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Introduction

Upper Valley Medical Center is partnering with member hospitals of the Greater Dayton Area Hospital Association and Wright State University to prepare our Community Health Needs Assessment. Each partner has invested resources and significant time in gathering information to form this Community Health Needs Assessment.

After describing the service area, this report provides a demographic and socioeconomic status analysis as a backdrop for the analysis of community health needs. It concludes with a presentation of priority health concerns. The report also addresses the methodologies used and the data limitations.

A community health needs assessment engages community members and partners to collect and analyze health-related data from many sources. The findings of the assessment inform community decision-making, the prioritization of health problems, and implementation strategies.

How to Read This Report and How Data were obtained

Data in this report are organized into topical areas, which can be located by referring to the table of contents. The report begins with a description of service area, providing a basic overview of the Hospital's geographic location as well as its socio-economic makeup. The assessment defines the term "health" broadly to include health care access, maternal and infant health, behavioral health, clinical care, diseases, mental and behavioral health, and substance abuse.

This report compiles primary and secondary data in order to paint a detailed picture of Miami County. Primary data are data collected from first-hand experience, commonly through surveys. Secondary data on the other hand is reprocessing and reusing information that has already been collected such as institutional records from sources such as hospitals and the Ohio Department of Health. The framework for the report was based on key areas of need. The report integrates primary and secondary data for the service area and also, in some cases, compares the service area's status to state and national data where possible, drawing out critical areas of concern. Narrative and graphics are used to highlight key findings. The report culminates in the presentation of priority needs for the hospital's service area.

Definition of the Community Served

The primary service area for Upper Valley Medical Center is defined as Miami County which is located in West Central Ohio. Two-thirds of the County's land is cropland and another 18.6% is considered forest (Ohio Development Services Agency). Interstate 75 cuts the region and the County north to south, which enabled this part of Ohio to be a critical supplier of Detroit's automotive industry, and contributed to the County's manufacturing industry base and dependence. Manufacturing employment contributes 29% of the total wages generated in the County in a given year; and it accounts for 19% of the County's non-agricultural jobs. (Economic Modeling Specialists, Inc., 2013).

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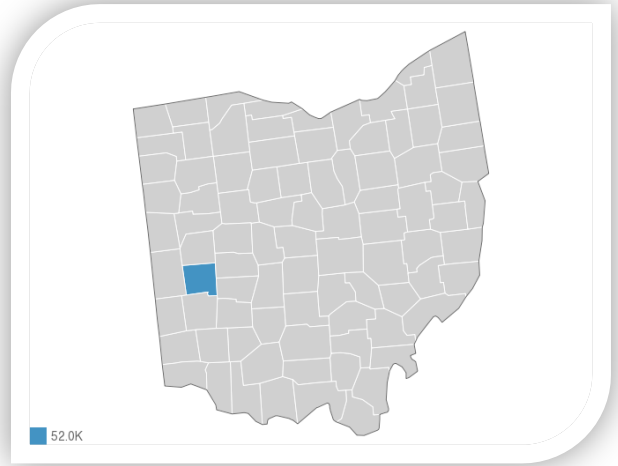
Consulting Persons and Organizations

The partners for the data analytics portion of the CHNA are Upper Valley Medical Center, the Greater Dayton Area Hospital Association, and Wright State University. Partners in the data review process and in the process for identifying and prioritizing community health needs and services are the Board of Trustees and executive leadership of Upper Valley Hospital, community health collaboratives featuring community, health, and business stakeholders/advocates organized by both Upper Valley Medical Center and the Greater Dayton Area Hospital Association along with its member hospitals.

Demographics of the Community
Characteristics of the Population

Figure 1: Population Trends, 2010-2040

Year	Population
2010	102,506
2020	102,590
2030	103,500
2040	103,990

Figure 2: Age, 2011

- 18 to 64 years, 60.6%
- 65+ years, 15.1%
- Under 18 years of age, 24.3%

Figure 3: Race, 2011

- White or Causcasian, 94.8%
- Minorities, 5.2%
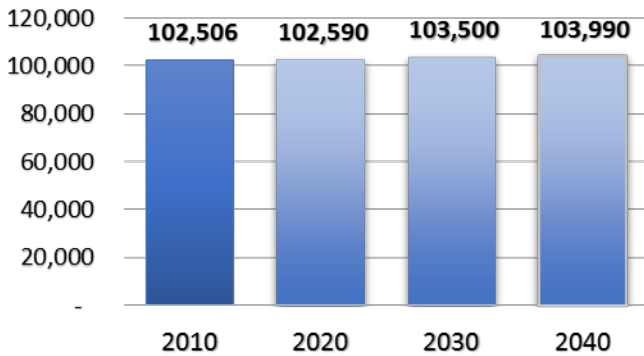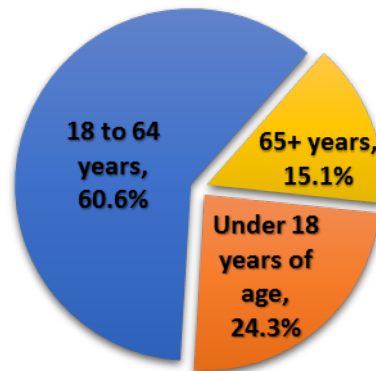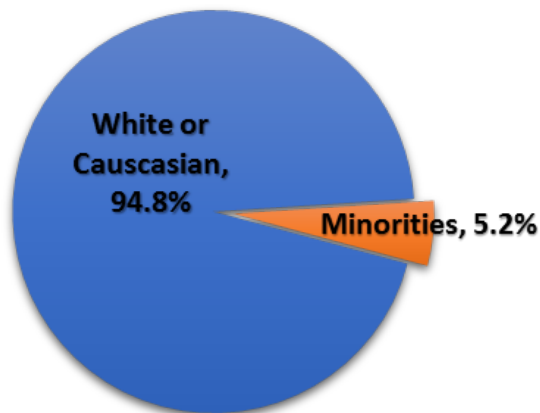
Between the years 2010 and 2040, Miami County's population is expected to increase less than 1.5%. The racial composition of the County is mainly White or Caucasian, with minorities comprising about 5% of the population. Most County residents are between the ages of 18 and 64 years old. The senior population is expected to increase from about 15% of the population in 2010 to nearly 21% in 2030. Approximately two-thirds of households are without children. The majority of occupied housing units in Miami County are owned.

Figure 4: Household Type

- Married with children 25.8%
- Households with no children 66.5%
- Single w/children 7.3%
- Other 0.4%
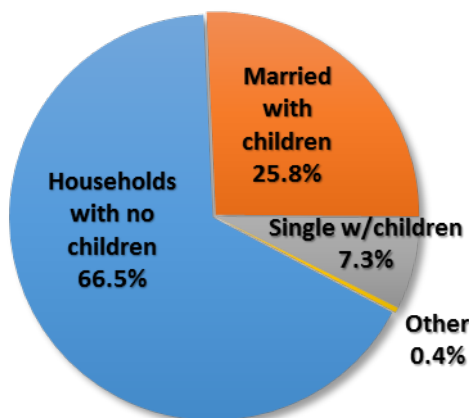
Figure 5: Senior Population Projections

- 20.6%
- Under 65, 84.9%
- 65+, 15.1%
- 2010
- 2030
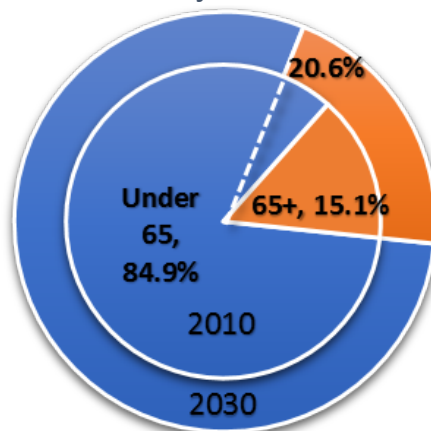
Figure 6: Occupied Housing Units

- Renter, 29.2%
- Homeowner, 70.8%
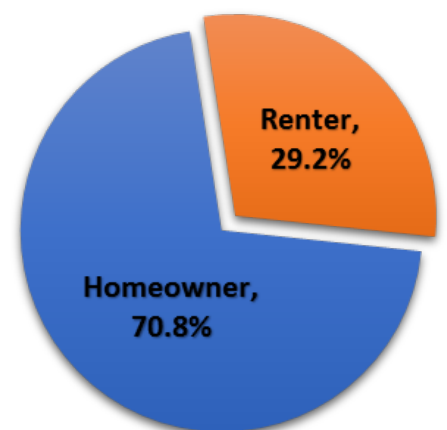
Figure 7: Educational Attainment for the Population 25 Years of Age & Older, 2011

	United States	Ohio	Miami County, OH
Graduate/prof degree	10.5%	9.0%	7.3%
Bachelor's degree	17.7%	15.5%	12.5%
Associate's degree	7.6%	7.5%	8.2%
Some college, no degree	21.0%	20.5%	21.0%
High school graduate, GED, or alternative	28.6%	35.4%	38.6%
No high school diploma, GED, or alternative	14.6%	12.2%	12.5%
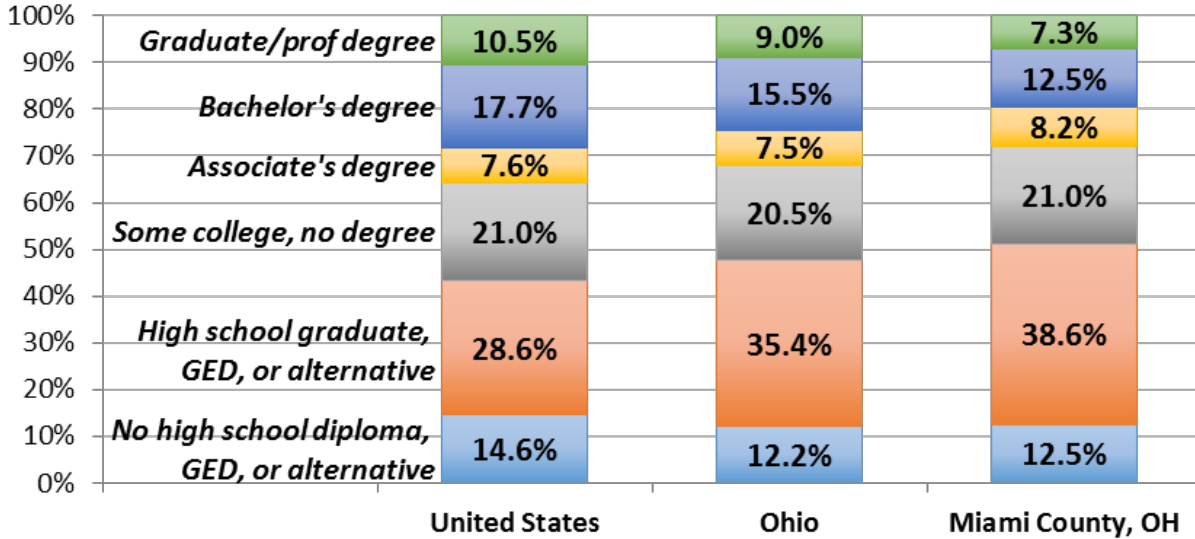
Figure 8: Median & Per Capita Income, 2011

