



BOARD OF HEALTH ANNUAL REPORT

2014





Our Vision...

Your public health team, connecting with our communities to achieve healthier outcomes.

### Administrative Staff



Melissa Bowerman, B.S.  
Administrative Services  
Division Director



Bob Gouin,  
R.S., M.B.A.  
Environmental Health  
Division Director



Robert Graham,  
D.O., M.P.H., F.A.A.F.P.  
Medical Director



Andrea Tabor,  
R.N., B.S.N., M.P.H.  
Community Health &  
Education Division Director

# Health Officer's Message



Welcome to the Mid-Michigan District Health Department's (MMDHD) annual report for 2014. The theme of this year's report is innovation.

With the budgets of local governments, including public health, still under pressure, MMDHD has embraced innovation as a way to ensure we continue to provide the quantity and quality of services our residents deserve. Beginning in 2010, MMDHD trained some staff in quality improvement (QI). Our first QI project successfully improved the experiences of people calling our automated phone system. We saw the phone system's score in our client satisfaction survey jump as a result. Building on what we learned from that project, we made a number of specific changes to our organization so we could achieve our quality goals. Among other things, we appointed a full-time quality improvement specialist, created a quality improvement plan and began working on a performance management system that would give us ongoing information about the details of our operation.

We have focused on Innovation in three main areas:

1. Innovation in service delivery makes it possible for us to attain prevention goals in more efficient ways. MMDHD has launched Mid-Michigan Pathways, a new model for delivering preventive services which uses community health workers to help low-income, vulnerable people connect to care (Read more about this on page 14). In order to increase access to preventive services for oral health, MMDHD has integrated oral health screenings and the application of fluoride varnish into its WIC program.
2. Innovation in technology saves staff time by automating work as much as possible (Read our blog post on this topic). On our intranet, staff have access to a performance management system which mines the data in our electronic health record to give them up-to-the-minute data on quality metrics with a single mouse click.
3. We seek innovative ways of financing our services to save local governments money. In many of our programs, including immunizations, family planning, Children's Special Health Care Services, and soon Mid-Michigan Pathways, we are able to bill for services. This is an increasing proportion of our budget.

Important innovations at MMDHD have come from our employees. We created an on-line "Innovation Station" where employees can post ideas. Many of these ideas have turned out to be winners, including buying stamps on-line, reducing staff time and paper costs by making our Board of Health documents all electronic, using texting to communicate in a crisis and developing a central scheduling system.

I invite you to keep reading this report to learn more about the ways MMDHD is using innovation to improve its services and better protect health.

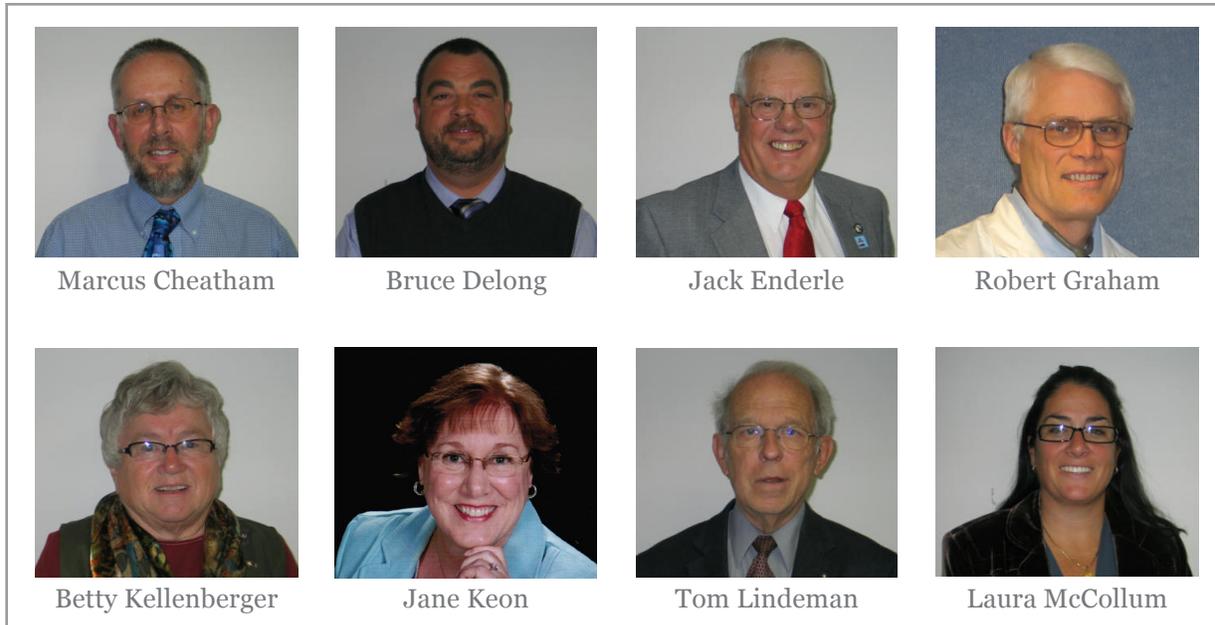
---

***MMDHD has embraced innovation as a way to ensure we can continue to provide the quantity and quality of services our residents deserve.***

---

Marcus Cheatham, Ph.D.  
Health Officer

# Board of Health



## **Mark W. (Marcus) Cheatham, PH.D. • Health Officer**

Dr. Cheatham is serving his third year as Health Officer and Board of Health member.

