

Macomb County Health Department 2009 Annual Report



“The health of the community depends not only upon the interest of the individual in his own health or those who are most dear to him, but also, and perhaps to a greater extent, in the efforts put forth by the community in the promotion of those policies and facilities for promoting good health, and for elimination of those conditions which constitute a definite hazard to the well being and even the lives of those citizens of the community.”

Oscar D. Stryker, M. D., Director
Macomb County Health
Department
1st Annual Public Health Report
1949

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Letter from the Director



Macomb County Health Department

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Dear Friends and Colleagues:

My letter this year has two purposes. One is to highlight activities of the Macomb County Health Department. The second is to thank all that have helped me work to improve the health and environment of Macomb County residents. Effective February 1, 2010, I will have retired after 38 years at the Department, 14 years as Director/Health Officer. I leave the position with the strong belief that the programs and services offered by the Health Department address the needs of this community and are the best in the state.

We have met the challenges of disease outbreaks, power outages, H1N1, changing health priorities, threats to Lake St. Clair and its connecting waterways, bioterrorism planning, and greatly reduced funding and staff levels.

The Health Department was able to address these and many other concerns because of the support it received and the staff that work so hard to protect our residents. I want to thank the Macomb County Board of Commissioners for their generous support of public health in Macomb County. Without their policy and financial commitment none of these accomplishments would have been possible. I would like to thank and acknowledge the staff of Macomb County Health Department for their loyalty and dedication in delivering services to the residents of Macomb County. Finally I want to thank the community for allowing me to serve them for so many years.

Since its inception in 1947, the Macomb County Health Department continues to meet the challenges in accomplishing our mission of health education, prevention, wellness, early identification of health problems, and environmental protection by developing unique and innovative programs to reduce risk to our residents. The role of the Macomb County Health Department will continue to evolve and expand as we meet the needs of our community in ways that reduce cost, increase access, and improve quality.

Some of the many services the Health Department provided to the community within the last year are as follows:

- The Macomb County Health Department worked in close cooperation with our community partners during the 2009 H1N1 Pandemic by enrolling 237 physician offices, 5 hospitals, and 33 pharmacies to provide H1N1 vaccines in our communities. During this pandemic, the Department also held mass clinics at various community locations providing over 40,000 additional H1N1 vaccine doses to the public at no charge. The Department also administered over 19,000 seasonal flu vaccine doses through our daily walk-in immunization clinics.
- Macomb County Health Department distributed 165,000 Compact Fluorescent Light bulbs to Macomb County residents, saving approximately \$1,000,000 in annual energy costs.

Please take a moment to peruse our work and contact us with your comments and ideas. Tell us what we do well and where we can improve further in protecting and promoting the personal and environmental health of our residents and our communities.

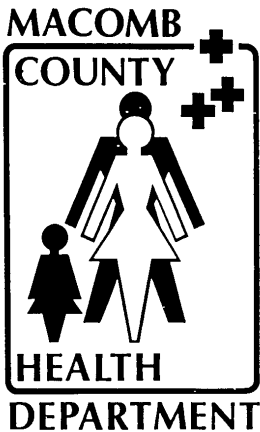
Sincerely,

A handwritten signature in cursive script, appearing to read "Thomas J. Kalkofen".

Thomas J. Kalkofen, M.P.H.
Director / Health Officer

**Accredited by the Michigan Public
Health Accreditation Commission**

PUBLIC HEALTH MISSION STATEMENT



The Mission of the Macomb County Health Department
is to

Improve, Promote and Protect

the personal and environmental health of our residents
and communities.

Public Health Guiding Values:

We value the delivery of public health services in a professional, ethical and competent manner, which respects the dignity of the individual.

**We are committed to excellence in all we do.
We value professional growth.**

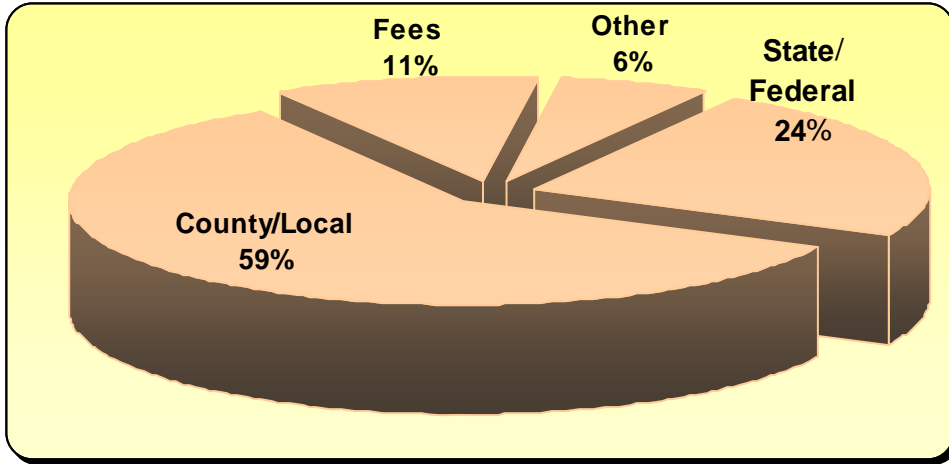
We value addressing community needs and the needs of population groups.

**We value a safe and healthy environment,
which promotes safe and healthy communities.**

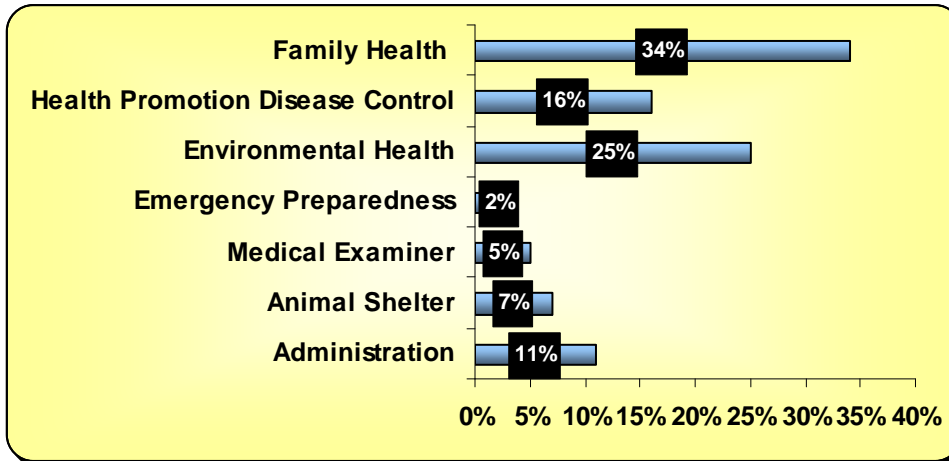
We value employee ideas, which generate quality improvement.

2009 BUDGET

Macomb County Health Department Funding Sources by Category Total Revenues: \$26,657,154



Macomb County Health Department Expenditures by Category Total Expenditures: \$26,657,154



ENVIRONMENTAL HEALTH

www.macombcountymi.gov/publichealth/EH/EHPrograms.htm

FOOD SERVICE SANITATION PROGRAM

The “Food Safety Training for Food Service Establishments” regulation, approved by the Macomb County Board of Commissioners in 2004, requires a manager at each food service establishment who is certified in safe food handling practices. The purpose of the regulation is to reduce the incidence of food borne illness associated with food obtained from food service establishments.



A copy of the regulation may be obtained at the Environmental Health office of the Macomb County Health Department, 43525 Elizabeth Road, Mt. Clemens, Michigan, 48043, during normal business hours. The regulation can also be viewed on the Health Department web site at www.macombcountymi.gov/publichealth/EH/Documents/FoodSafetyTrainingRegulation.pdf

Total licensed food service facilities in Macomb County = 2,643

NUMBER OF SERVICES PERFORMED IN 2009			
Food Service Inspections	4,420	Food Service Construction Plan Reviews	89
Follow-up Inspections	1,121	Food Borne Outbreak Investigations	7
Temporary Inspections	251	Food Service Complaints Investigated	332

PUBLIC SWIMMING POOL PROGRAM

The Environmental Health Services Division performs yearly inspections of all licensed public swimming pools and spas in Macomb County. Inspections address the condition of the pool structure, the enclosure area, water filtering and disinfection equipment, and safety equipment. Pool water quality is monitored throughout the swimming season by requiring pool owners to contract with a commercial laboratory for weekly testing and provide results to the Health Department. Macomb County Health Department staff conducted 430 inspections of public swimming pools in Macomb County in 2009.