Median Household Income:
- U.S. $52,762
- Ohio $48,071
- Miami County $51,438

Per Capita Income:
- U.S. $27,915
- Ohio $25,618
- Miami County $25,079
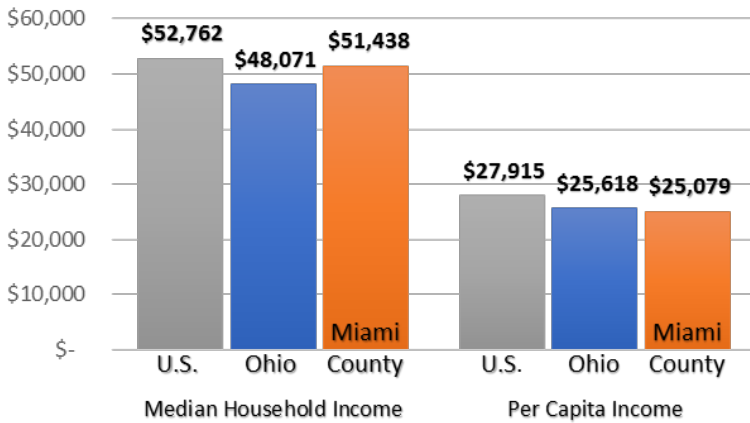
Charts on this page focus on socioeconomics. There is good evidence that socioeconomic position is a stronger determinant of health-related outcomes than race or ethnicity. Degree attainment in Miami County is lower than that of Ohio and the nation. Miami County's per capita income is slightly lower than the State's and the Nation's, but the County's household income is higher than that of Ohio. Moreover, poverty in Miami County is less pervasive than at the State level.

Figure 9: Percentage of the Population below the Poverty, 2011

Percentage of the Population below the Poverty Level

Legend: Ohio | Miami County

	Ohio	Miami County
All People	14.8%	11.3%
Under 18 years of Age	21.2%	17.8%
18 to 64 years of age	13.7%	10.2%
65 years of age & older	8.1%	5.1%
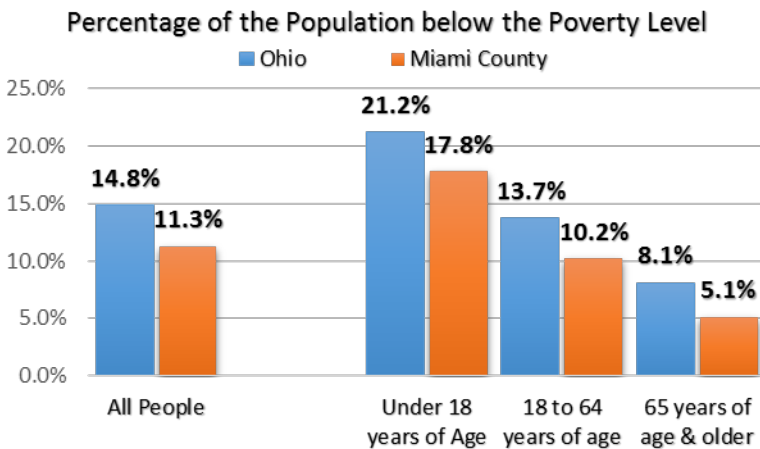
Health Care Facilities and Resources within the Community

The County's health care infrastructure is comprised of one hospital, six state licensed nursing homes, five state licensed residential care facilities, a hospice care, two state licensed ambulatory surgery facilities, and one state licensed dialysis center, per the Ohio Department of Health. The Miami County health department, named Miami County Public Health, offers environmental health, public health nursing, maternal and child health services, and the WIC program (Women, Infants, & Children), among other services. The chart below presents information about the health care and hospital's capacity from the Health Resources and Services Administration and the Ohio Department of Health directory of hospitals.

Primary Care Physicians	**48**
PCP Physicians/100K Pop	46.7
General/Family Practice	33
General Family/100K Pop	32.1
Internal Medicine	10
Internal Medicine/100K Pop	9.7
Pediatricians	5
Pediatricians/100K Pop (ratio indicative of low child population)	18.6

Obstetricians/Gynecologists	**10**
OB/GYN /100K Pop	19.1

General Surgeons	**4**
General Surgeons/100K Pop	3.9

Psychiatrists	**3**
Psychiatrists/100K Pop	2.9

Dentists	**36**
Dentist/100K Pop	35.1

Hospitals	
Total Hospitals	1
Total Hospital Beds	*199
Short-Term General Hospitals	1
STG Beds	*199

*Source: Ohio Department of Health, Health Care Provider Report & Information Extract, last accessed 1/12/2013

Health Centers	
Community Health Centers	0
Federally Qualified Health Centers	0

Source: Health Resources and Services Administration, Health Resources Comparison Tool, http://arf.hrsa.gov/arfdashboard/HRCT.aspx, last accessed 11/12/2013 (except where noted)

MIAMI COUNTY IS DETERMINED BY THE HEALTH RESOURCES AND SERVICES ADMINISTRATION (HRSA) TO HAVE SUFFICIENT PRIMARY CARE PHYSICIANS AND DENTISTS. HOWEVER, IT IS DETERMINED TO BE A HEALTH PROFESSIONAL SHORTAGE AREA (HPSA) FOR MENTAL HEALTH CARE PROVIDERS.

Upper Valley Medical Center Featured Services

Upper Valley Medical Center is a member of the Premier Health Partners network, and is a 199-bed, short-term general hospital located in Miami County. Its featured services are presented below.

After Hours Care – After Hours Care is an alternative for non-life threatening illnesses or minor injuries that may occur when physician offices are closed.

Cancer Care Center—the newly expanded Cancer Care Center and oncology team provide diagnosis, advanced treatment and ongoing support.

- New infusion center with heated massage chairs, flat screen TVs and other personal amenities
- Advanced radiation therapy including HDR brachytherapy, intensity modulated radiation therapy, imaged guided radiation therapy and more.
- Surgical options, including laparoscopic surgery, interventional radiology, and dedicated CT scanner.
- Cancer registry and clinical trials.
- Healing Garden offering a natural, calming environment for reflection and healing.
- Support programs and patient navigator available to assist with coordination of resources.
- Accredited by the American College of Surgeons Commission on Cancer and The Joint Commission

Cardiac/Cardiology Services—The Cardiac Rehabilitation combines safe, carefully monitored exercise, education and counseling in a program tailored to the needs of the individual.

Dialysis Services—Outpatient Dialysis Services are provided on the UVMC campus by DaVita, the nation's second largest provider of dialysis care.

Imaging/Radiology Services—Diagnostic Imaging Services encompasses a variety of modalities used to diagnose conditions and injuries, providing your physician with high quality, timely information for treatment. These modalities include: Plain Image studies, Fluoroscopic studies, CT (Computerized Tomography), CTA, Ultrasound, MR (Magnetic Resonance Imaging), PET (Positron Emission Tomography), and more.

Maternity/Women's Services—Birthing suites provide care for labor, delivery, and recovery, all in the same private room. The sophisticated equipment in suites is adjustable and can adapt to each phase of labor and delivery.

Occupational Health—Includes examinations/screenings, drug screening/testing, educational programs like CPR, and specialized services like OSHA required testing.

Orthopedics—Treating acute injuries, chronic instability, overuse syndromes, arthritis, fractures and more in the shoulder, elbow, arm, wrist, hand, hip, knee, leg, ankle and foot.

Surgical Services include: Surgical Centers/Departments and Groups, Ambulatory Surgery Center, Endoscopy Center, Cardiac Cath / Special Procedures lab, Post Anesthesia Care Unit (PACU), Hyatt Surgery Center, Miami County Surgeons, and Digestive Specialty Care.

Hospital

Short-term Care	
Special Care	10 beds
Medical/Surgical-Gen	99 beds
Psychiatric	39 beds
Physical rehab	11 beds
OB Level I	16 beds
Subtotal	*175 beds*

Newborn Care	
Neo Level I	18 beds
Neo level II	6 beds
Subtotal	*24 beds*
Total	*199 beds*

Source: Ohio Department of Health, Health Care Provider Report & Information Extract, http://publicapps.odh.ohio.gov/eid/reports/EID_Report_Criteria.aspx, last accessed 11/12/2013

Clinics

Health Partners Free Clinic was created in the late 1990s to provide medical care for the uninsured and under-insured residents of Miami County, Ohio. Physicians and nurse practitioners volunteer their time. There is no cost to patients.

During the first eight years of service the clinic was in space provided by the Miami County Public Health agency. A total of four hours of free medical care per week was provided. Health Partners' Board of Directors responded to the huge and growing need for services by purchasing land and constructing a new building – the Paul G. Duke Health Center.

Since moving into the new facility 20-24 hours per week of free medical care is offered each week. The number of patients has tripled. The clinic also provides care for patients with chronic health problems such as diabetes, hypertension and chronic lung disease.

Mental Health Care Capacity

The Tri-County Board of Recovery and Mental Health covers the three county area of Darke, Miami, and Shelby counties. This Board administrates the planning, development, funding, and evaluation of behavioral health services delivered by a network of community-based organizations.

The Tri-County Board of Recovery & Mental Health Services provides 24/7 coverage for mobile crisis assessments at the three local hospitals (Wayne, Wilson, and UVMC), the Darke, Miami, and Shelby county jails, and West Central Detention Center. On occasion, a mobile responder may be requested to complete an assessment at one of the local police departments in the three counties or David L. Brown Youth Center in Miami County. These crisis and assessment services are for people with mental health or drug and alcohol needs.