## **Bruce Delong • Clinton County Commissioner**

Mr. Delong is serving his fourth year on the Board of Health. He is the Vice Chairperson for the Board, Chairperson of the Program Committee, and a member of the Personnel Committee.

## **Jack A. Enderle • Clinton County Commissioner**

Mr. Enderle is serving his eighth and final year on the Board of Health. He is a member of the Finance and Mid-Central Coordinating Committees, as well as the Michigan Association for Local Public Health Board. MMDHD thanks Mr. Enderle for his many years of dedicated service.

## **Robert Graham D.O., M.P.H., F.A.A.F.P. • Medical Director**

Dr. Graham is serving his twenty-third year as Medical Director and Board of Health member.

## **Betty Kellenberger • Montcalm County Commissioner**

Ms. Kellenberger is serving her second year on the Board of Health. She is also Chairperson of the Personnel Committee, and serves on the Quality Vision Action Team.

## **Jane Keon • Gratiot County Commissioner**

Ms. Keon is serving her first year on the Board of Health and is a member of the Finance and Mid-Central Coordinating Committees.

## **Tom Lindeman • Montcalm County Commissioner**

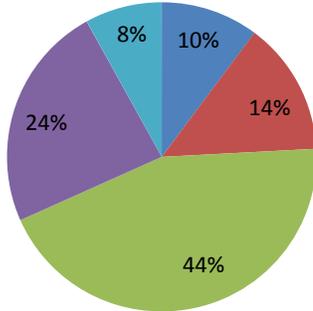
Mr. Lindeman is serving his eleventh year on the Board of Health. He is the Chairperson of the Finance Committee, Vice Chairperson of the Mid-Central Coordinating Committee, and is a member of the Program Committee.

## **Laura McCollum • Gratiot County Commissioner**

Ms. McCollum is serving her second year on the Board of Health. She is Chairperson of the Board, and serves as a member of the Personnel and Program Committees.

# Finance

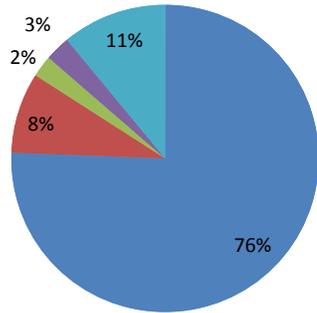
## Revenues



State & Federal Funds .....	44%	<span style="color: green;">■</span>
Appropriations & County Funding .....	24%	<span style="color: purple;">■</span>
Charges for Service .....	14%	<span style="color: red;">■</span>
Licenses and Permits .....	10%	<span style="color: blue;">■</span>
Other .....	8%	<span style="color: cyan;">■</span>

TOTAL REVENUES.....\$5,737,100.00

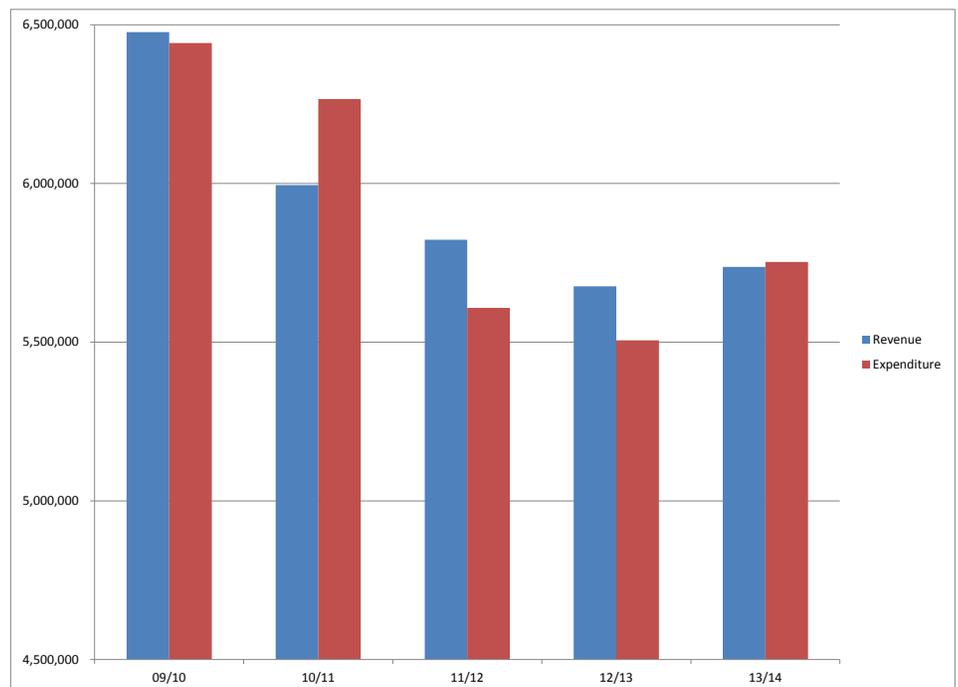
## Expenses



Personnel .....	76%	<span style="color: blue;">■</span>
Other.....	11%	<span style="color: cyan;">■</span>
Supplies and Equipment .....	8%	<span style="color: red;">■</span>
Travel .....	3%	<span style="color: purple;">■</span>
Contractual .....	2%	<span style="color: green;">■</span>

TOTAL EXPENSES..... \$5,752,851.00

## Five-Year Trend





# Environmental Health

Ensuring a safe and healthy environment for the residents and visitors of Clinton, Gratiot, and Montcalm Counties is the Environmental Health Division's primary objective.

