508)	(4,152,544)
Other financing sources (uses)					
Issuance of bonds	-	-	-	-	-
Premium on bonds issued	-	-	-	-	-
Transfers from other funds	4,610,714	4,610,714	4,610,715	1	3,582,994
Transfers to other funds	-	-	-	-	-
Total other financing sources (uses)	4,610,714	4,610,714	4,610,715	1	3,582,994
Net change in fund balance	(550,862)	582,371	1,609,880	(1,027,507)	(569,550)
Fund balance, beginning of year	885,613	885,613	885,613	-	1,455,163
Fund balance, end of year	\$ 334,751	\$ 1,467,984	\$ 2,495,493	\$(1,027,507)	\$ 885,613

Preliminary unaudited



SOURCES

COVER

Image by TanteTati from Pixabay. <https://pixabay.com/photos/faucet-water-bad-sanitaryblock-686958/>

PAGES 6 - 7

Environmental Sustainability

TV image by E.Z from Pixabay. <https://pixabay.com/photos/the-old-tv-2882742/>

Tires image by Jazella from Pixabay. <https://pixabay.com/illustrations/tires-pile-trash-old-rubber-4063336/>

Hazardous image by ar130405 from Pixabay. <https://pixabay.com/illustrations/nuclear-hazardous-hazard-radiation-2082637/>

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https://www.epa.gov/sites/production/files/2019-11/documents/msw_infographic_with_2017_data_nov_2019.pdf

PAGES 8 - 11

Groundwater Study

Kirk Park in West Olive, Ottawa County image courtesy of Ottawa County Parks & Recreation Department

Strategies images courtesy of Ottawa County Planning & Performance Improvement Department

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PFAS Response

Robinson Elementary school sign image courtesy of mlive.

<https://www.mlive.com/news/muskegon/2018/12/deq-testing-41-more-wells-for-pfas-near-grand-haven-school.html>

Drinking fountain image courtesy of WZZM 13. <https://www.wzzm13.com/article/news/health/pfas-levels-at-robinson-elementary-school-confirmed-to-be-more-than-double-epa-limit/69-610004015>

News media image courtesy of WOOD TV8.

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News media image courtesy of WZZM 13. <https://www.wzzm13.com/article/news/new-testing-results-reveal-high-pfas-levels-at-robinson-fire-department/69-91b2885c-2640-49cd-bccd-99da04f0090a>

News media image courtesy of Holland Sentinel. <https://www.hollandsentinel.com/news/20190209/pfas-source-needle-in-haystack>

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Public Health Response

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PAGES 22 - 25

Flu Granny Campaign

Vector images by Vecteezy:

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Images courtesy of My Community Dental Centers. <https://www.mydental.org/>

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