As a snapshot, first quarter of fiscal year 2014 data indicate that the Mobile Crisis Team responded to 1,660 hotline phone calls, which equates to 18-19 calls a day. The most common crises reported are psychological/emotional problems (651 calls), suicidal/homicidal (276 calls), interpersonal/family issues (249 calls), and information and referral (199 calls). Almost half of the calls originated from Miami County residents. Two-thirds of the calls were made by females and one-third by males. The largest number of calls (47%) came from people ages 41 to 60. Responses were deemed to be required in 174 of the 1,660 calls. Two-thirds (65%) of those for whom a response was necessary had medical insurance. Most of the responses were an assessment and referral to either Wayne or Wilson Hospital, but not to Upper Valley Medical Center (UVMC). That is because UVMC provides their own behavioral health crisis assessments. As mentioned earlier, UVMC has 39 psychiatric beds.

The Mental Health Provider Network in Miami County includes:

The Mental Health Clinic Miami County Site
550 Summit Ave.
Troy, OH 45373
(937) 335-0361

Miami County Recovery Council

1059 N. Market St.
Troy, Ohio 45373
(937) 335-4543

SafeHaven, Inc. Miami County Site

633 N. Wayne St.

Piqua, Ohio 45356

(937) 615-0126

Services Provided by the Provider Network Include:

- Individual, couples, family and group counseling
- Services for children, adolescents and the elderly
- Treatment for alcoholism and other addictions
- Suicide prevention, education and outreach provided through the Tri-County Suicide Prevention Coalition
- Counseling for the victims of violent crimes
- 24-hour emergency services for those in crisis
- Outreach programs for the mentally ill homeless
- Medication management
- Respite
- Access to hospitalization, detoxification and residential services when appropriate
- Pre-discharge planning and aftercare services for people who have been hospitalized
- Education and prevention materials on various mental health and recovery topics
- Supervised living with access to other safe, affordable housing options for people with mental disabilities

Access to Care

The distribution of health insurance coverage in Miami County is similar to the State and the nation. A higher percentage of adults in the County are covered by employer-based or TRICARE health insurance. Wright-Patterson Air Force Base, located in Southwest Ohio, is one of the largest bases in the Air Force; TRICARE® is the health care program serving Uniformed Service members, retirees and their families. Miami County has a smaller percentage of adults with no health coverage as compared to the State and the nation.

Figure 10: Medical Insurance Coverage for the Population 18 Years of Age and Older, 2009-2011

Medical Insurance Coverage for the Population over the Age of 18, 2009-2011

United States:
- No coverage, 17.5%
- Other or combination(s) of coverage 16.7%
- With Medicare &/or Medicaid coverage 13.3%
- Direct purchase, 5.5%
- With employer-based or TRICARE health insurance 46.9%

Ohio:
- No coverage, 13.9%
- Other or combination(s) of coverage 17.8%
- With Medicare &/or Medicaid coverage 13.6%
- Direct purchase, 4.4%
- With employer-based or TRICARE health insurance 50.3%

Miami County:
- No coverage, 12.5%
- Other or combination(s) of coverage 19.6%
- With Medicare &/or Medicaid coverage 11.9%
- Direct purchase, 3.7%
- With employer-based or TRICARE health insurance 52.4%

The figure below indicates that, within the County, adults 18-34 are less likely to have coverage than adults ages 35-64 and adults ages 65 and over. This finding is standard across other counties in the Southwest Ohio region.

Figure 11: Comparison of Insurance Coverage for Adults (18 Years of Age or Older) by Age Cohort, 2009-2011

Insurance Coverage by Age for Miami County Adults, 2009-2011

Age Cohort	with no coverage	with coverage
18 to 34 years	27.9%	72.1%
35 to 64 years	16.9%	83.1%
65 years of age or older	1.0%	99.0%
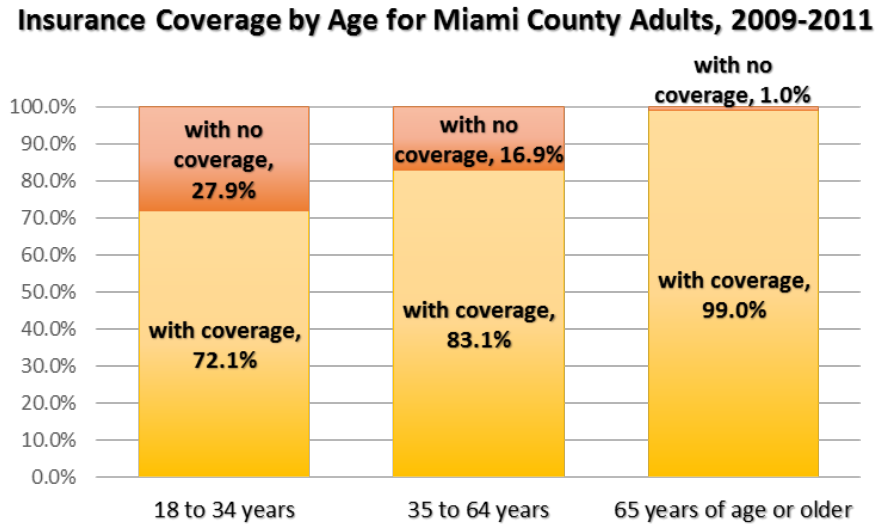
Health Needs of the Community

The Robert Wood Johnson Foundation in collaboration with the University of Wisconsin Population Health Institute created *County Health Rankings*, which uses a variety of health measures to score and rank the health of Counties across the United States. Out of the 88 counties in Ohio, Miami County is ranked 34 for health outcomes. The table below displays Miami County's overall ranking as well as scores for the categories that comprise the ranking. Subsequent sections in this report provide more detailed information regarding the data displayed in the table.

County Health Rankings Data

	Miami County	Ohio	National Benchmark	National Median	Rank of 88
HEALTH OUTCOMES					34
Maternal and Infant Health					
Teen Pregnancy (per 1,000)	36.5				
Low Birth Weight	8.2%	8.6%	6.0%		
Percentage of pregnant mothers who smoked	22.5%	17.8%	1.4%		
Percent of Mothers without 1st trimester care	40.2%	27.0%	22.1%		
Behavioral Risk Factors					26
Adult smoking*	25.7%	22%	13%		
Adult overweight/obesity*	68.8%	65.7%		64.5%	
Physical inactivity*	26.8%	27%	21%		
Excessive drinking*	12.5%	18%	7%		
Motor vehicle crash death rate	13	11	10		
Chlamydia Rate	225.4	461.7	10% reduction		
Gonorrhea Rate	53.0	73.2	10% reduction		
Clinical Care					26
Uninsured	12.5%	14%	11%		
Primary care physicians	2,135:1	1,348:1	1,067:1		
Dentists	2,353:1	1,928:1	1,516:1		
Preventable hospital stays	72	79	47		
Diabetic screening	85%	83%	90%		
Mammography screening	64%	63%	73%		
Disease					46
Poor or fair health*	14.1%	15%	10%		
Poor physical health days	3.8	3.6	2.6		
High blood pressure*	38.3%	31.7%		28.7%	
Blood cholesterol*	38.4%	39.6%		37.5%	
Heart Attack (myocardial infarction)*	3.7%	4.3%		4.2%	
Coronary heart disease*	2.8%	4.3%		4.1%	
Leading Causes of Death					27
Premature Death	6,682	7,457	5,317		

* RWJ data replaced with Miami County 2011 BRFSS data

Maternal and Infant Health

Teen Birth Rates

Consistent with the State's trend, Miami County's teen birth rate is generally declining but is higher than the State's rate. Over the last several decades, the number of U.S. teenagers having babies has steadily declined, and reached a record low in 2012, according to the CDC.

Figure 12: Teen Birth Rate
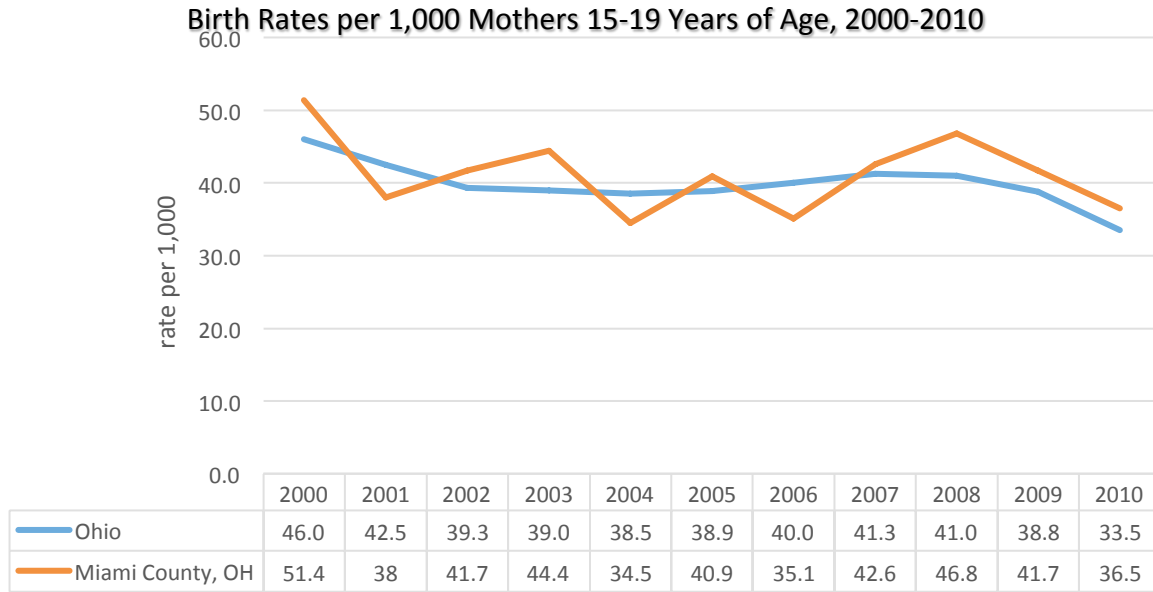
Birth Rates per 1,000 Mothers 15-19 Years of Age, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Ohio	46.0	42.5	39.3	39.0	38.5	38.9	40.0	41.3	41.0	38.8	33.5
Miami County, OH	51.4	38	41.7	44.4	34.5	40.9	35.1	42.6	46.8	41.7	36.5

Source: 2000-2010, Ohio Department of Health, Vital statistics annual birth summaries. Last updated 05/24/2013.