## Healthy Cooking at Farmers Markets

Farmers markets are among the places people turn to when looking for fresh, healthy food. Increasingly, vendors at Farmers Markets are experimenting with new ways of encouraging people to eat healthier, including a wide array of new products and live cooking demonstrations that feature food tasting. And communities love farmers markets because they encourage economic activity. Health Departments, on the other hand, are concerned about preventing food poisoning. Our rules tend to make us say "No!" to the idea of people whipping up a dish and serving it to the public on the fly.

As part of a pilot project for the Michigan Farmers Market Association, one of our sanitarians, Charity Little, worked with the Bath Farmers Market to develop a set of rules that would allow vendors to do live cooking demonstrations—featuring items available from the Market that day—and let the public taste the result. Charity worked with the market to identify all the food items that were from safe sources, to train vendors on what items they had to have on hand to safely prepare food (a hand-washing station, for example) and safe food handling practices (wear gloves, for example). The project was so successful that the Farmers Market Association asked Charity to do a statewide webinar for their members, and asked us to work with Michigan Department of Agriculture to turn the rules into a new statewide policy. Thank-you Charity!



*In 2014, this division provided services to 3,290 unduplicated clients.*

### Well and Septic Stakeholders Group

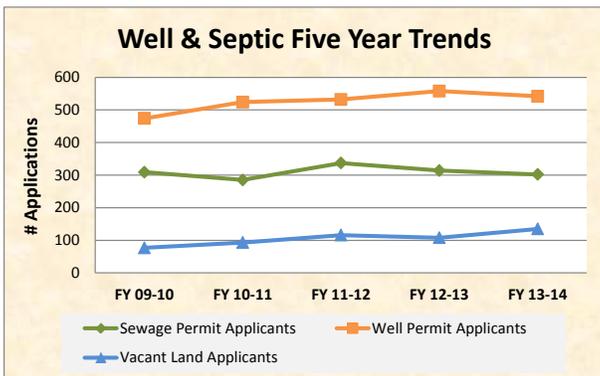
The Health Department has long been concerned about surface water quality in the District. In particular, we have been worried about E-coli bacteria in rivers and drains which come from human and animal feces. E-coli gets into the water from farm runoff, failed septic systems and direct connections to drains. In 2014 we took some important steps toward action on water quality.

The Health Department was approached by the Clinton Conservation District and invited to work with them on the Maple River watershed. The Conservation District has developed a watershed management plan for the Maple River, and has received a grant from the Michigan Department of Environmental Quality to implement the plan. With resources from the grant, we were able to convene a Well and Septic Stakeholder Committee to study the problem of human waste in the water District-wide, and make recommendations about how to proceed. The stakeholders included drain commissioners, other conservation districts, representatives from agriculture and real estate, private contractors and local government.

The stakeholders recommended three things. First, the Health Department should expand public education efforts to make sure homeowners understand how to care for their septic system; second, procedures could be developed to identify more failed systems and direct connects that the community would support; and third, they called for increased use of information technology so that better records can be kept and better use can be made of those records.

The third recommendation turned out to be a boon to us. The Conservation District is partly funding our acquisition of a new information technology system for our Environmental Health Division. This technology will make it easier for the community to get permits and access their records by conducting business with the Department online. We spent the last part of 2014 developing requirements for the new system. Look for it to roll out by the end of 2015!

The stakeholder's final report is on our website: <http://tinyurl.com/n4x3m4m>



Our budget has been cut, but we have maintained high levels of productivity by streamlining permitting and cross-training staff.

### WASTEWATER MANAGEMENT

Proper treatment of human wastewater helps prevent the spread of disease and viral infection. These programs provide guidance and oversight for on-site sewage disposal.

*Number of Inspections/Permits Issued (unduplicated)*

	Clinton	Gratiot	Montcalm	District
On-Site Sewage Disposal Permits	118	48	136	302
Site Evaluation	93	13	29	135
<b>TOTALS</b>	<b>211</b>	<b>61</b>	<b>165</b>	<b>437</b>

### FOOD PROGRAM

Through regular inspections and education, this program helps assure the public that the meals consumed outside of the home are safe.

*Number of Services Provided (unduplicated)*

	Clinton	Gratiot	Montcalm	District
Advanced Food Training Classes	99	61	82	242
Food Service Inspections (Fixed)	386	296	404	1,086
Food Service Inspections (Temp.)	57	51	71	179
<b>TOTALS</b>	<b>542</b>	<b>408</b>	<b>557</b>	<b>1,507</b>

### ENVIRONMENTAL QUALITY

Assuring a good quality of life where we live and play is a key component of these programs.

*Number of Clients Served (unduplicated)*

	Clinton	Gratiot	Montcalm	District
Campground Program	3	7	29	39
DHS Inspections	37	21	43	101
Nuisance Complaint Investigations	53	41	95	189
Radon Test Kits Distributed	159	46	83	288
Public Swimming Pool Program	30	8	11	49
<b>TOTALS</b>	<b>282</b>	<b>123</b>	<b>261</b>	<b>666</b>

### SURFACE AND GROUNDWATER CONTROL

A fundamental component of public health met by these programs is the protection of our lakes, streams and the water we drink.

*Number of Clients Served (unduplicated)*

	Clinton	Gratiot	Montcalm	District
Groundwater Quality Control	136	114	292	542
Well Contaminate Monitoring	6	26	1	33
Septage Waste Haulers				
Trucks Inspected	10	10	12	32
Sites Inspected	2	1	7	10
Loan Evaluations	7	2	38	47
Clandestine Drug Investigations	3	5	8	16
<b>TOTALS</b>	<b>164</b>	<b>158</b>	<b>358</b>	<b>680</b>



# Community Health & Education

This division embraces its role as the provider of and advocate for public health in our counties.