BODY ART ESTABLISHMENT REGULATON

The “Regulations Governing Body Art Establishments in Macomb County” was approved by the Board of Commissioners in 2008. The purpose of the regulation is to protect the health of the public and prevent disease transmission by establishing sanitation, construction and equipment standards in body art facilities along with an inspection schedule to verify compliance.

The Macomb County Health Department inspected 36 body art and permanent cosmetic facilities in 2009.

LAKE ST. CLAIR ASSESSMENT

The Lake St. Clair Assessment is performed each year by the Macomb County Health Department in order to keep track of E. coli counts to help avoid beach closings and Total Maximum Daily Load (TMDL) exceedances. The monitoring involved in this project also looks for toxic contaminants in both the sediment and in the water column at 35 sites in Lake St. Clair and 20 sites in the Clinton River watershed.

These sites are also monitored to measure water quality parameters such as pH, dissolved oxygen, conductivity, water temperature, and turbidity to increase our understanding of the overall health of Lake St. Clair.

The results are then entered into a computerized data base and statistically analyzed to determine trends and correlations to obtain a history of Lake St. Clair water quality over a long period of time. A yearly report is prepared and past reports can be viewed at www.macombcountymi.gov/publichealth/EH/LSCA%20Report/LSCAIntroduction.htm

ST. CLAIR RIVER/LAKE ST. CLAIR DRINKING WATER PROTECTION PROJECT

The St. Clair River-Lake St. Clair Drinking Water Protection system continued to monitor the waters in the Huron to Erie Corridor in 2009. The plant operators, health departments and others are viewing the data from these monitors in real-time.



The drinking water monitoring system includes all 13 water plant intakes from Port Huron to the City of Wyandotte. The monitoring devices stationed at these plants include, at a minimum, a multiparameter probe (pH, conductivity, temperature, turbidity, oxidation-reduction potential, dissolved oxygen, and chlorophyll) and selected plants will be equipped with a fluorometer (petroleum compounds), a total organic carbon (TOC) analyzer and a gas chromatograph/mass spectrometer (volatile organic chemicals).

A companion project, the Regional Water Quality Information Management System (RWQIMS) is making the drinking water system data available to the public through the Internet at www.rwqims.com within 24 hours. The RWQIMS will also store and provide web-based public access to data from multiple water quality projects throughout southeast Michigan. Regional data owners are able to upload and share their information in a consistent and common format. To date 10 million data entries have been stored in the RWQIMS. Data searching and retrieval can be accomplished via dropdown menu query system or selecting locations of interest on a map.

Efforts continued in 2009 to establish a secure and sustainable funding mechanism for the long-term operation of this valuable tool in public health protection. A framework for a regional governing alliance was devised, but the accompanying cost allocation methodology was not acceptable to all parties, and therefore the alliance was not formed in 2009. Other funding sources have been and will continue to be explored.

ENVIRONMENTAL MANAGEMENT AND RISK ASSESSMENT PROGRAM (EMRAP)

EMRAP is a local approach to managing the environmental and public health threats posed by hazardous and polluting materials, which are routinely used, stored and transported through



Macomb County. EMRAP staff respond to intentional and unintentional discharges of polluting materials originating from residential, commercial, industrial and institutional sources.

In 2009, EMRAP responded to 51 complaints of polluting materials threatening our air, soil, groundwater or surface waters and ultimately public health.

Macomb County's Household Hazardous Waste (HHW) Program is also

administered through EMRAP. Throughout 2009, 3,315 households delivered 143,397 pounds of hazardous waste, which included approximately 12,000 pounds of pesticides, 26,600 pounds of solvents, 46,000 pounds of oil-based paints, 81 pounds of mercury and 2,500 pounds of unwanted medications. The Health Department continued its partnership for the 12th consecutive year with the Michigan Department of Agriculture Clean Sweep Program, which covers the cost for the disposal of collected pesticides and mercury.

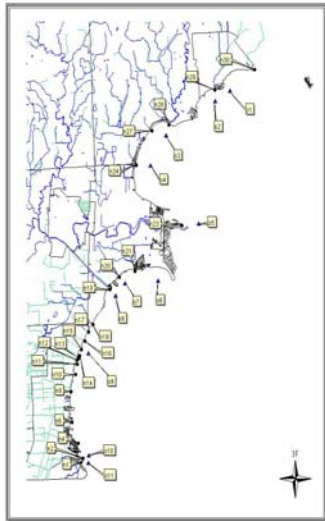
Additionally, growing concerns over the detection of trace pharmaceuticals in drinking water supplies prompted the Health Department to institute daily collection of waste medications. Residents can deliver such materials to certain Health Department offices on a daily basis for safe storage and disposal.

EMRAP staff partnered with a major Macomb County retailer to celebrate Earth Day by kicking off a free Compact Fluorescent Lamp (CFL) giveaway. The CFLs were purchased at cost through a Michigan Energy Efficiency Grant from the Michigan Department of Labor and Economic Growth (DLEG). Over 165,000 CFLs were given away to Macomb County residents. Use of the distributed CFLs by county residents is expected to yield an annual energy savings of over \$1 million.

SURFACE WATER IMPROVEMENT & MONITORING TEAM (SWIM)

The Surface Water Improvement and Monitoring (SWIM) Team Program encompasses three important aspects of water quality: monitoring, investigations and education. Each week, samples continue to be collected at over 60 sites from tributaries of the six subwatersheds in Macomb County.

Essential information on the water quality is gathered from these weekly samples. Samples are also collected twice weekly at the six public beaches in the county as part of the beach monitoring program. The monitoring program runs from April through September each year. Residents can view data on the internet at www.macombcountymi.gov/publichealth/EH/SurfaceWaterMonitoring.htm



The SWIM Team also is conducting illicit discharge investigations at commercial, industrial and institutional facilities within Sterling Heights and Clinton Township as part of a Clean Michigan Initiative Illicit Discharge Elimination Program (IDEP) Grant. Through the efforts of the SWIM Team, 70 million gallons per year of sewage and wastewater have been diverted away from Lake St. Clair and its tributaries and into an approved disposal/treatment system. This has been accomplished by:

- ◆ Surveying over 745 miles of open drain, rivers and streams;
- ◆ Identifying and testing more than 5,130 outfalls;
- ◆ Conducting investigations at 8,909 industrial, commercial, residential and institutional facilities since 1998. Approximately 15% of these facilities were found to have an illicit discharge that required correction. Educational efforts focused on water quality are conducted throughout the county. Efforts range from giving presentations at schools to participating in local outreach events. In 2009, over 10,000 residents, mostly school children, received information on water quality issues.

ONSITE SEWAGE DISPOSAL AND ONSITE WATER SUPPLY PROGRAMS

Areas of Macomb County that do not have municipal water and/or sewer available must rely on onsite facilities for their sewage disposal and water supply needs. The Macomb County Environmental Health Division administers public health regulations to ensure water supplies (wells) and sewage disposal systems are adequately installed and maintained to serve these residents. Onsite sewage and water supply systems also are required to be evaluated for adequate functionality at such time the property is transferred to another owner. Below is a summary of activities for these programs in 2009.