Births to Unwed Mothers

In Miami County, the percentage of births to unwed mothers also follows the State trend and has slowly risen over the past ten years. However, Miami County's percentage still remains lower than that of the State.

Figure 13: Births to Unwed Mothers

Percentage Unwed Mothers, 2000-2010

Ohio: 34.6%, 35.1%, 35.3%, 36.2%, 37.3%, 38.9%, 40.4%, 42.0%, 43.2%, 44.0%, 43.2%

Miami County, OH: 29.5%, 29.4%, 31.3%, 32.6%, 30.8%, 34.0%, 35.5%, 35.3%, 37.4%, 39.2%, 37.1%

Source: 2000-2010, Ohio Department of Health, Vital statistics annual birth summaries. Last updated 05/24/2013.

First Trimester Prenatal Care

The rate of mothers not receiving first trimester prenatal care has remained consistently lower than the State's percentage in Miami County, but the gap is closing. The percentage of mother's not receiving first trimester prenatal care in the County has increased since 2006.

Figure 14: Percent of Mothers Not Receiving First Trimester Prenatal Care

Percentage without First Trimester Care, 2006-2010

Source: 2000-2010, Ohio Department of Health, Vital statistics annual birth summaries. Last updated 05/24/2013.

Births to Mothers Who Smoke

The percentage of mothers who smoked while pregnant was lower or relatively consistent with that of the State through 2005, when the percentage of mothers who smoked increased rapidly and remained substantially higher than the State. The Healthy People 2020 goal is to reduce the national percentage to 1.4%, a 10% improvement.

Figure 15: Births to Mothers Who Smoke

Percentage of Births to Mothers Who Smoked, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Ohio	18.9%	19.0%	17.8%	17.0%	17.5%	17.4%	18.7%	19.1%	19.1%	19.1%	17.8%
Miami County, OH	17.6%	14.8%	16.5%	16.7%	17.7%	17.8%	24.1%	23.3%	21.7%	26.3%	22.5%

Source: 2000-2010, Ohio Department of Health, Vital statistics annual birth summaries. Last updated 05/24/2013.

Low Birth Weight Rate

Smoking during pregnancy causes low birth-weight in at least 1 in 5 infants, and in recent years Miami County's percentage of low birth weight babies (8.2%) shows a marked increase, with the rate approaching the State (8.5%). The national rate is 8.2% with a national target for reduction to 7.8%.

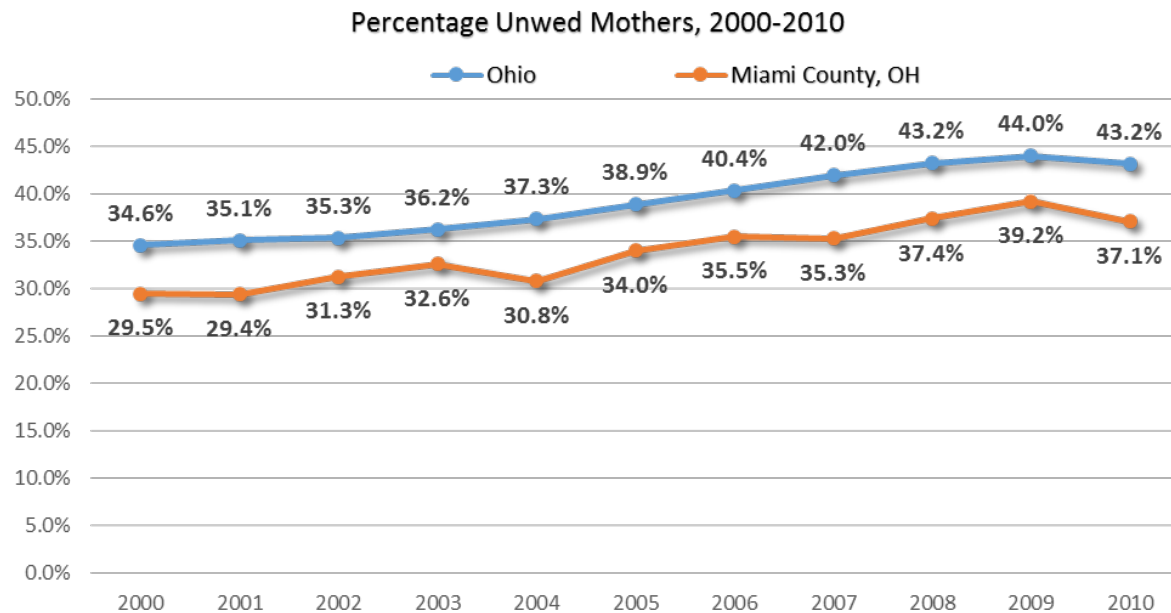**Figure 16: Percentage of Low Birth Weight Babies**

Percentage Low Birth Weight, 2000-2010

Source: 2000-2010, Ohio Department of Health, Vital statistics annual birth summaries. Last updated 05/24/2013.

Infant Mortality Rate

The general trend of infant mortality in Miami County and the State is presented using a three-year rolling average. The number of infant deaths is below the threshold for reporting, therefore specific numbers have been removed from the figure, but the impression indicates a lower rate in the County.

Figure 17: Infant Mortality Rate

Infant Mortality Rate (3-year average per 1,000 live births), 2000-2011
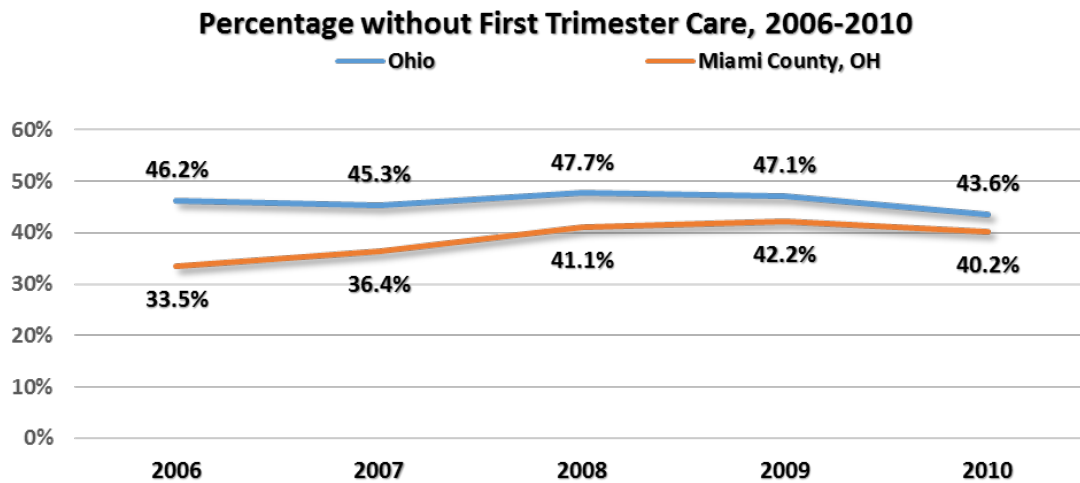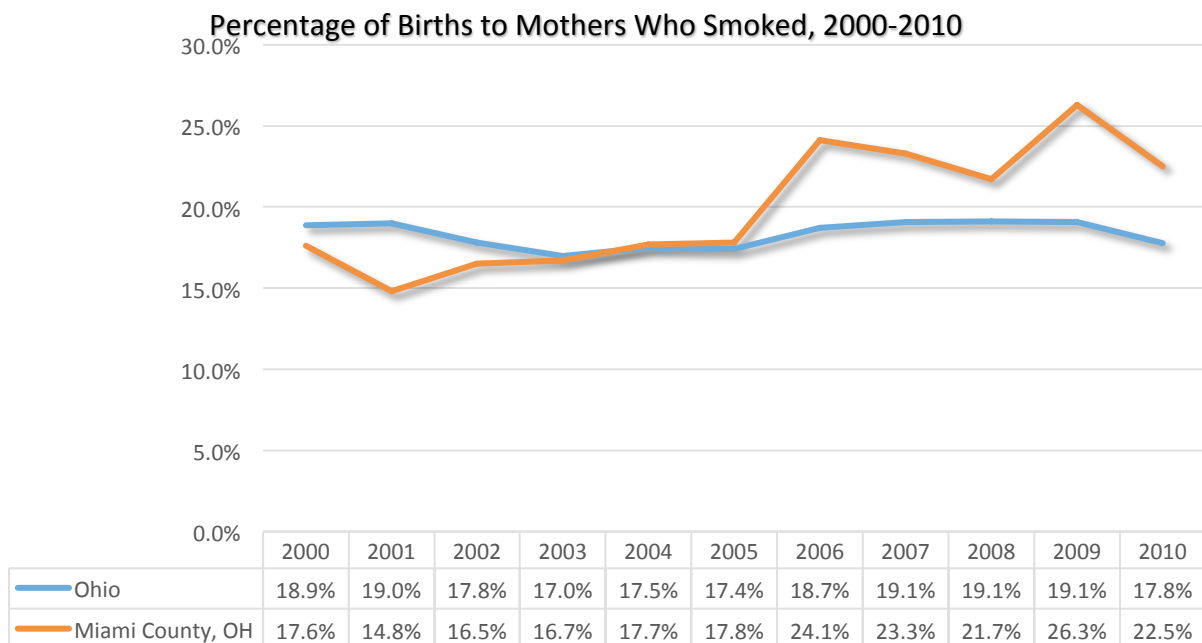
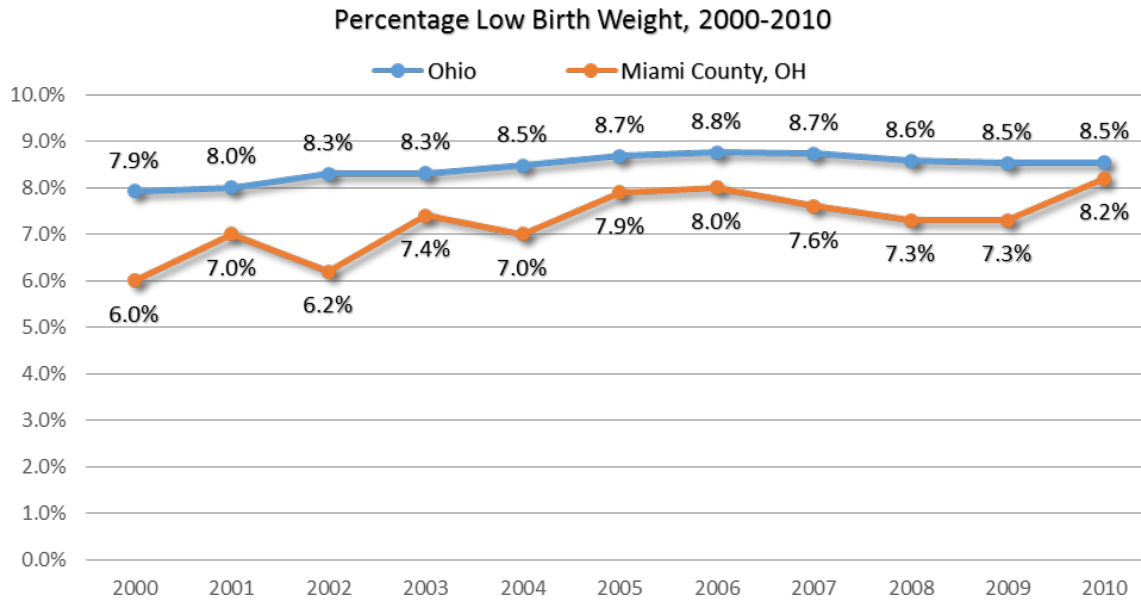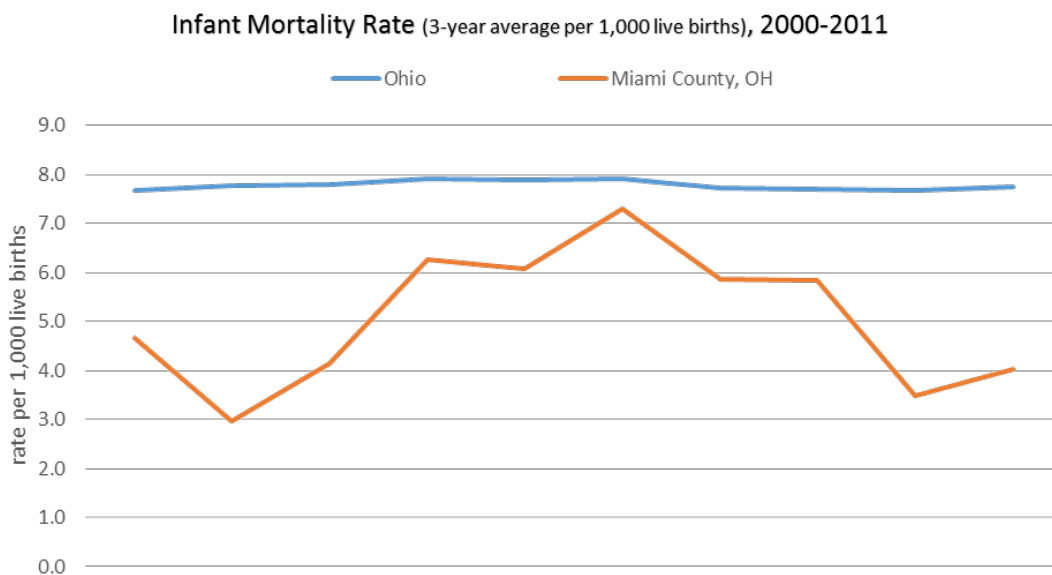** Data suppressed to adhere to Ohio Department of Health confidentiality standards.*
 Source: 2000-2010, Ohio Department of Health, Vital statistics annual birth summaries. Last updated 05/24/2013.