## Fluoride Varnish Program

MMDHD provides community-based oral health programs that focus on education and prevention. With support from partner agencies and community foundations, the agency employs a part-time registered dental hygienist to coordinate and provide preventive oral health services. Currently, the Oral Health Coordinator, Shelley Treynor, RDH, organizes and implements a fluoride varnish program for approximately 800 children who attend EightCAP, Inc. Head Start, which includes two fluoride varnish applications per child each year. The current Head Start fluoride varnish program recently completed its sixth year of operation.

On March 21, 2014 the Fluoride Varnish Program was expanded to the Women, Infants, and Children (WIC) clinics in Montcalm County. The program was rolled out in Clinton County on May 7, 2014 and in Gratiot County on June 19. The program provides up to four fluoride varnish applications per year on all erupted teeth of WIC-enrolled



children ages 6 to 36 months, dental hygiene education for children and parents enrolled in the program, and assistance in obtaining dental treatment for those who have urgent needs.

This program is unique in that it provides this service while the infant or child is seen at the WIC clinic. This creates a more efficient delivery of care in which the family can receive multiple services during a single trip. This is an important feature

for low-income families who often face barriers to care like limited access to reliable transportation or fuel costs.

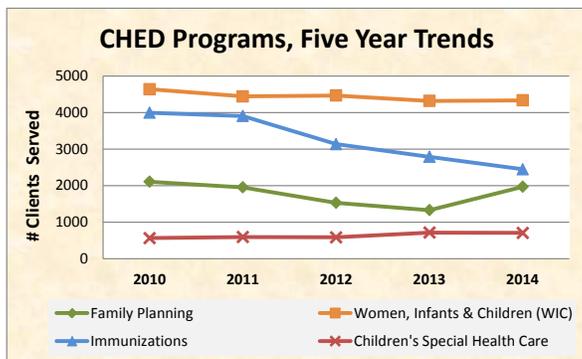
Clinical studies show that fluoride varnish applied early and at regular intervals can reduce the susceptibility of tooth enamel to decay. A recent publication by the Cochrane Collaboration (Fluoride Varnishes for Preventing Dental Caries in Children and Adolescents, 2013) indicates that fluoride varnish can reduce dental decay by approximately 37%.

*In 2014, this division provided services to 34,623 unduplicated clients.*

**Healthy Michigan Plan (Expanded Medicaid)**

The State of Michigan’s Healthy Michigan Plan (HMP) is designed to make health care services available to low-income residents of Michigan. In the spring of 2014, health department staff began collaborating with community partners to coordinate and offer enrollment assistance to district residents who were eligible for HMP. Partners included Montcalm County United Way, Montcalm Area Health Center, Department of Human Services, MSU Extension and Michigan’s Primary Care Association. In addition to offering enrollment services within the health department, staff and partners enrolled people during community events held throughout the district. Approximately 8,300 individuals are enrolled in HMP as of April 6, 2015, including 2,266 in Clinton County, 2,254 in Gratiot County, and 3,778 in Montcalm County.

Those who have enrolled in the program now have important benefits that enable them to access care, have better health outcomes, and financial well-being. One consequence of the HMP is that we have seen a decline in the demand for some of the services offered at our health department. For example, in 2014/2015 we experienced a 13% decline in the number of clients served in the Family Planning clinics as more individuals have coverage and can access services at their primary care provider. While there will most likely always be a need for programs such as Family Planning and Immunizations, we have been assessing needs and finding new opportunities to enhance health in our district. An example is the Pathways Program, highlighted on page 14.



Medicaid expansion led to a decline in some services.

**MATERNAL & CHILD HEALTH**

These programs give financial, social, nutritional and medical support to qualified families. These programs benefit the community by reducing infant mortality, ensuring healthy births and maintaining the health of mothers and their children.

	Number of Clients Served			
	Clinton	Gratiot	Montcalm	District
Hearing Screenings (# conducted)	2,979	1,623	3,329	7,931
Vision Screenings (# conducted)	5,051	2,389	5,612	13,052
Children’s Special Health Care	226	170	348	708
Family Planning Services	437	839	694	1,970
Women, Infants & Children Program	1,095	1,353	1,907	4,334
Maternal/Infant Support Services	N/A	227	N/A	227
<b>TOTALS</b>	<b>9,788</b>	<b>6,601</b>	<b>11,890</b>	<b>*28,222</b>

Totals may not add up because some clients were served in more than one county.

**CHRONIC DISEASE CONTROL**

These activities target specific chronic diseases and focus on early detection and referral.

	Number of Clients Served			
	Clinton	Gratiot	Montcalm	District
Breast & Cervical Cancer Control	46	27	N/A	73
Lead Poisoning Screening	296	378	535	1,208
<b>TOTALS</b>	<b>342</b>	<b>405</b>	<b>535</b>	<b>*1,281</b>

Totals may not add up because some clients were served in more than one county.

**COMMUNICABLE DISEASE CONTROL**

These programs offer testing, education, prevention and treatment services to control communicable diseases within our communities. Many of these services may be available at low or no cost.

	Number of Clients Served			
	Clinton	Gratiot	Montcalm	District
Communicable Disease Control	495	362	568	1,425
HIV Counseling/Testing	2	21	30	53
Immunizations	802	760	897	2,448
Sexually Transmitted Disease Control	41	57	71	169
<b>TOTALS</b>	<b>1,340</b>	<b>1,200</b>	<b>1,666</b>	<b>4,095</b>

Totals may not add up because some clients were served in more than one county.