WATER SUPPLY AND SEWAGE DISPOSAL RELATED INSPECTION SERVICES

INSPECTION SERVICES	2009	2008	2007	2006	2005
Septic Permits Issued	232	211	299	407	499
Well Permits Issued	71	102	146	178	277
Well & Septic Permit Inspections	515	1,319	2,669	3,550	4,541
Water Samples Collected for Analysis	320	381	689	1,577	957
Septic System Evaluations for Property Transfer	397	345	420	545	730
Well Water System Evaluations for Property Transfer	178	149	150	239	311

VITAL RECORDS

www.macombcountymi.gov/publichealth/BRFS/healthstat.htm

BIRTHS AND DEATHS IN MACOMB COUNTY

Vital records are a source of important health information. Detailed health information is noted at the time of birth and death by the attending medical providers. These confidential health facts or data are collected on-line through a secure web-based system and compiled by the State to give us a picture of the health of our county and the state as a whole.

BIRTHS:

Of the **9,706** total births in Macomb County in the 2008 calendar year:

- ⇒ 94.4% were to women 20 years old or older (State: 89.9%)
- ⇒ 9.3% gave birth to low birthweight infants (State: 8.5%)
- ⇒ 2.8% gave birth to very low birthweight infants (State: 1.8%)
- ⇒ 30.3% were to unmarried mothers (State: 40.4%)
- ⇒ 15.2% smoked while pregnant (State: 18.1%)
- ⇒ 10.2% of mothers had less than 12 years of education (State: 16.5%)
- ⇒ 77.5% received prenatal care during the first trimester (State: 73.2%)

Statistically, unmarried women, as a group, have lower incomes, are more likely to smoke than married women, and have a greater proportion of low birth weight babies. Compared to infants of normal weight, low birth weight and very low birthweight infants are at increased risk for impaired development and infant death. Smoking during pregnancy is the single greatest risk factor for low birth weight.

DEATHS:

Major causes of death in Macomb County are similar to those statewide. The top three causes, Heart Disease, Cancer, and Chronic Lower Respiratory Disease account for over 58% of all mortality.

Leading Causes of Death and Cause-Specific Rates Macomb County and Michigan Residents, 2008 and United States Residents, 2006							
Michigan Rank	Cause of Death	Number of Deaths			Rate of Death		
		Macomb	Michigan	U. S.	Macomb	Michigan	U. S.
1	Diseases of the Heart	2,238	24,369	631,836	269.4	243.6	211.0
2	Cancer	1,803	20,159	559,888	217.1	201.5	187.0
3	Chronic Lower Respiratory Disease	435	5,161	124,583	52.4	51.6	41.6
4	Stroke	380	4,650	137,119	45.7	46.5	45.8
5	Accidents	317	3,679	121,599	38.2	36.8	40.6
	Total	7,642	88,272	2,426,264	920.0	882.4	810.4

Note: Rates are per 100,000 population.

Source: 2008 Michigan Resident Death File, Vital Records and Health Data Development Section, MDCH Volume 57, Number 14, April 17,2009, National Vital Statistics Report, National Center for Health Statistics.

MINOR CIVIL DIVISION BIRTHS & DEATHS

MINOR CIVIL DIVISION, 2008	Top 3 Causes of Death				
	BIRTH	DEATH	HEART	CANCER	CLRD*
TOTAL	9,706	7,642	2,238	1,803	435
ARMADA VILLAGE	32	27	9	7	2
CENTER LINE CITY	99	119	39	19	5
EASTPOINTE	400	348	97	76	20
FRASER CITY	137	147	51	26	9
GROSSE PTE SHORES	1	1	0	0	1
MEMPHIS-PT CITY	12	8	0	1	1
MT CLEMENS CITY	218	195	54	55	11
NEW BALTIMORE-PT CITY	182	79	26	16	5
NEW HAVEN-PT VILLAGE	111	37	7	9	5
RICHMOND CITY	92	63	15	14	5
ROMEO VILLAGE	69	42	14	11	2
ROSEVILLE CITY	646	527	144	126	30
ST CLAIR SHORES CITY	608	800	260	170	45
STERLING HEIGHTS CITY	1,504	1,042	302	256	48
UTICA CITY	81	62	17	17	2
WARREN CITY	1,633	1,520	486	332	83
ARMADA TOWNSHIP	7	19	3	8	2
BRUCE TOWNSHIP	35	33	3	10	2
CHESTERFIELD TOWNSHIP	482	260	76	76	14
CLINTON TOWNSHIP	1,107	957	263	223	62
HARRISON TOWNSHIP	234	225	67	62	15
LAKE TOWNSHIP	0	1	0	1	0
LENOX TOWNSHIP	27	47	16	10	1
MACOMB TOWNSHIP	986	381	121	99	21
RAY TOWNSHIP	30	28	6	6	1
RICHMOND TOWNSHIP	20	18	3	6	0
SHELBY TOWNSHIP	731	507	117	127	37
WASHINGTON TOWNSHIP	222	148	42	40	6
UNKNOWN MCD	0	1	0	0	0

* Chronic Lower Respiratory Disease

Source: 2008 Michigan Resident Death File, Division for Vital Records and Health Statistics, MDCH

HEALTH PROMOTION / DISEASE CONTROL

www.macombcountymi.gov/publichealth/HPDC/HPDC.htm

HEALTH PROMOTION

Non-communicable diseases (NCDs) such as cancer, heart disease, diabetes, stroke, kidney disease and chronic lower respiratory disease accounted for 5,223 out of 7,642 deaths or 68.3% of all deaths in Macomb County, 2008. Hospitalizations for the major NCDs represented 26.6% of all admissions (2008).

Premature deaths (occurring before age 75 years), and ambulatory care sensitive hospitalizations can *potentially* be prevented through activities such as health promotion, detecting and managing disease early through screening and follow-up, or intervening with medical and surgical treatments to increase survival. NCDs account for 27,245 Years of Productive Lives Lost before age 75 years (a rate of 3,510 YPLL per 100,000 population).

Research has identified the 6 main modifiable risk factors for NCDs as:

- 1) Tobacco use
- 2) Diet (indiscriminate eating)
- 3) High Blood Cholesterol
- 4) High Blood Sugar
- 5) Physical Inactivity
- 6) Overweight / Obesity.

Modified Risk Factors of Chronic Non-Communicable Diseases

Leading Cause of Illness & Death in Macomb County	MODIFIABLE RISK FACTORS					
	Tobacco	Diet	High Blood Cholesterol	High Blood Sugar	Physical Activity	Overweight Obesity
Heart disease	Y	Y	Y	Y	Y	Y
Cancer	Y	Y			Y	Y
Stroke	Y	Y	Y	Y	Y	Y
Diabetes		Y	Y	Y	Y	Y
Chronic lower resp. disease	Y	Y	Y	Y	Y	Y

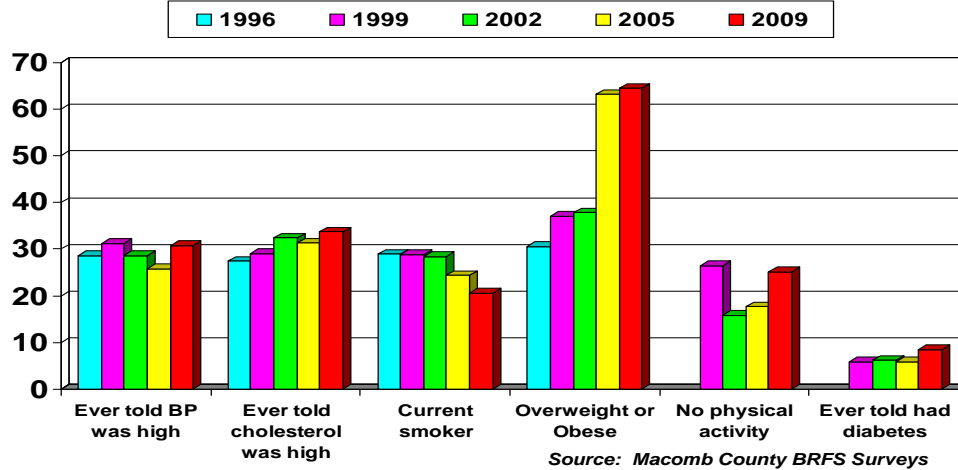
The preventable forms of non-communicable disease cannot be addressed by biomedical science. The prevention of NCDs is rooted in **culture** (the way a society lives), not science; and health promotion strategies are employed in their prevention.