Behavioral Risk Factors

According to County Health Rankings, Miami County is ranked 26th of 88 counties in terms of healthy behaviors. County Health Rankings data has been supplemented with the results of Miami County's 2011 Behavioral Risk Factor Surveillance System (BRFSS) Survey. The primary purpose of the survey of adults is to evaluate the health status of residents, establish public health priorities, and identify baseline measures for establishing public health program outcomes. Miami County's BRFSS took place in May-April of 2011 and consisted of telephone surveys with 600 adult residents.

Adult smoking

Nearly 40% of Miami County 2011 BRFSS survey respondents (38.6%) have smoked at least 100 cigarettes in their life (which is the CDC's definition of "ever smoked"), and 40.2% of those respondents currently smoke. This equates to 25.7% of *all* survey respondents currently smoking.

Physical Activity & Obesity

According to the Miami County 2011 BRFSS, less than three-quarters of adults (73.2%) had participated in some sort of physical activity in the past month (the survey was conducted in May-April). Two-thirds of Miami County respondents (68.9%) are classified as overweight (38.5%) or obese (30.4%) based on their body mass index.

Excessive drinking

In 2011, 12.5% of all Miami County adult BRFSS respondents were binge drinkers, having consumed five or more drinks on any one occasion within the past month.

Motor vehicle crash death rate

Miami County's motor vehicle crash death rate is slightly higher than that of Ohio with 13 motor vehicle crash deaths per 100,000 population compared to 11 for the state of Ohio. Similarly, Miami County 2011 BRFSS respondents were asked how often they use a seatbelt when driving or riding in a car. Over four in five respondents (84.8%) indicated that they always wear a seatbelt when they drive or ride in a car. About 6% of Miami County adults (6.3%) say they "sometimes" or "seldom" wear a seatbelt, while 3.0% never wear a seatbelt.

Sexually Transmitted Infections

Data from the Ohio Department of Health shows that while Miami County's incidence of chlamydia generally has been increasing, it has remained consistently and substantially lower than the State statistics.

Figure 18: Chlamydia Cases, 2000-2012
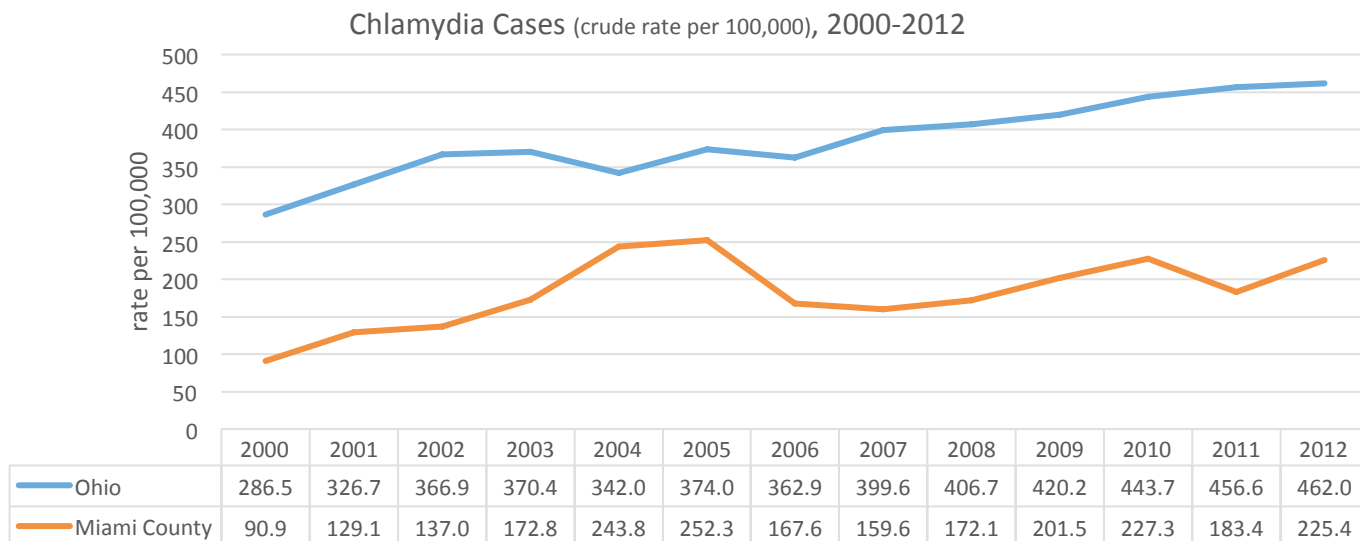
Chlamydia Cases (crude rate per 100,000), 2000-2012

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Ohio	286.5	326.7	366.9	370.4	342.0	374.0	362.9	399.6	406.7	420.2	443.7	456.6	462.0
Miami County	90.9	129.1	137.0	172.8	243.8	252.3	167.6	159.6	172.1	201.5	227.3	183.4	225.4

Source: Ohio Department of Health, 2008-2012 Ohio Infectious Disease Status Report: Chlamydia, last accessed 11/13/2013
Ohio Department of Health, 2006-2010 Ohio Infectious Disease Status Report: Chlamydia, last accessed 11/13/2013
Ohio Department of Health Information Warehouse, 2000-2005 Chlamydia Surveillance Report, last accessed 11/13/2013

There has been a slight increase in cases of Gonorrhea since 2000, but the incidence rate has remained consistently below that of the State.