**ORAL HEALTH**

For families that cannot afford dental care, help with prevention is essential for their children’s oral health. MMDHDs sealant and fluoride varnish programs, supported by United Way and Meijer, reach hundreds.

	Number of Clients Served			
	Clinton	Gratiot	Montcalm	District
Fluoride Varnish Application				
WIC	81	74	203	358
Head Start	0	0	667	667
<b>TOTALS</b>	<b>81</b>	<b>74</b>	<b>870</b>	<b>1,025</b>

Totals may not add up because some clients were served in more than one county.



# What's killing us and making us sick?

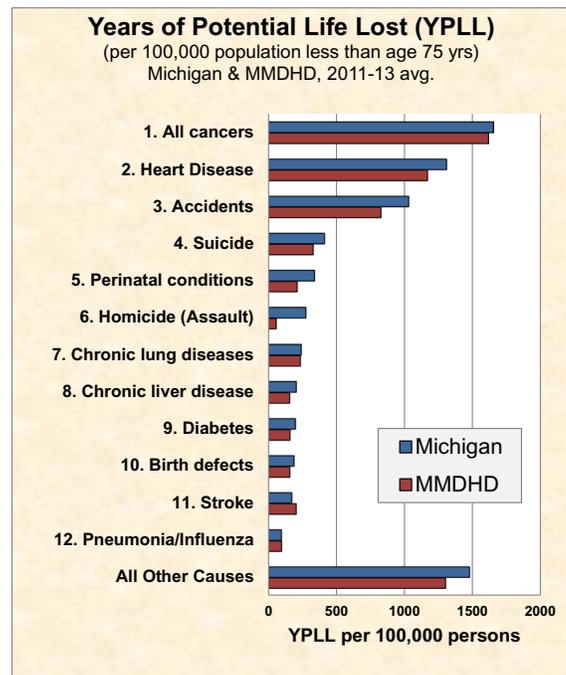
If you want to understand health—and what undermines health—one of the best places to start is with the leading causes of death. Obviously we should focus our health improvement efforts on the top killers. When we can, however, we like to use a slightly different indicator of the leading causes of death that weighs the deaths of young people more heavily, because of the value society assigns to the lives of infants and children. This is called Years of Potential Life Lost (YPLL). Years of Potential Life Lost for our district is shown in the chart (lower right).

Notice that heart disease and cancer are the main causes of YPLL. This reflects the fact that chronic diseases associated with unhealthy lifestyles have become our biggest health challenge. One of the most harmful health-related behaviors is tobacco use. Smoking is still the leading preventable cause of death. On the chart, smoking is related to the high rates of cancer and heart disease, and also perinatal conditions, lung disease, birth defects, pneumonia and stroke. Two other harmful behaviors are unhealthy diets and lack of physical activity. These behaviors cause destructive changes in every one of our body's systems. They especially affect the metabolic and circulatory systems and the kidneys and liver. These contribute to cancer, heart disease, liver disease, diabetes and stroke (see chart). Other killers in the top 12 are related to unhealthy lifestyles, too. Substance abuse, including the abuse of alcohol and prescription drugs contributes significantly to YPLL, especially to accidents, homicide and suicide.

Although deaths of infants and children are rare today, they contribute significantly to YPLL because they lose many years of potential life. When mothers are not healthy, their babies are likely to be unhealthy or unsafe. Unfortunately, young mothers today are all too often poor and vulnerable to health risks. Notice that premature birth (perinatal conditions) and birth

defects are among the top 12 killers. Finally, communicable diseases—illness caused by germs—make it into the top 12, including pneumonia and flu, hepatitis (chronic liver disease) and cancer (several cancers are caused by viruses including cervical cancer).

What follows on the next three pages is a brief exploration of health status in three critical areas that contribute to YPLL: maternal and child health, communicable disease and chronic disease. Because of their importance as leading causes of death and illness, these areas are the major focuses of what we do in public health.

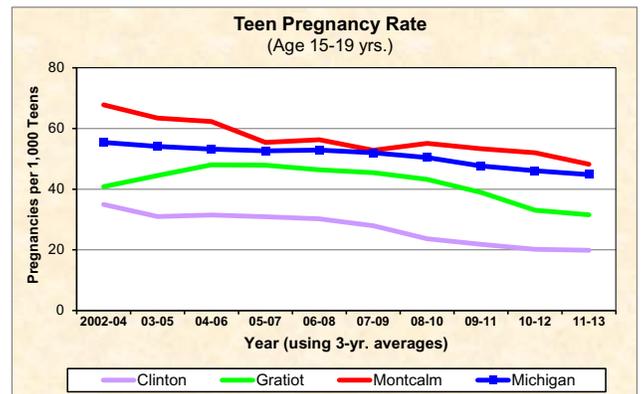


# Maternal and Child Health

Maternal and child health status may be the single best indicator of the overall health of a community. A community that can assure the well-being of its mothers and their babies is a strong community. For this reason, maternal and child health has always been a major focus of public health. Some of our most popular and well-known programs, like Women, Infants and Children (WIC) and the Maternal and Infant Health Program (MIHP), serve our mothers and children. WIC and the MIHP have been evaluated and shown to improve maternal and child health and reduce preterm births.