MCHD has 4 program areas that address the prevention and control of NCDs:

- Cardiovascular Disease Risk Reduction (screening/early detection)
- Health Education (including Tobacco Prevention and Childhood Obesity)
- Nutrition
- Breast & Cervical Cancer Screening

The Macomb County 2009 Behavioral Risk Factor Survey (BRFS) was designed to identify priority health issues and the populations at greatest risk for health problems.

Trends in Modifiable Risk Factors in Macomb County, 1996-2009



Outcome objectives, (e.g. Healthy People 2010 and Healthy Michigan 2010 objectives) are long term and measurable. The objects of interest are mortality, morbidity, and disability. These objectives measure the level to which a health problem is to be reduced as a result of an intervention. A comparative review of some selected health indicators (for Macomb County, Michigan and USA) is shown in table below.

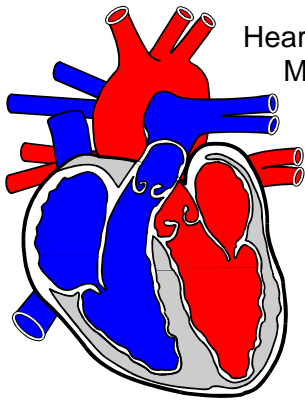
SELECTED LEADING HEALTH INDICATORS AND OBJECTIVES (HEALTHY PEOPLE 2010 & HEALTHY MICHIGAN 2010)

LEADING HEALTH INDICATORS OBJECTIVES	HP 2010 TARGET	MACOMB COUNTY (BRFS 2009)	MICHIGAN (BRFS 2008)	USA (BRFS 2009)
Increase the proportion of persons with health insurance	100%	87.3%	86.3%	85.3%
Reduce the proportion of adults who engage in no leisure time physical activity	20%	25.1%	25.1%	20.2%
Increase the proportion of adults who are at a healthy weight (BMI <25.0)	60%	35.6%	34.7%	35.9%
Reduce the proportion of adults who are obese (BMI >30.0)	15%	25.7%	30.1%	27.2%
Reduce tobacco use by adults	<12%	20.6%	20.2%	17.9%
Reduce the proportion of persons engaging in binge drinking.	<6%	18.2%	17.6%	15.5%
Reduce the overall cancer death rate	159.9 (per 100,000)	195.4	191.2	187.1 (2006 prov.)
Reduce the diabetes death rate	45 (per 100,000)	70.7*	82.3	23.3 (2006 prov.)
Reduce coronary heart disease deaths	166 (per 100,000)	237.3*	231.1	134.8 (2006 prov.)
Reduce stroke deaths	48 (per 100,000)	42.3*	46.5	43.6 (2006 prov.)
Reduce the proportion of adults with high blood pressure	16%	30.8%	27.8%	28.7%
Reduce the proportion of adults with high total blood cholesterol	17%	33.7%	27.8%	37.4%

Sources: 2009 BRFs Reports for Macomb County; 2008 BRFs Report for Michigan; and 2009 BRFs Report for USA;

* 2007 MDCH Health Statistics Tables for Michigan and Macomb County; CDC 2006 Provisional Death Statistics

CARDIOVASCULAR DISEASE RISK REDUCTION PROGRAM



Heart disease and stroke are the 1st and 4th leading causes of death in Macomb County. Risk factors for cardiovascular disease include high blood pressure, cigarette smoking, no physical activity, obesity (BMI >30), diabetes and high cholesterol. MCHD provides comprehensive risk reduction services for residents.

Heart Health for Seniors

- **10** presentations involving **171** Macomb County seniors highlighting cardiovascular disease risk factors

Community Screening Services (for cardiovascular disease risk factors)

- **1,828** residents screened at **100** community sites. Of these:
 - 20% were found to have high blood pressure
 - 16 residents were in the Urgent High Blood Pressure Category and 2 were in the Emergency High Blood Pressure Category
 - 39% were overweight and 33% were obese
 - 15% were smokers
 - 18% were physically inactive
- **2,158** residents at **32** community sites received combined blood pressure and cholesterol screening services. Of these:
 - 8% were found to have high total cholesterol and 10% were found to have borderline high total cholesterol with 2 or more cardiovascular risk factors
 - 26% were found to have undesirable HDL (good cholesterol)
 - 22% were found to have high blood pressure
 - 18 residents were in the Urgent High Blood Pressure Category and 3 residents were in the Emergency High Blood Pressure Category
 - 38% were overweight and 26% were obese
 - 5% were smokers
 - 11% were inactive
- **499** residents discovered to be at-risk were provided with follow-up services.

Cardiovascular-Related Educational Services to Macomb County Students

- **100** presentations to **2,519** student contacts of the “Healthy Kids Healthy Hearts” Program increased the knowledge base of 4th graders relating to physical activity, healthy eating and remaining tobacco-free.
- **23** “Macomb in Motion” and “Be Smart, Eat Smart” sessions provided for **551** students in kindergarten through 5th grade.

HEALTH EDUCATION PROGRAM

Establishing healthy behaviors during childhood is easier and more effective than trying to change unhealthy behaviors during adulthood. Schools have a critical role to play in promoting the health and safety of young people and helping them establish lifelong healthy behavior patterns. Macomb County Health Educators provide health information in schools, worksites and communities.

Empower Individuals and Communities with Health Education

- **11,000** students and community members provided with health information on various topics.
- Created **5** new car seat safety fact sheets - Choosing a Seat, Rear-Facing Use, Forward-Facing Use, Booster, Latch/Tether - and published online and distributed **1,000** sheets at car seat events, health fairs, Buckle-Bear presentations and individual appointments.
- **293** child car seat inspections conducted. **76%** of owner-installed car seats were installed incorrectly. Automobile sunshade screens "*My Car Seat Checked by Macomb County Health Department*" designed and **150** distributed.
- Conducted a Pandemic H1N1 public information educational campaign to encourage H1N1 vaccination in Macomb County.
 - Developed and maintained H1N1 dedicated web-pages for individuals and health care providers, and established and monitored a social media (Facebook) page which garnered **over 150** "Friends".
 - Established and provided Telephone Hotline (Phone Bank) services fielding **over 6,800** calls.
 - Posters and flyers developed to target specific groups, i.e., pregnant women, children, and at-risk adults. **112,000** posters and flyers distributed to schools, health care facilities, childcare centers, and community groups in the County.
 - **11,000** Pandemic Influenza Workbooks and approximately **7,000** bookmarks and magnets advertising Macomb County website address distributed to County schools, libraries, government/municipal offices, community centers, churches, senior centers, parks and recreation centers, healthcare facilities and senior living centers.

Tobacco-Free Macomb (Tobacco Prevention Coalition)

- Approximately **2,500** Macomb County students received tobacco prevention presentations.
- Over **150** high school and/or college students educated on the dangers of hookah (water pipe with loose tobacco) use.
- Hookah and spit tobacco informational handout developed and **over 3,400** distributed to physicians in the St. John and Henry Ford Hospital systems and Mt. Clemens Regional Medical Center.
- Coordinated the Macomb County Tobacco Prevention Coalition and maintained the website, www.macombtobaccoprevention.com.
- Maintained and published current list of 100% smoke-free restaurants in Macomb County on Tobacco Prevention Coalition website.

HEALTHY KIDS HEALTHY FUTURES COALITION

The Healthy Kids–Healthy Futures Coalition is a community-based coalition with active participation from local agencies that share a common mission to promote healthy nutrition choices and physical activity behaviors among Macomb County children. The long-range goal of Healthy Kids–Healthy Futures is to reduce the incidence of childhood obesity and chronic diseases such as type II diabetes, high blood pressure and cardiovascular disease.

Address Childhood Obesity

- Provide online health information promoting healthy nutrition choices and physical activity behaviors among children through maintenance of website, www.healthykidshealthyfutures.com.
- Sponsored “**Fun & Fitness Day 2009**” at Veterans Memorial Park in Roseville, where community members received free physical activity resources and healthy family nutrition information.
- Updated and published “**Out and About in Macomb – A Guide to Fun Physical Activities for You and Your Family**”, and distributed **36,000** copies through schools, libraries, health fairs, and community events.