Figure 19: Gonorrhea Cases, 2000-2012
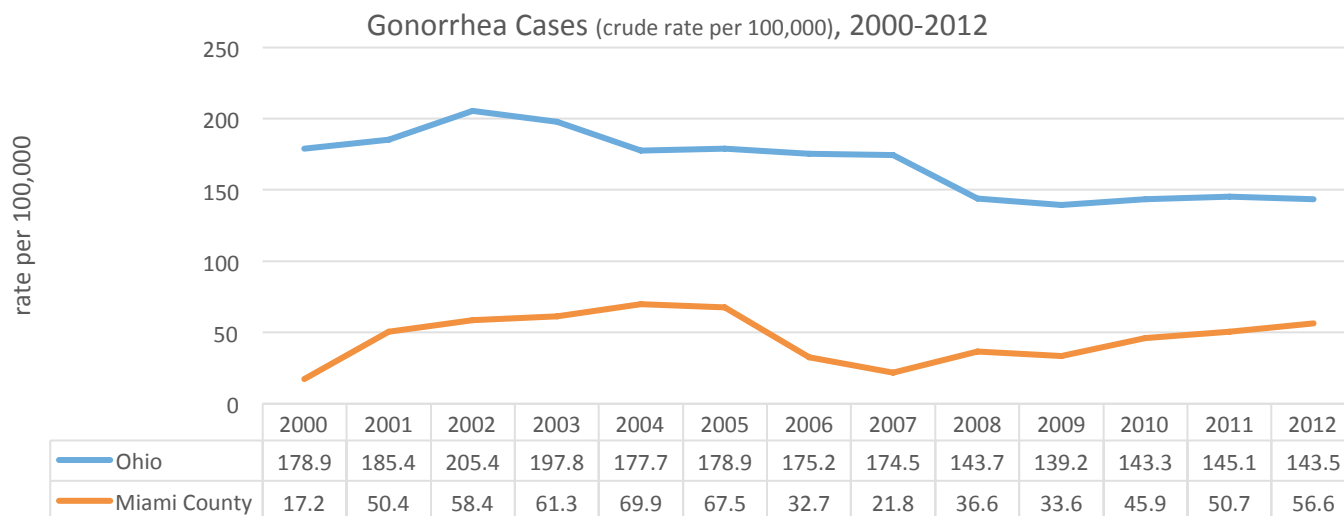
Gonorrhea Cases (crude rate per 100,000), 2000-2012

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Ohio	178.9	185.4	205.4	197.8	177.7	178.9	175.2	174.5	143.7	139.2	143.3	145.1	143.5
Miami County	17.2	50.4	58.4	61.3	69.9	67.5	32.7	21.8	36.6	33.6	45.9	50.7	56.6

Source: Ohio Department of Health, 2008-2012 Ohio Infectious Disease Status Report: Gonorrhea, last accessed 11/13/2013
Ohio Department of Health, 2006-2010 Ohio Infectious Disease Status Report: Gonorrhea, last accessed 11/13/2013
Ohio Department of Health Information Warehouse, 2000-2005 Gonorrhea Surveillance Report, last accessed 11/13/2013

Mental Health and Wellness

Poor mental health days

Roughly one-quarter of Miami County BRFSS adult respondents (24.1%) reported having *at least* one day of poor mental health in the past month. Crosstabs by demographic variables revealed that younger respondents were less likely to have days with poor mental health in the past month. Analysis of responses pertaining to mental health revealed no significant differences by gender.

In a sample of 1,246 Miami County youth, findings show a range of concerns related to youth mental health. For example, 8.5% of students in middle and high school feel lonely all the time. Nearly 25% of middle school students and 30% of high school students say they do not "have a trusted adult to go to with problems." Nearly 12% of middle school students are rarely hopeful about their future, and 10% of high school students are rarely hopeful. The goal is to develop and implement a system for Youth Mental Health Support and Parent Engagement.

Inpatient hospitalization for neurotic mental health disorders rose dramatically in 2012 but declined slightly in the ED. Hospitalization for personality disorders remained relatively flat over the study period.

Figure 20: Emergency Department Mental Disorder Discharge Diagnoses for the Adult Population, 2004-2012

Primary & Secondary Emergency Department Mental Disorder Discharge Diagnoses for the Adult Population, 2004-2012
(crude rate per 100,000)

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Neurotic	346.4	360.9	354.4	389.6	372.1	401.7	449.9	545.7	463.7
Personality	41.0	22.4	38.7	38.6	34.4	28.3	46.6	83.2	50.8
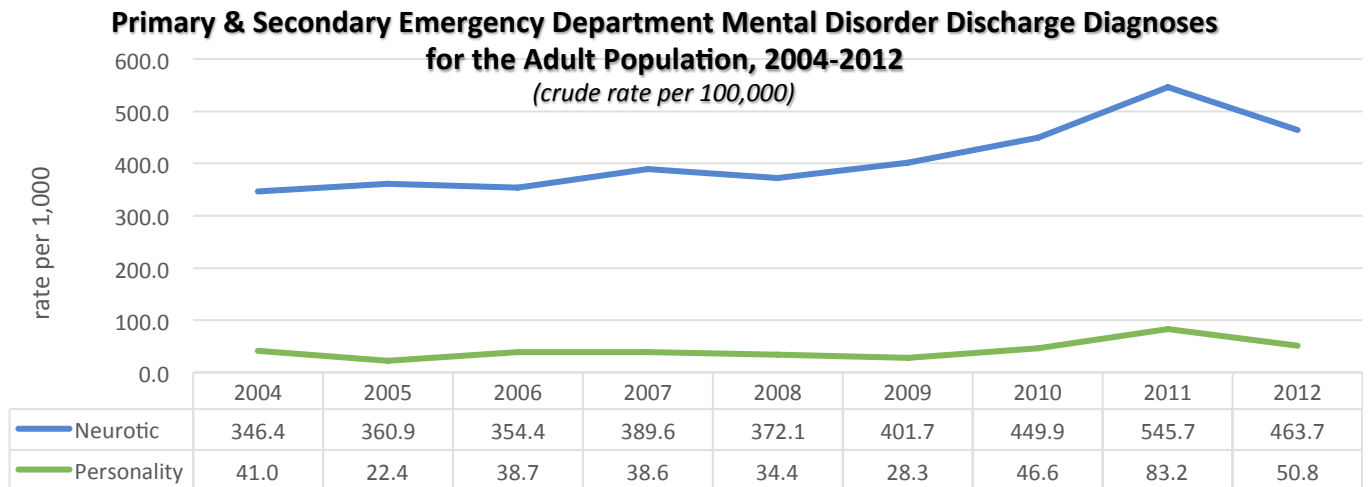
Source: Ohio Hospital Association and Greater Dayton Area Hospital Association

Figure 21: Inpatient Mental Disorder Discharge Diagnoses for the Adult Population, 2004-2012

Primary & Secondary Inpatient Mental Disorder Discharge Diagnoses for the Adult Population, 2004-2012
(crude rate per 100,000)

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Neurotic	295.1	259.0	226.1	194.8	186.0	282.6	224.9	221.1	329.5
Personality	108.6	97.9	91.7	83.2	56.6	76.7	38.5	54.8	61.0
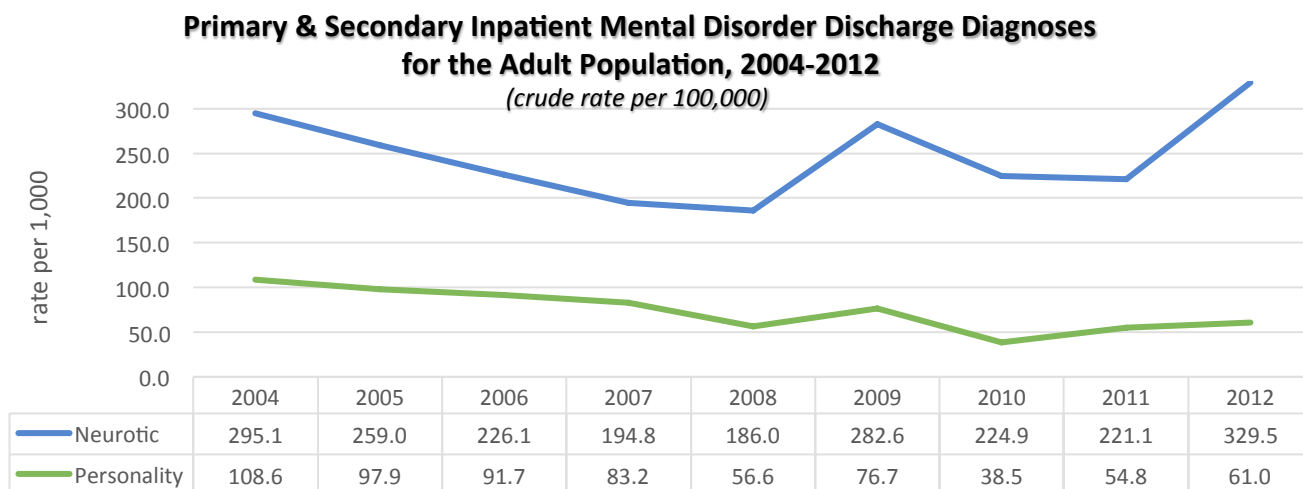
Source: Ohio Hospital Association and Greater Dayton Area Hospital Association

Clinical & Preventative Services

According to County Health Rankings, Miami County is ranked 26th of 88 counties in terms of residents obtaining appropriate clinical care.

Uninsured

According to American Community Survey data, 12.5% of Miami County's adult population (ages 18+) has no health care coverage. Miami County has a smaller percentage of adults with no coverage compared to the State and the nation (13.9% and 17.5% respectively). Data show that adults ages 18-34 in the County are less likely to have coverage compared to adults ages 35-64 and 65+.

Primary care physicians

About 90% of 2011 BRFSS respondents (89.8%) said they have a particular clinic, health center, doctor's office, or other place that they go to when they are sick or need advice about health, while 10.2 percent of respondents did not have a primary source where they receive these health care services. Respondents who indicated having a particular clinic, health center, doctor's office, or other place that they go to when they are sick or need advice about health were then asked what the specific type of place is from which they get their health care services. The majority of these respondents (89.7%) indicated that they receive their services from a doctor's office or HMO. About 4.4% of County adults report that their main source of primary health care is from an urgent care center or hospital.

Dentists

Almost two-thirds (66.0%) of adults who participated in the Miami County 2011 BRFSS respondents had visited the dentist in the past year. According to the Ohio Department of Health's Health Care Provider Report, there are approximately 35 practicing dentists in Miami County per 100,000 population.

Preventable hospital stays

The County Health Rankings measures preventable hospital stays as, "the hospital discharge rate for ambulatory care-sensitive conditions per 1,000 Medicare enrollees."[1] Miami County had 72 preventable hospital stays. The number for the State is 79 preventable hospital stays, while the national goal is 47 stays.

Diabetic screening

More than 8 out of 10 (85%) diabetic Medicare enrollees received the HbA1c screening in the past year. This test measures glycated hemoglobin levels, providing care providers with an estimate of how well patients have been managing their diabetes.[2]

Mammography screening

Almost three-fourths (71.5%) of all Miami County women who participated in the 2011 BRFSS have had a mammogram. When women who indicated that they had had a mammogram were asked how long it had been since their last mammogram, 56.4% indicated that it had been within the past year. Less than two-thirds (70.8 percent) of female respondents ages 40 and older had a mammogram performed within the past two years.