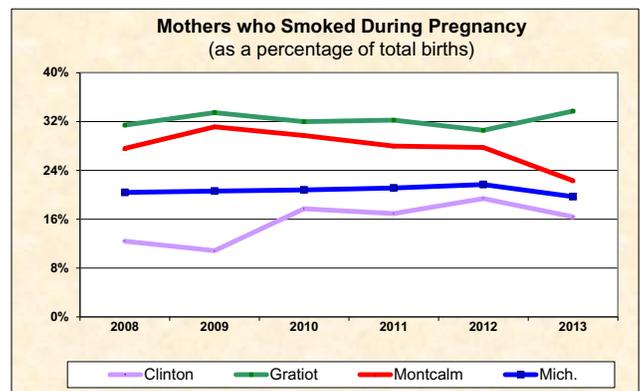
## Teen Pregnancy

One of public health's successes has been helping girls and their families prevent unwanted teen pregnancies. This has contributed to a dramatic improvement in the health of mothers and infants, and enables more girls to stay in school. Notice the long, steady decline in teen pregnancies in all the counties we serve. The teen pregnancy rates for Gratiot and Montcalm Counties are around the State average while Clinton is much lower. Public health doesn't get all the credit for this decline, however. It is part of the worldwide phenomenon of girls and women delaying motherhood to go to school and enter the workforce.



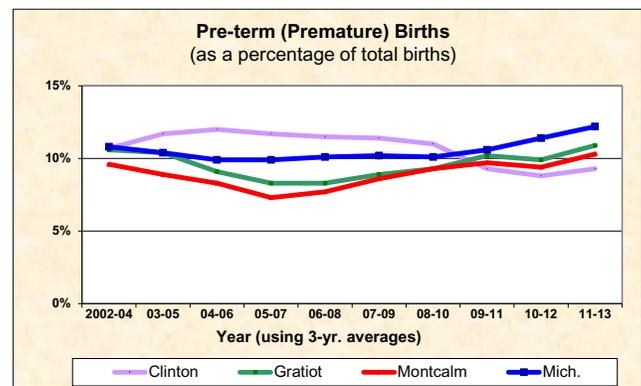
## Mothers who smoked during pregnancy

Mothers who smoke are more likely to have premature or low birth weight babies. Their babies are more likely to have birth defects, and their infants are more likely to develop asthma or other respiratory problems. Startlingly, parts of Mid-Michigan have stubbornly high rates of maternal smoking. Notice that Clinton County has a maternal smoking rate around 15 percent (lower than State average), whereas Gratiot and Montcalm have very high rates of maternal smoking—much higher than the average for Michigan as a whole. After learning this from the Live Well Gratiot Community Health Assessment, people in that community have stepped up smoking prevention efforts.



## Premature births

About one-in-four U.S. children are born in poverty. As a result, the health of mothers and babies is not ideal. When mothers are not healthy, there is a higher chance of premature birth. These babies are less likely to survive and can suffer long-term physical and cognitive problems. The care they receive in Neonatal Intensive Care is extremely expensive and drives up health care costs. This chart shows the rate of premature births for our counties and Michigan. Michigan's rate of 10 to 12 percent is high compared to other states and countries with similar economies. Unfortunately, our counties have prematurity rates about as high. There has been little improvement and it can't be corrected by health care alone. It depends on improving the living conditions of mothers, which is what we call a "social determinant" of health.



# Communicable Disease

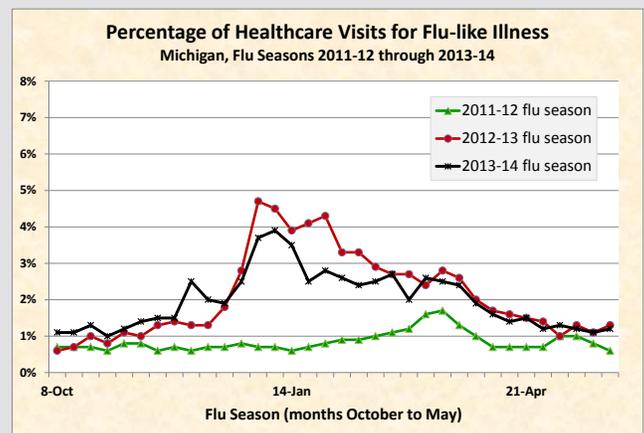
## Great strides in preventing communicable disease

In the 19th century, communicable diseases like dysentery, diphtheria, typhoid fever, small pox and polio were scourges that sickened and killed indiscriminately in Michigan. The public health services we offer today were developed to defeat communicable disease, including well and septic inspections, food service sanitation and outbreak investigations. Victory over communicable disease was finally achieved through the development of vaccines. In fact, the pertussis vaccine was developed by three women scientists in Grand Rapids in the 1930s, Pearl Kendrick, Grace Eldering and Loney Clinton Gordon. Pertussis and measles are making a comeback because levels of vaccination are lower than they should be.

## Vaccines: the best way to beat germs

Many diseases that used to sicken or kill many people are now rare because of vaccines. MMDHD provides a variety of immunizations through the Vaccines for Children, Immunization Action Plan and other programs. Vaccination information is entered into the advanced Michigan Care Improvement Registry (MCIR) database, so that wherever someone goes, their doctor knows what immunizations they need (and which not to give).

One of the most familiar vaccine-preventable illnesses is the flu. The chart on the right shows hospital visits for flu during the three flu seasons from 2011-12 through 2013-14. These data come from the nation's hospital-based Influenza-Like Illness Reporting Network. Notice that the 2013-14 flu season started early and was very active. Most years, three different types of influenza viruses circulate, so you can get a flu shot even after you have had influenza once and be protected against the other strains.