NUTRITION SERVICES PROGRAM

Nutrition affects health from conception through the senior years. Health promotion and chronic disease prevention services address nutritional needs throughout the stages of life.

Improve Quality of Health and Life

- **6,484** individuals received information on a variety of nutrition topics.
- **105** nutrition education presentations to community groups.
- Developed and distributed over **1,000** H1N1 flu information fact sheets on the relationship between a healthy diet and the prevention and recovery from the flu.
- Referred **400** residents to a wide variety of community based agencies to address their nutrition needs.
- Presented nutrition displays and distributed information at over **25** health fairs throughout the community reaching **2,593** Macomb County residents.

Combat Childhood Obesity in Macomb County

- **53** childhood obesity prevention presentations.
- **2,000** childhood nutrition handbooks reprinted and distributed, promoting establishment of healthy eating habits at an early age to prevent childhood obesity and reduce the risk of chronic disease.
- **300** families received free nutrition education resources and healthy eating information at “**Fun and Fitness Day 2009**” in Roseville.
- **Over 1,000** infant feeding guides distributed for new mothers promoting good nutrition for growing babies.

- **500** breastfeeding resource packets designed to support and encourage breastfeeding were distributed.
- **15** school health initiatives provided education to more than **700** adolescents about healthy food choices and increased physical activity.

Focus on Nutrition Education Impacting Health Challenges of Senior Citizens

- Over **1,000** seniors provided with type II diabetes and heart health information.
- Promoted healthy eating and exercise at **11** senior health fairs.
- **10** programs presented addressing the importance of early colorectal cancer screenings and the dietary implications for cancer prevention.

Progress Toward a Healthier Community

- Created a healthier school environment for students through collaboration with Blue Cross Blue Shield community grantee, King Academy of Mt. Clemens.
- Established community partnerships with over **50** Macomb County pediatricians to combat childhood obesity.
- Collaborated with the Macomb Food Program in the areas of hunger awareness, advocacy, and financial support.

BREAST AND CERVICAL CANCER SCREENING PROGRAM

The goal of a Breast and Cervical Cancer Screening Program (BCCSP) is to reduce morbidity and mortality from breast and cervical cancer among the most economically vulnerable female population. Through the Macomb County Health Department’s BCCSP, low-income women (\leq 185% Federal Poverty Level) aged 40-64 years who are uninsured are provided access to annual screening and some recommended diagnostic services.

Overview of Women served by BCCSP, 2009

AGE GROUP	NUMBER	PERCENT
40-44 yrs	161	21.4%
45-49 yrs	190	25.27%
50-54 yrs	177	23.54%
55-59 yrs	138	18.35%
60-64 yrs	86	11.44%

RACE/ETHNICITY	NUMBER	PERCENT
White	608	80.85%
Black	73	9.70%
Hispanic	26	3.46%
Asian	40	5.32%
Native American	5	0.66%

- Breast and cervical cancer screening for **752** women.
- **63** breast biopsies performed for Macomb County clients.
- **13** cases of breast cancer diagnosed (all of these women qualified for special Medicaid coverage to cover all the costs of their cancer care).
- **2** of **9** clients identified with early cervical cancer received special Medicaid coverage for their treatment.

HEARING AND VISION PROGRAM

The Hearing & Vision Screening Program is an early detection program that provides free hearing and vision screening, referrals and follow-up for preschool and school-aged children.



Vision Services

- **45,504** school-aged children, **8,486** preschool-aged children and **457** special education students had their vision screened.
- **6,804** school-aged, **506** preschool-aged and **37** special education students were referred for further evaluation.

Hearing Services

- **27,442** school-aged, **8,474** preschool aged and **529** special education children had their hearing screened.
- **1,090** school-aged, **317** preschool aged and **13** special education student were referred for further evaluation.
- **510** children received a diagnostic evaluation by an Ear, Nose and Throat Doctor and were rechecked by an audiologist at Otology Clinics during school year 2008-09.

HEARING & VISION SCREENING SERVICES AND COVERAGE BY AGE/GRADE

SCHOOL-YEAR 2008-09 REPORT	VISION SCREENED	HEARING SCREENED
Pre-school – 3 yr old	641	685
Pre-school – 4 yr old	5,859	5,866
Pre-school – 5 yr old	1,986	1,923
Kindergarten	25	8,575
1 st Grade	9,322	525
2 nd Grade	516	8,674
3 rd Grade	9,651	396
4 th Grade	638	8,983
5 th Grade	9,802	277
6 th Grade	554	12
7 th Grade	9,337	0
8 th Grade	440	0
9 th Grade	5,180	0
10 th Grade	39	0
11 th Grade	0	0
Special Education	457	529
TOTAL	54,447	36,445

COMMUNITY HEALTH OUTREACH PROGRAM (CHOP)

The Community Health Outreach Program provides health information and referral services for individuals in the communities of Mt. Clemens and Clinton Township.

COMMUNITY HEALTH OUTREACH PROGRAM ACTIVITIES

CHOP Indicators	Calendar Year 2008	Calendar Year 2009
New Clients	121	73
Returning Client Visits	659	470
Contacts (Prospective clients)	104	74
High-Risk Pregnant Clients	106	70
Community Health Education Presentations	9	8
Health Education Community Participants	--	134

GENDER AND RACE/ETHNICITY OF CLIENTS SEEN THROUGH CHOP

CHOP Clients	Calendar Year 2008 [^]	Calendar Year 2009 [*]	% Pop. Served 2009
African-American Males	75	199	28.8%
African-American Females	178	302	43.7%
Caucasian Males	11	25	3.6%
Caucasian Females	64	121	17.5%
Hispanic Males	2	0	0.0%
Hispanic Females	0	0	0.0%
Asian Males	1	19	2.7%
Asian Females	14	14	2.0%
All Others	2	11	1.6%
TOTAL	347	691	99.9%

[^] Numbers **may** be higher as data for Jan-Sep represented only new clients. Oct-Dec data represented all clients.

^{*} Racial/Gender statistics for 11 months only.

DISEASE CONTROL

COMMUNICABLE DISEASE PROGRAM

Reporting of communicable diseases is required by Michigan Law, and the investigation of these reports in Macomb County is undertaken by the Public Health Nurses and Disease Specialists in the Communicable Disease Program.

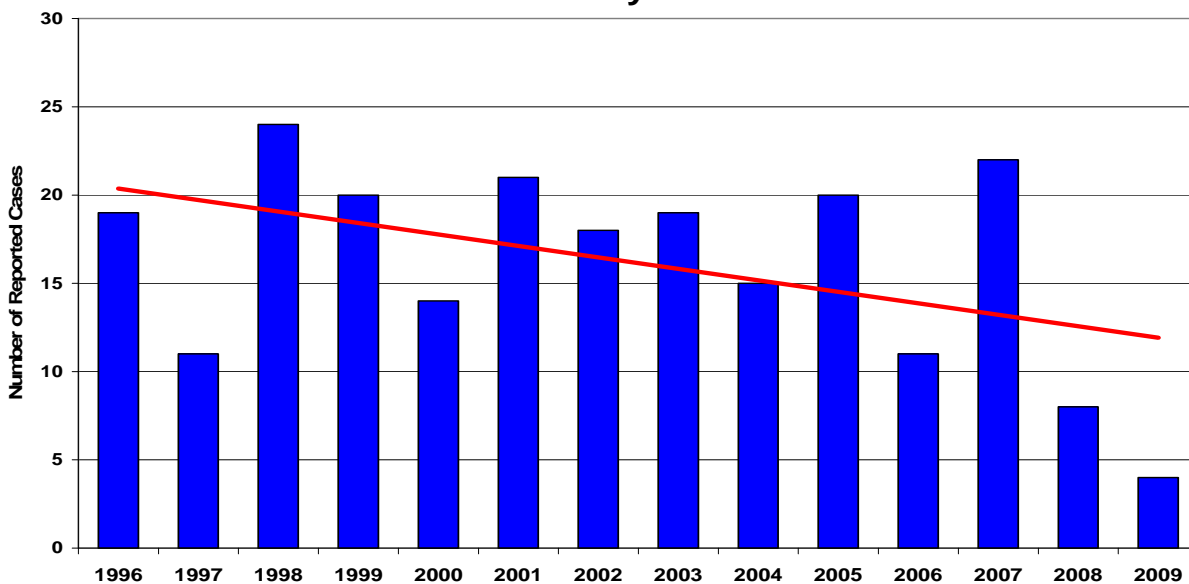
PROGRAMS	INDIVIDUALS SERVED
Communicable Disease Investigations	1,440
HIV/AIDS Counseling and Testing	1,875
Sexually Transmitted Disease Testing	3,101
Sexually Transmitted Disease Education	1,900
Foreign Travel Information	547
Tuberculosis Control	225
Tuberculosis School Investigation*	732
School Immunization Program Assessments	50,029