Primary and Chronic Diseases

Poor or fair health

Approximately 14% of Miami County BRFSS respondents reported that their overall health is *fair* or *poor* compared to 15% for the State. Crosstabs by demographic variables revealed that younger respondents and females were significantly more likely than older respondents and males to indicate that their health is *excellen*t or *very good*.

Poor physical health days

One-third of Miami County BRFSS respondents (33.7%) reported that, in the past month, they had *at least* one day of poor physical health. Crosstabs by demographic variables revealed that younger respondents are less likely to have days with poor physical health in the past month. Despite females being more likely than males to describe their general health as excellent or very good, female respondents were more likely than male respondents to indicate having at least one day when their physical health was not good. According to the County Health Rankings data, on average, Miami County residents had 3.8 poor physical health days within a 30 day period, which is comparable to Ohio's average (3.6).

High blood pressure

As shown in Figures 21 and 22 below, hypertension has been and continues to be the leading inpatient discharge diagnosis for the adult population in Miami County and the third most prevalent emergency department discharge diagnosis. Over one-third of Miami County BRFSS respondents (38.3%) had been diagnosed with high blood pressure. Crosstabs by demographics revealed that older respondents (those

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[1] http://www.countyhealthrankings.org/app/#/ohio/2013/measure/factors/5/description
[2] http://www.countyhealthrankings.org/app/#/ohio/2013/measure/factors/7/description

65 and older) were significantly more likely than younger respondents to indicate that they have high blood pressure. Male respondents were also significantly more likely than female respondents to indicate that they have high blood pressure.

Blood cholesterol

Over eighty percent of BRFSS respondents (80.5%) indicated they have had their blood cholesterol checked at some point in their life. When asked how long it has been since their blood cholesterol was checked, 72.3% of all respondents (and 92.8% of those who have had their cholesterol checked) have had their blood cholesterol checked within the last 5 years. Over one-third of Miami County respondents who have had their blood pressure checked (38.4%) have been diagnosed with high cholesterol.

Heart Attack (myocardial infarction) & Coronary heart disease

Less than four percent (3.7%) of 2011 BRFSS respondents reported having had a heart attack or myocardial infarction, while less than three percent (2.8%) of BRFSS respondents reported having coronary heart disease. Figure 23 shows that, despite a general decline, diseases of the heart continue to be the leading cause of death for Miami County adults.

Cancer

Since 2000, prostate and breast cancer have been the two most prevalent types of cancer. Generally, there is a downward trend for the cancer rates depicted in the figure with the exception of melanoma of the skin.

Figure 22: Cancer Rates, 2000-2011

Cancer Rate Trends (crude per 100,000), Top Six - 2000-2011

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Prostate	150.4	194.4	263.2	177.4	200.7	185.0	227.1	172.1	272.3	173.0	140.7	147.3
Breast	238.7	198.5	192.8	220.0	210.9	255.0	251.5	222.6	241.6	175.9	206.9	133.8
Melanoma of Skin	35.4	51.5	43.2	49.5	47.8	52.7	51.1	54.7	41.5	81.4	75.9	88.0
Lung & Bronchus	106.3	98.9	102.6	88.3	81.1	81.6	87.8	97.8	114.0	117.6	119.6	48.5
Uterus	42.0	47.0	44.3	20.7	43.7	15.3	53.3	43.0	55.4	32.7	49.9	29.7
Colon & Rectum	109.0	86.7	93.1	89.7	85.1	85.6	90.4	79.5	84.2	55.6	75.9	29.3

Source: Ohio Department of Health Ohio Cancer Incidence Surveillance System

Inpatient Discharge Diagnoses

Hypertension is the most common hospital inpatient discharge diagnosis and presents an increasing rate over time. Given its magnitude in the figure it may mask other concerning trends such as the 32% increase in the diabetes rate from 2004 to 2012. Emergency Department diagnoses are rising for all diagnoses presented but unintentional injury.

Figure 23: Top Seven Hospital Inpatient Primary & Secondary Discharge Diagnoses for the Adult Population, 2004-2012

Top Seven Inpatient Discharge Diagnoses for the Adult Population, 2004-2012 *(crude rate per 1,000)*

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Hypertension	96.0	99.9	113.4	108.8	116.8	109.1	114.6	124.6	130.0
Non-Ischemic Heart Disease	67.8	73.0	82.2	82.5	81.6	75.0	73.7	77.3	74.0
Diabetes	49.5	50.6	57.2	56.2	60.0	56.7	60.2	62.5	65.2
Ischemic Heart Disease	55.9	55.3	66.1	62.6	60.0	54.8	56.5	56.8	56.0
COPD	15.2	17.5	18.4	18.3	20.0	17.3	39.7	44.7	50.6
Alcohol and Drug	24.8	29.4	33.3	37.6	41.3	38.7	40.3	42.2	48.2
Complications Pregnacy & Childbirth	52.9	55.3	55.1	53.9	53.8	52.7	49.8	49.5	47.7
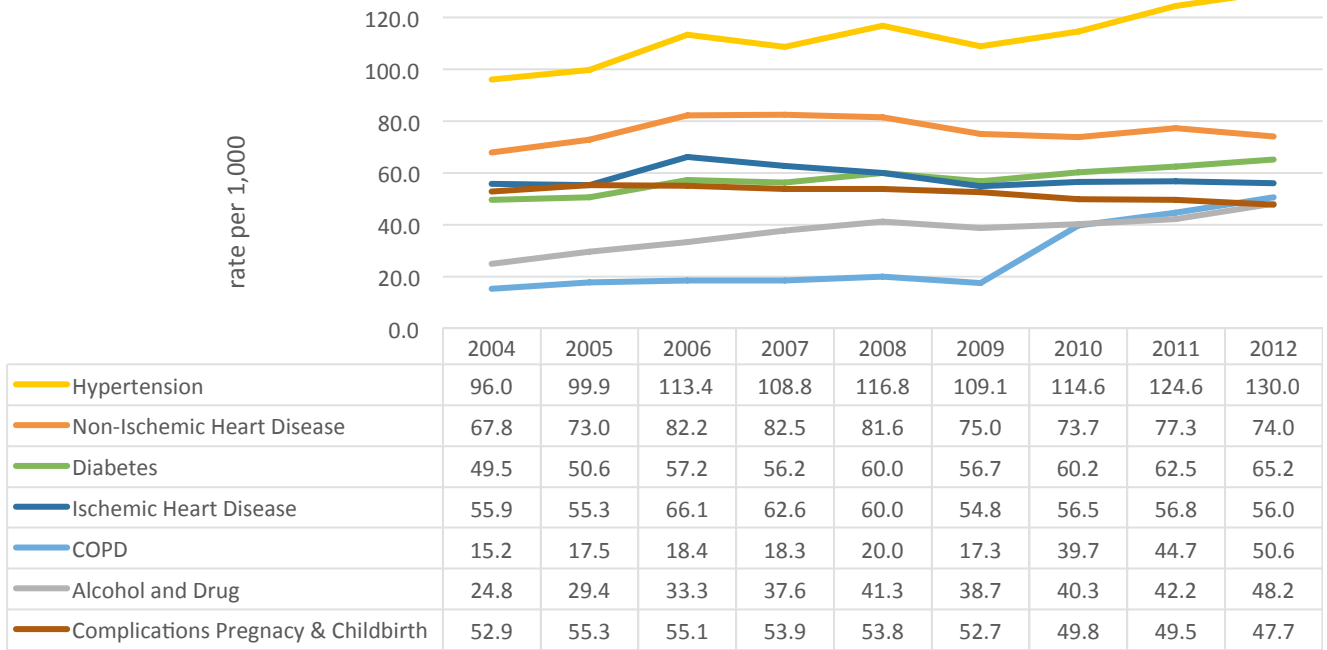
Source: Ohio Hospital Association and Greater Dayton Area Hospital Association

Figure 24: Top Seven Hospital Emergency Department Primary & Secondary Discharge Diagnoses for the Adult population, 2004-2011

Top Seven Emergency Department Discharge Diagnoses for the Adult Population, 2004-2011
(crude rate per 1,000)