## 2014 Outbreaks

In 2014, MMDHD conducted five outbreak investigations typical of those that occur in group settings. Four of the outbreaks were in nursing homes; two possibly caused by norovirus (NV), one by respiratory syncytial virus (RSV), and the other by influenza, type A. In such situations, our role is to determine the cause and ensure that proper infection control practices are implemented. The other outbreak occurred from the spread of the scabies mite in a school and in-home settings. We also routinely investigate suspect cases that turn out to not be confirmed. One such group setting involved four individuals who developed illness after attending a fair. However, nothing at the fair could be identified that could have caused their illness.

MMDHD has established an Epi Team to respond to outbreaks of communicable disease. The Epi Team includes the Medical Director, Epidemiologist, Communicable Disease Nurses and field investigators. Like other Michigan local health departments, MMDHD uses the Michigan Disease Surveillance System (MDSS) to receive and manage disease reports. MDSS is a highly advanced database that allows local and State investigators to collaborate. It also reports cases to the Centers for Disease Control and Prevention (CDC), which can identify when local cases of diseases are connected to more widespread outbreaks.

Date	County	Exposure	# Ill	Suspect Vector	Agent
January	Montcalm	Nursing Home	11	Close contact	Influenza A
Feb/Mar & May	Gratiot	Nursing Home	31	Close contact	Suspected Norovirus
March	Clinton	Nursing Home	31	Close contact	RSV
March	Clinton	Nursing Home	59	Close contact	Suspected Norovirus
September	Montcalm	School	27	Close contact	Scabies

# Chronic Disease

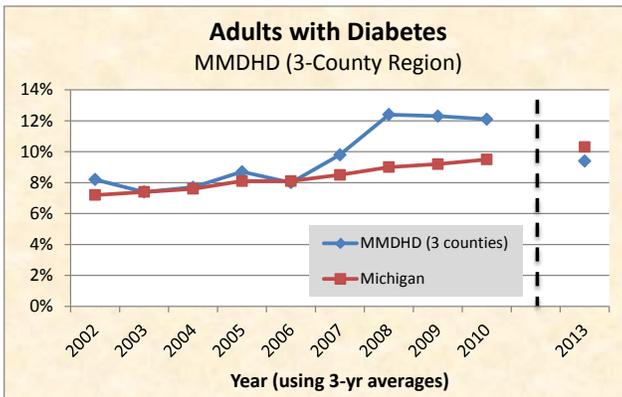
## A Surge in Chronic Disease

The health of the public has improved tremendously over the years. We live longer with less fear of disease than ever before. However, as we are all too aware, chronic illnesses associated with unhealthy lifestyles have emerged as new challenges to public health. Obesity and related syndromes like hypertension, stroke and diabetes are common in adults and are increasing in our children. Complicating the picture, people can live for a long time with these conditions, driving up the cost of health care. As the cost of health care rises, it affects our businesses and makes government too expensive. Public health is throwing itself into the struggle against chronic disease, just as it once did in the fight against germs.



## Taking action to improve health

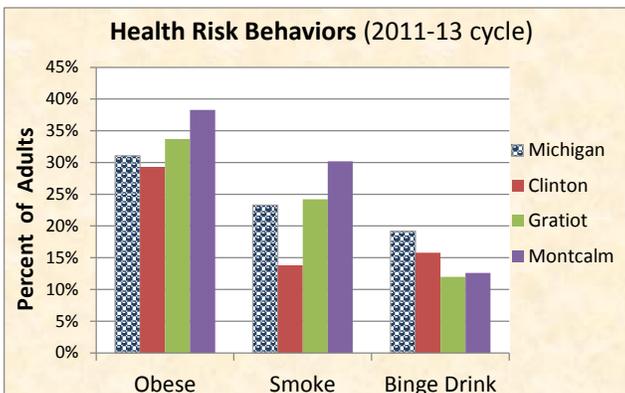
The three Community Health Assessment and Improvement Projects in our district, Healthy Montcalm, Live Well Gratiot and Healthy! Capital Counties, are targeting factors like this that increase our risk of chronic disease. The plans include strategies aimed at promoting physical activity and healthier diets; fighting substance abuse, including alcohol and tobacco; and increasing access to preventive health services for low-income and uninsured people. To see these plans, visit [www.mmdhd.org](http://www.mmdhd.org) and click on the "Community Health Assessment" link.



## Diabetes increasing

The chart at left shows that the percentage of people living with diabetes has nearly doubled in the past 20 years. Mid-Michigan is affected by the same increases in chronic disease seen elsewhere in the United States. It is no wonder. We have yet to make the changes in our lifestyles that we need to improve health.

*Due to methodology changes that took place in 2011, Behavioral Risk Factor Surveillance System (BRFSS) estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.*



## Health risk behaviors

The chart at left shows the percent of the population who are obese, smoke or binge drink in Clinton, Gratiot and Montcalm counties, and compares them to the State of Michigan. Notice that Gratiot and Montcalm counties have rates of obesity similar to the rest of Michigan, and smoking rates that are higher than Michigan. Clinton County has the highest rate of binge drinking. These patterns fit what is typically seen in other places. Of the three counties, Clinton County has higher household incomes and rates of college graduation. Such communities often have lower rates of obesity and lower rates of smoking, but higher rates of alcohol consumption.