*In March 2009, MCHD completed the second round of tuberculosis contact Investigation involving 2 Macomb County schools:

- 504 (58.6%) students tested negative in both rounds
- 228 (26.1%) students were not fully evaluated (only tested in December 2008 round)
- 134 (15.2%) did not present for evaluation.
- 10 baseline or prior positives (rate = 1.3%)
- 4 conversions who were negative in round 1 and positive in round 2 (rate = 0.5%)

Tuberculosis is showing a downward trend in numbers over the period 1996-2009.

Active Tuberculosis Cases Macomb County 1996-2009



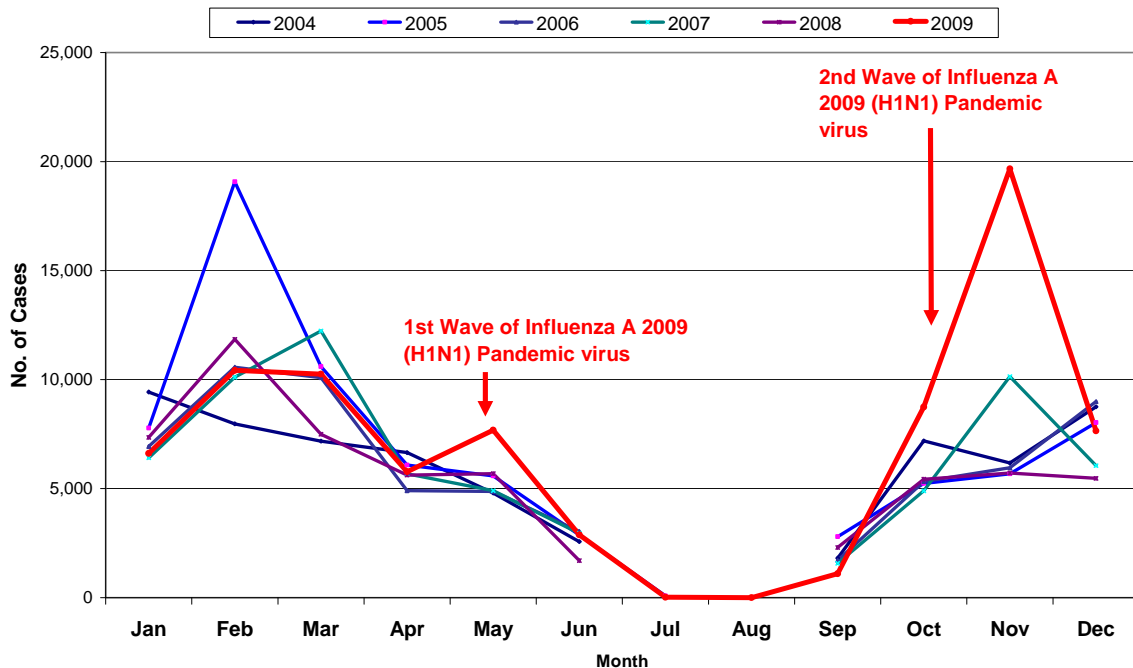
REPORTABLE COMMUNICABLE DISEASES IIN MACOMB COUNTY, 2009-2004

COMMUNICABLE DISEASES	2009	2008	2007	2006	2005	2004
1. Influenza-Like Illness	79,787	58,801	64,963	62,393	73,803	62,532
2. Chlamydia	2,217	1,540	1,635	1,380	1,297	1,048
3. Gonorrhea	567	446	446	468	398	240
4. Hepatitis C (chronic)	536	509	389	386	334	337
5. Hepatitis B (chronic)	161	145	157	175	188	159
6. Varicella (Chicken Pox)	120	224	260	462	395	397
7. Salmonellosis	83	63	88	72	77	63
8. Invasive Streptococcus pneumonia disease	63	73	64	63	-	20
9. Viral Meningitis	71	94	79	87	94	79
10. Pertussis (Whooping cough)	70	30	15	4	12	-

2009 saw the advent of a novel strain of H1N1 influenza virus, and the subsequent declaration of a Pandemic situation by the World Health Organization on 11 June 2009. There were 2 waves of infection in April-May, and Oct-November 2009.

There was development of a vaccine and a far-reaching H1N1 vaccination program commenced in late October 2009.

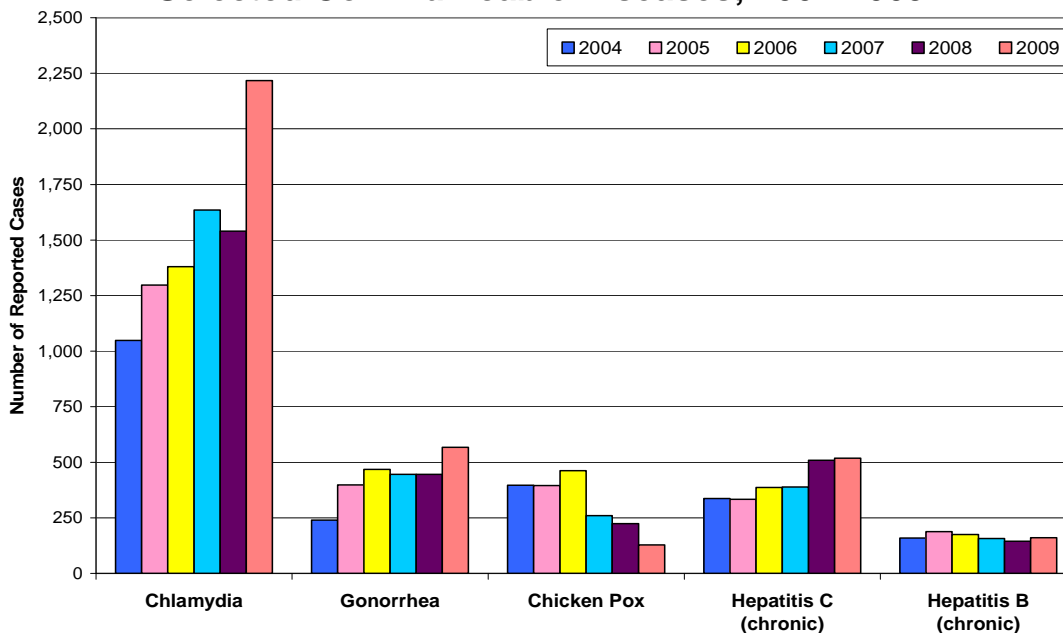
Historical Macomb County Influenza-Like Illness Reports 2004-2009