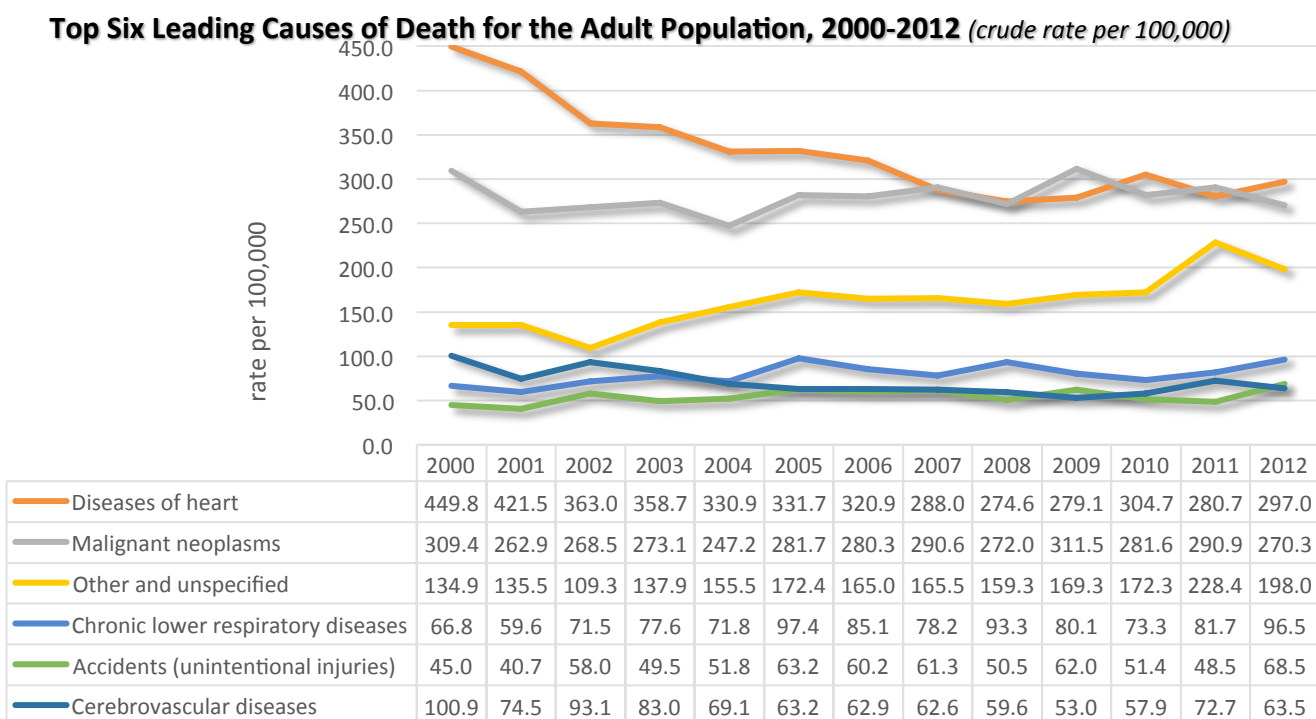|	2004	2005	2006	2007	2008	2009	2010	2011
Unintentional Injury	111.7	103.3	99.6	102.2	101.2	100.1	100.8	79.5
Alcohol and Drug	15.4	21.2	23.7	23.9	27.0	31.4	38.8	70.7
Hypertension	58.5	68.9	67.2	63.0	50.6	53.7	49.8	61.1
Abdominal Pain Ill Defined	41.4	41.4	45.1	51.7	56.1	56.7	57.5	60.1
Spinal Disorders	51.3	48.0	49.0	55.1	58.7	62.0	40.7	49.5
UTI	22.6	20.0	21.1	26.5	32.3	36.6	35.5	41.7
Chest Pain Ill Defined	29.0	29.5	30.0	31.1	34.4	33.4	32.0	37.8
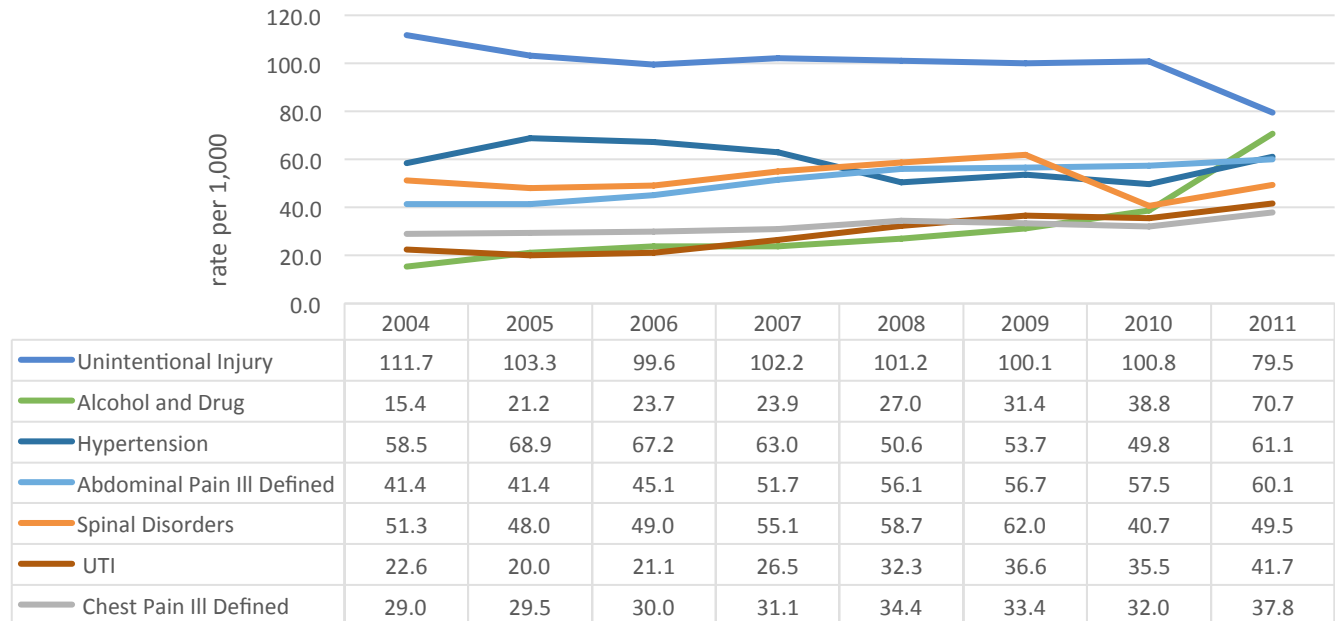
Source: Ohio Hospital Association and Greater Dayton Area Hospital Association

Leading Causes of Death

The figure below presents the six top leading causes of death in Miami County. The mortality rate for diseases of the heart, which is still the leading cause of death, has declined substantially since 2000 and the rate is fairly constant in more recent years. Mortality rates that are increasing include Chronic Lower Respiratory Diseases, accidents, and other unspecified causes.

Figure 25: Top Six Leading Causes of Death, 2000-2012

Top Six Leading Causes of Death for the Adult Population, 2000-2012 *(crude rate per 100,000)*

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Diseases of heart	449.8	421.5	363.0	358.7	330.9	331.7	320.9	288.0	274.6	279.1	304.7	280.7	297.0
Malignant neoplasms	309.4	262.9	268.5	273.1	247.2	281.7	280.3	290.6	272.0	311.5	281.6	290.9	270.3
Other and unspecified	134.9	135.5	109.3	137.9	155.5	172.4	165.0	165.5	159.3	169.3	172.3	228.4	198.0
Chronic lower respiratory diseases	66.8	59.6	71.5	77.6	71.8	97.4	85.1	78.2	93.3	80.1	73.3	81.7	96.5
Accidents (unintentional injuries)	45.0	40.7	58.0	49.5	51.8	63.2	60.2	61.3	50.5	62.0	51.4	48.5	68.5
Cerebrovascular diseases	100.9	74.5	93.1	83.0	69.1	63.2	62.9	62.6	59.6	53.0	57.9	72.7	63.5

Source: 2000-2012, Ohio Department of Health Vital Statistics

Process for Identifying and Prioritizing Community Health Needs

The identification of priority health needs began with a comprehensive review of all primary and secondary data. Next, criteria were applied to aid in the selection of cross-cutting issues that are not trending in a favorable way. The criteria used were:

• Prevalence

• Seriousness (hospitalization and/or death)

• Impacts on other health issues

• Urgency—what are the consequences of not addressing this issue?

• Prevention—is the strategy preventative in nature?

• Economics — is the strategy financially feasible? Does it make economic sense to apply this strategy?

• Acceptability – Will the stakeholders and the community accept the strategy?

• Resources — is funding likely to be available to apply this strategy? Are organizations able to offer personnel time and expertise or space needed to implement this strategy?

Priorities Identified by Researchers

By applying these criteria, researchers identified priority areas for consideration by the Hospital and its community group. These priority areas are not presented in a ranked order.

Maternal and Infant Priorities:

1. First Trimester Prenatal Care – The percentage of mothers not receiving first trimester prenatal care in the County has increased since 2006 from 33.5 to 40.2.
2. Teen pregnancy—Consistent with the State's trend, Miami County's teen birth rate is generally declining but is higher than the State's rate.
3. Percentage of births to mothers who smoke—The percentage of mothers who smoked while pregnant was lower or relatively consistent with that of the State through 2005, when the percentage of mothers who smoked increased from 17.8% to 22.5% in 2010. Since then it has remained substantially higher than the State.
4. Low birth weight—The rate for the County in the most recent year is 8.2 versus 8.5 for the State; however, the trend is increasing and has increased dramatically since 2000.

Primary and Chronic Diseases:

While Miami County's Health Ranking among Ohio's 88 counties is 34 overall, for diseases the County's ranking is 46th. Diseases of concern include:

1. Hypertension—From 2004 to 2012, the rate of hospital inpatient hypertension discharge diagnosis increased from 96 to 130 per 1,000 adults.
2. Melanoma of the skin cancer—the cancer rate has increased from 35.4 to 88 per 100,000 from 2000 to 2011.
3. Emergency department alcohol and drug discharge diagnosis—From 2004 to 2011, the rate of Emergency Department diagnosis increased from 15.4 to 70.7. With a higher than average motor vehicle crash rate, this issue may be of further concern.

Methodology and Information Gaps

The spine of this analysis is hospital and public health data. Hospital data is provided in the form of ICD-9 codes. The International Classification of Diseases (also known by the abbreviation ICD) is the United Nations-sponsored World Health Organization's "standard diagnostic tool for epidemiology, health management and clinical purposes."[3] The ICD is designed as a health care classification system, providing a system of diagnostic codes for classifying diseases, including nuanced classifications of a wide variety of signs, symptoms, abnormal findings, complaints, social circumstances, and external causes of injury or disease.[4]

For this Community Health Needs Assessment, primary and secondary diagnoses were provided for selected ICD-9 codes. Researchers listed 26 codes for adults five of which had subcategories. An example of a category is "injury" which is subcategorized into unintentional injury (with another subcategory of *fractures*), homicides, and suicides. For this analysis of infants, children and youth, 31, 24, and 23 ICD-9 codes were analyzed with some of those having subcategories. For this analysis, the top codes were selected for presentation based on natural breaks in the data.

Public health data are provided by the Ohio Department of Health (ODH) for Southwest Ohio. Maternal and infant health data as well as mortality data (including infant mortality) were directly downloaded from the ODH website. Cancer registry data were provided to Wright State University for rate calculations. Data are suppressed whenever there are fewer than 10 cases in a cell.

Besides hospital and public health data, other critical secondary data sources included:

- U.S. Bureau of the Census American Community Survey
- The Ohio Development Services Agency population forecasts and county descriptions
- Economic Modeling Specialists, Inc. industry and occupational data
- Hoover's (a subsidiary of Dun & Bradstreet) company records
- Robert Wood Johnson Foundation County Health Rankings
- Health Resources and Services Administration (HRSA) HPSA and health resources data

Limitations and Gaps in the Data

Information gaps that limit the ability to assess the community's health needs include:
- No service/usage data are included from hospital clinics and private clinics.
- Secondary aggregate data on mental health users, services, and costs is difficult to obtain for Medicaid patients and basically impossible to obtain from private sector providers.
- The most recent data from the Ohio Department of Health for some data is 2010.
- Some ICD-9 data had to be suppressed due to anomalies.
- The health data presented in this report are not exhaustive.
- A longitude for First Trimester Prenatal Care has a baseline of 2006, because the method for data presentation changed in that year.

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[3] http://www.who.int/classifications/icd/en/
[4] http://www.rtmedibus.com/educationclinicalcontent/conditions-and-diseases