# In the Spotlight

## Pathways to Better Health



Community Health Workers Molly Smith, Sam Tran,

Imagine that a public health worker goes into the home of a diabetic patient to explain the importance of eating a healthier diet. While in the home he notices ashtrays overflowing with cigarette butts, empty liquor bottles strewn about, no food in the cupboards, the water has been shut off and the patient complains of anxiety and depression. If the worker just delivers their healthy eating message and leaves, the patient obviously will never be able to control their diabetes and will wind up in the emergency room. Medical care has a limited impact on a person's health, while economic, social, educational, and environmental factors are much more influential. About half of all health care expenditures go to treat the sickest five percent of the population.

In 2012, the Mid-Michigan District Health Department recognized that we needed to change the way we do business. We knew that the Mid-Michigan Health Plan, which we used to pay for care for uninsured people in our District, was going to go away. The Federal government was going to stop funding county health plans. At the same time, we were interested in starting to work with the sickest and most expensive people in the community. We thought that if we could reduce the cost of these patients we might be able to persuade other health plans to fund the work.

Thinking along the same lines, the State of Michigan began encouraging health departments to consider the Community Pathways HUB Model. Pathways was originated by Doctors Sarah and Mark Redding in 2004. The Reddings began by working with native Alaskans who had tuberculosis. When medical treatment failed to make a lasting improvement in their patient's health, the Reddings recruited community members to help make changes in their living conditions such as adequate heat during the winter, a consistent food supply, and safe transportation to the health clinic. When the patients' health finally improved, the Reddings adapted this model to their current medical practice in Mansfield, Ohio, where they applied it to low-income pregnant women.

Pathways uses lay Community Health Workers (CHWs) to address the social conditions that affect health. Importantly, CHWs are not nurses or social workers, they are individuals from the community who share the life experiences of their clients, which means they often have more credibility. The CHWs find individuals at greatest risk, refer them to health and social services, make sure they actually get served, and document the results. By carefully documenting their work, CHWs make it possible to demonstrate the value of what they do in dollars and cents.

---

***Medical care has a limited impact on a person's health, while economic, social, educational, and environmental factors are much more influential.***

---



Shelly McPherson, and Angie Felton

---

*The cost and utilization of care  
definitely goes down when expensive  
patients work with Community  
Health Workers.*

---

Another important part of the Pathways model is the Community HUB. It is where the database that the CHWs use is housed and managed. It takes referrals, distributes them to the CHWs, creates reports on their work, and handles contracts and payments. The HUB holds the network of CHWs together.

In 2013, MMDHD convened a Tiger Team of health care and human services partners to consider launching a Pathways project. Looking at data from hospital partners, the Tiger Team was convinced we could reduce the cost of care significantly if we addressed the mental health issues of the most expensive patients. At the same time, health department staff (the Quality

Vision Action Team), while working on our strategic plan, decided the concept was so important that they made it the center piece of the plan. In March 2014, as we were working on a business plan for the project, the Ingham County Health Department offered us a grant to hire a CHW. Ingham County was one of three sites in Michigan to receive large grants from the Center for Medicare and Medicaid Services (CMS) to launch Pathways projects and they decided to fund CHWs in neighboring Clinton (which we serve) and Eaton counties. Muskegon and Saginaw were the other Pathways sites. Along with a grant to cover the CHW's salary, we would also get HUB services provided by the Ingham Health Plan Corporation and training provided by the Michigan Public Health Institute.

We hired our first CHW, Shelly McPherson, and her work had an immediate impact in Clinton County. Before long, people from other agencies in the community were telling us that hiring Shelley was one of the best things we ever did. And the stories of her work were very moving: saving a Veteran from losing his home, getting mental health services for someone who had never had them before, helping people get heat, food, medications, quit smoking, and the list goes on.

It was clear we needed to expand the program into Gratiot and Montcalm Counties. So we approached the Mid-Michigan Health Plan Board with a request for funding. They agreed to fund two positions, which were filled by Molly Smith and Samantha Tran. Before long, Shelley was so busy she had a waiting list, and the Health Plan agreed to hire another CHW for Clinton County. That position was filled by Angie Felton. All three of these most-recently hired CHWs were MMDHD employees who were looking for a way increase their involvement in the community.

Today our CHWs are working with over 100 people per month (Angie is just ready to be trained). We got a peek at some embargoed data that CMS has on the performance of the CHWs. It shows that the cost and utilization of care definitely goes down when expensive patients work with CHWs. There is still one piece of the puzzle missing, however. Our CHWs are not yet able to bill health plans for their services. This will require policy changes by the State of Michigan. It is very important that the State make these changes before the Mid-Michigan Health Plan runs out of money. You can bet we are spending a lot of time in Lansing trying to make sure this happens as soon as possible.



MID-MICHIGAN DISTRICT HEALTH DEPARTMENT  
Administrative Offices  
615 N. State Street., Suite 2  
Stanton, MI 48888-9702



BOARD OF HEALTH/  
ADMINISTRATIVE OFFICES

615 N. State St., Ste. 2  
Stanton, MI 48888-9702  
989.831.5237  
Fax: 989.831.5522

CLINTON BRANCH OFFICE

1307 E. Townsend Rd.  
St. Johns, MI 48879-9036  
989.224.2195  
Fax: 989.224.4300  
Off-site clinic: DeWitt

MONTCALM BRANCH OFFICE

615 N. State St., Ste. 1  
Stanton, MI 48888-9702  
989.831.5237  
Fax: 989.831.3666  
Off-site clinics:  
Greenville, Howard City

GRATIOT BRANCH OFFICE

151 Commerce Dr.  
Ithaca, MI 48847-1627  
989.875.3681  
Fax: 989.875.3747  
Off-site clinic: Alma

[www.mmdhd.org](http://www.mmdhd.org)