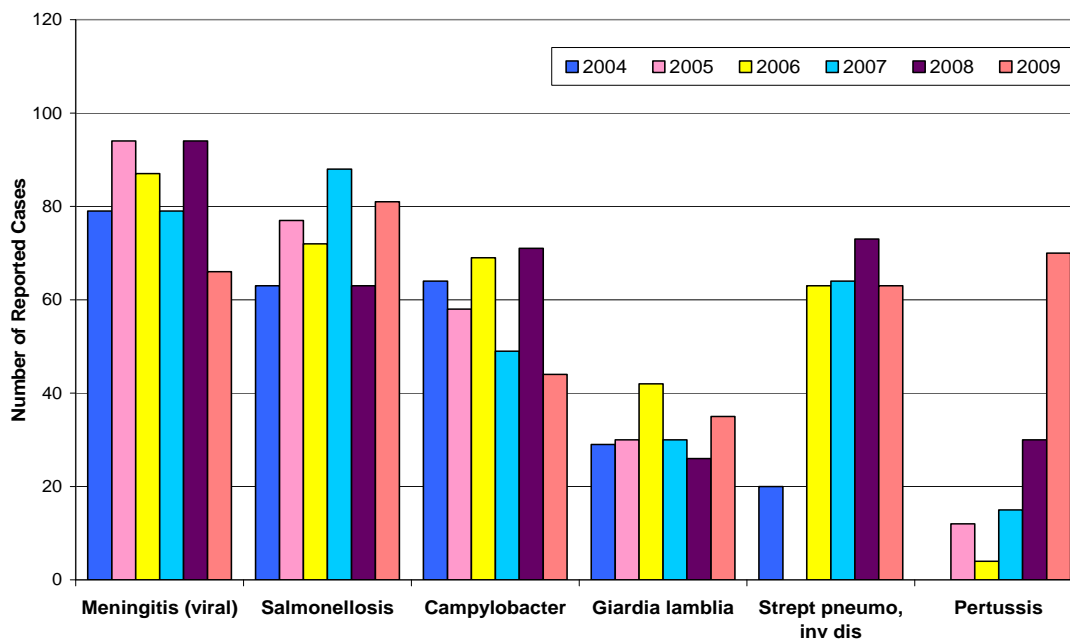
Over the six-year period 2004-2009, there have been sharp and steady increases in the number of case reports of Chlamydia (+111.5%), Gonorrhea (+136.3%) and Hepatitis C (+59.1%). Pertussis (a vaccine-preventable disease) has shown a significant increase (+483.3%) from 12 cases in 2005 to 70 in 2009.

Chicken Pox (-69.8%) has shown significant decline in numbers over the same period.

Selected Communicable Diseases; 2004-2009



Selected Communicable Diseases: 2004-2009



FAMILY HEALTH SERVICES

www.macombcountymi.gov/publichealth/ClinicServices/fhs_FamilyHealthServices.htm

FAMILY PLANNING PROGRAM

The MCHD Family Planning Program is a Title X, Federally funded program serving women and men for reproductive health care. In 2009, the Family Planning Program provided reproductive education, pelvic exams, Pap smears, and contraceptives at reduced cost to 3,260 clients. The Program encourages low-income females between 19 and 44 years of age to apply for the Plan First! Program, administered by the State of Michigan. This program covers the cost of pelvic exams, Pap smears, and birth control for eligible females. Applications are available in our Family Planning Clinics. By assisting clients with the Plan First! application process, 1,371 females were enrolled into the Plan First! Program during 2009.



Two full-time Nurse Practitioners and one part-time Gynecologist perform exams while providing direction to clients on how to proceed with their health care.

The expertise of these three practitioners, with support from both nursing and clerical staff, provides high quality services to all clients, regardless of their circumstances. Through collaboration with community agencies, 160 clients with abnormal Pap smears had access to additional diagnostic testing and treatment when necessary.

WOMEN, INFANTS & CHILDREN (WIC) NUTRITION PROGRAM

- In March 2009, the Macomb County WIC Program successfully transitioned from a paper-based processing system to an electronic-based system of processing and recordkeeping, called MI-WIC. The MI-WIC system, a web-based application which has been implemented throughout Michigan, is the first system in the United States to incorporate web-based electronic recordkeeping, electronic benefit issuance (EBT), and the new USDA WIC food packages.
- In March 2009, the Macomb County WIC program implemented an e-mail account for WIC participants to send their nutrition education certificates (lessons completed on-line); almost 2000 families participated in this initiative, which saved office visits. This initiative streamlines services and saves resources for WIC families as well as WIC staff.



MICHILD/HEALTHY KIDS

During 2009, 1,590 low-income Macomb County children and pregnant women received MICHild/Healthy Kids health insurance through public health outreach and case finding efforts, providing them with a medical home and access to quality well child care, immunizations, screening tests, and sick care supervision. There is continued high demand for assistance with follow-up after their application reaches the Department of Human Services. This high demand uses an e-mail process between Macomb County Health Department staff and the Department of Human Services staff that allows cases with extenuating circumstances, like illness of a newborn or delivery prior to reaching eligibility, to be processed more quickly thus assuring access to needed medical care.



PUBLIC HEALTH NURSING

The Macomb County Health Department has a Public Health Nurse (PHN) available Monday thru Friday, 8:30 AM to 5:00 PM to answer any question a Macomb County resident may have. In 2009 there is continued high demand for our Phone Duty Nurse services as well as an increase in the complexity of needs. Many families are finding themselves, for the first time, in need of State and Federally funded programs and have no idea where to turn. Our nurses are giving emotional support to families who have just experienced a job loss and educating them on how to navigate the available support systems.

It is not uncommon for one family to need the number for a low cost clinic, emergency food, utility assistance and the Department of Human Services. Providing this service helps to maintain the health and well being of Macomb County residents who might otherwise fall through the cracks. In 2009, Public Health Nursing provided 7,383 direct phone services.

Public Health Nursing will continue to provide in-home services to and coordinate at risk infants for the Early On program, children who are lead burdened, and families of newborns, and refer these children to MCHD services and community resources. In 2009 Public Health Nursing provided 964 home visits.

CHILDREN'S SPECIAL HEALTH CARE SERVICES (CSHCS)

The MCHD locally based services staff are dedicated to assisting children and families with qualifying medical conditions meet their specialty health care needs. In 2009, 1,900 children received an array of services for medical, hospitalization, hospice, pharmacy, diagnostic, private duty nursing, and specialty equipment/ramp services.

The Case Manager PHN provided 123 Plans of Care assessment services and 70 case management visits to families in need of PHN intervention.

FETAL INFANT MORTALITY REVIEW PROGRAM (FIMR)

The task of the MCHD FIMR Case Review is to take a close look at everything that affected the health of the mother, fetus, or infant when there has been a fetal or infant death. Case Review Team is composed of health, academic, and social service community partners. In 2009, 20 infant mortality cases were presented to the Case Review Team. Significant system issues are identified and recommendations are summarized.

FIMR review is a public health opportunity to look at and improve local issues that may contribute to disparities and poor birth outcomes.

VACCINE-PREVENTABLE DISEASES IMMUNIZATION DIVISION

Vaccines have reduced or eliminated many infectious diseases that once routinely killed or harmed many infants, children, and adults. However, the viruses and bacteria that cause vaccine-preventable disease and death still exist and can be passed on to people who are not protected by vaccines.



However, the viruses and bacteria that cause vaccine-preventable disease and death still exist and can be passed on to people who are not protected by vaccines.

Vaccine-preventable diseases have many social and economic costs: sick children miss school and parents lose time from work. These diseases also result in doctor's visits, hospitalizations, and even premature death.

During 2009, Macomb County Health Department Immunization Clinics provided the following protective doses to our children:

- Measles/Mumps/Rubella – 3,426 doses
- Varicella (Chickenpox)– 5,341 doses
- Diphtheria/Tetanus/Pertussis(Whooping Cough) – 7,898 doses
- Haemophilis influenzae type b (HiB disease)– 4,002 doses
- Hepatitis A – 7,619 doses
- Hepatitis B – 3,280 doses
- Influenza – 7,208 doses
- Meningitis – 1,794 doses
- Polio – 4,527 doses
- Pneumococcal – 4,368 doses
- Rotavirus – 1,943 doses

Children under 5 are especially susceptible to disease because their immune systems have not built up the necessary defenses to fight infection. By immunizing on time (by age 2), parents can protect their children from disease and also protect others at schools or daycares.

It is also important for adults to continue getting immunized. Tetanus can only be prevented with immunization. Tetanus bacteria are widespread in the environment. If vaccination against tetanus were stopped, persons of all ages would be susceptible to this serious disease. Everyone needs a Tetanus booster every 10 years. During 2009, Macomb County Health Department Immunization Clinics provided the following protective doses to adults:

- Adult Diphtheria/Tetanus – 2,935 doses
- Hepatitis A – 2,312 doses
- Hepatitis B – 3,252 doses
- Influenza – 12,550 doses
- Immune Globulin – 9 doses
- Meningitis – 138 doses
- Measles, Mumps, Rubella – 1,151 doses
- Pneumonia – 757 doses
- Polio – 118 doses
- Rabies Pre/Post-exposure – 19 doses
- Varicella – 551 doses
- Shingles – 1,202 doses



SPECIAL ADULT VACCINE PROGRAM

Clients 19 years and older who were without insurance or whose insurance does not cover the cost of vaccines, were able to get vaccines at Macomb County Health Department offices through the American Recovery and Reinvestment Act (ARRA) program. The vaccines were provided through the Michigan Department of Community Health. The only cost to the client was the administration fee of \$8.00 per shot.

- **HPV4 vaccine (Gardasil)** is available through this program for women 19 through 26 yrs of age. 771 doses were given in 2009.
- **Shingles vaccine (Zostavax)** is available for those 60 years of age and older. 650 doses were given in 2009.
- **Varicella vaccine** is available for those born in 1980 or after with no prior immunization/incomplete series or no evidence of chickenpox immunity. 60 doses were given in 2009.
- **Pneumococcal vaccine** is available for those who are current smokers, have asthmatic conditions, or other high risk health conditions. 127 doses were given in 2009.

DENTAL SERVICES



The Health Department's Dental Clinic provides high quality preventive and restorative treatment to adults and children of Macomb County who are considered to be low income. The Dental Clinic accepts Medicaid for individuals under the age of 21. The fees charged for self paying clientele are reduced in comparison to private practice. Examples of the many services that are provided in the clinic include: examinations, cleaning, x-rays, fillings, fluoride treatments, sealants, bonding, crowns and dentures.

DENTAL SERVICES	2009	2008	2007	2006
Total Client Visits	2,710	2,411	2,465	2,411
Number of Services	6,100	6,553	6,650	6,423
Fluoride Treatments	276	257	287	263

DENTAL SERVICE PAYMENTS	2009	2008	2007	2006
Self Pay	2,224	1,694	1,347	1,784
Medicaid	1,444	1,340	1,737	1,243

MATERNAL / CHILD HEALTH SERVICES

The Maternal/Child Health Services program provides preventive and primary health care services to Macomb County residents. The mission is to improve, promote and protect the health status of county residents through health screening, assessment, anticipatory guidance, education and referral as needed. Services are delivered in homes, schools, clinics, and community outreach sites.

MATERNAL/CHILD HEALTH SERVICES	2009	2008	2007	2006
Home Visits	964	1,199	1,200	1,153
Phone Services	7,383	9,336	9,519	7,760
Immunization Hours	5,063	2,738	3,425	2,284
Community Contacts	406	626	607	708
Total # People Served	7,173	8,565	7,988	7,884
Total # of Services Provided	17,142	21,307	20,134	19,840

EMERGENCY PREPAREDNESS PROGRAM

www.macombcountymi.gov/publichealth/EPP/EmergencyPreparednessProgram.htm

The Emergency Preparedness Program completed two major exercises in 2009. The first, an exercise at the Distribution Node which provided training to workers who will be at the site for a real event. The Distribution Node is the location within the county where the Strategic National Stockpile (SNS) of medications and supplies for the residents are stored.



This exercise provided the needed capabilities to the workers who assist from several county departments. The State of Michigan Office of Public Health Preparedness provided oversight at the location of the exercise. The SNS was shipped to the location where the Distribution Node workers received, sorted, accounted for and prepared the medications for shipment to the Dispensing Sites where the residents come to receive their allotment of medication.

The second exercise was held in the Chippewa Valley High School where the Health Department provided workers to set up the school as a dispensing site for residents to receive their medications. Over 50 people were involved with the exercise.

Nurses, Environmental Health Services and Administration took part in the exercise. The exercise lasted approximately three hours.

Setting up the school as a receiving site was the initial goal for the exercise. The Environmental Health Services Division will provide a Logistics Chief from the Department in both live and exercise type events. Environmental Health Division provides the equipment the Operations Section Chief requires in order to dispense to the residents as they go through their lines at the different sites throughout the county.

Several emergency plans were completed within the program. Plans include the Continuity of Operations Plan, Emergency Coordinating Center Guide, a revised Strategic National Stockpile Plan as well as an upgrade to the All-Hazards Plan.

2010 will provide exercises that will include activation of the Emergency Coordinating Center and the Distribution Node. Training will be provided to Environmental Health Services Division Staff and other County departments who will take part in the exercise.



MACOMB COUNTY MEDICAL EXAMINER'S OFFICE

www.macombcountymi.gov/publichealth/Medical-Examiner/medicalexaminer.htm

The Medical Examiner's duty is to investigate accidental, homicidal, suicidal and sudden unexpected deaths which occur in the county. The investigation includes an examination of the scene, autopsy when necessary to determine the cause and manner of death and certification of death certificates for these cases.



In 2009, the Medical Examiner's Office investigated 1,792 deaths, performed 582 forensic examinations and issued 2,904 cremation permits. Additionally,

1,426 home hospice deaths were reported to the Medical Examiner's Office. The total number of death investigations increased by 4% from 2008 and the total number of forensic examinations increased by 13% from 2008. Cremation permits issued in 2009 showed a 3% increase from 2008.

Drug related deaths continue to rise in Macomb County. Abuse of prescription medications and use of illicit drugs, primarily cocaine and heroin continue to be a major concern. The total number of drug related deaths increased by 25% from 2008. Suicide and homicide deaths also increased in 2009 when compared to 2008.

As in previous years, the Medical Examiner's Office continues to work closely with the Gift of Life Organ and Tissue Procurement Agency and the Michigan Eye Bank. Due to this coordinated effort, the number of potential donors is maximized without compromising any investigation.



The new Medical Examiner's Office continues to be a state-of-the-art facility which is frequently toured by Medical Examiner personnel from other counties, who are looking to incorporate its design into their facility.

ANIMAL SHELTER

www.macombcountymi.gov/publichealth/animal.htm

The Animal Shelter is committed to ensuring the safety of Macomb County residents with regard to animal related issues, while providing appropriate and humane treatment of the animals. The Shelter's animal placement services have been expanded to include Adopt a Pet Services, approved animal rescue leagues and donation of dogs to various service organizations including Leader Dogs, Paws with a Cause, and the U.S. Customs Service.



The Animal Shelter provides a wide range of animal related services, including pet

adoptions, shelter for lost or unwanted animals, animal cruelty investigations, enforcement of State dog laws, dog licensing, animal bite reports, and quarantine follow up, rescue services for wild and domestic animals, removal of deceased animals from roadways, and placement services for exotic animals. The Animal Shelter received over 12,900 animals of all types during the 2009 year.



ANIMAL SHELTER ACTIVITY		2009
Canine - Received/Admitted		2,762
Returned to Owner		818
Adopted		702
Feline - Received/Admitted		5,261
Returned to Owner		93
Adopted		526
Ferret - Received/Admitted		19
Returned to Owner		3
Adopted		8

LOCATIONS



CENTRAL HEALTH SERVICE CENTER

43525 Elizabeth Road

Mt. Clemens, Michigan 48043

(586) 469-5235



KNOLLWOOD OFFICE CENTER

16931 19 Mile Road, # 130

Clinton Township, Michigan 48038

(586) 412-3387



SOUTHEAST HEALTH CENTER

25401 Harper Avenue

St. Clair Shores, Michigan 48081

(586) 466-6800



SOUTHWEST HEALTH CENTER

27690 Van Dyke

Warren, Michigan 48093

(586) 465-8090



VERKUILEN BUILDING

21885 Dunham Road

Clinton Township, Michigan 48036

(586) 469-5471



ANIMAL SHELTER

21417 Dunham Road

Clinton Township, Michigan 48036

(586) 469-5115
