

2013

FORT HAMILTON HOSPITAL

Community Health Needs Assessment



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Introduction

Fort Hamilton Hospital 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 the Fort Hamilton Hospital's service area, providing a basic overview of the Medical Center'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 secondary data from multiple sources to paint a detailed picture of the Fort Hamilton Hospital Service Area. Secondary data 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 report presents previously gathered data from the AIM for Better, *Health Care Access Now. (2012). Community Health Needs Assessment*, as well as from the Greater

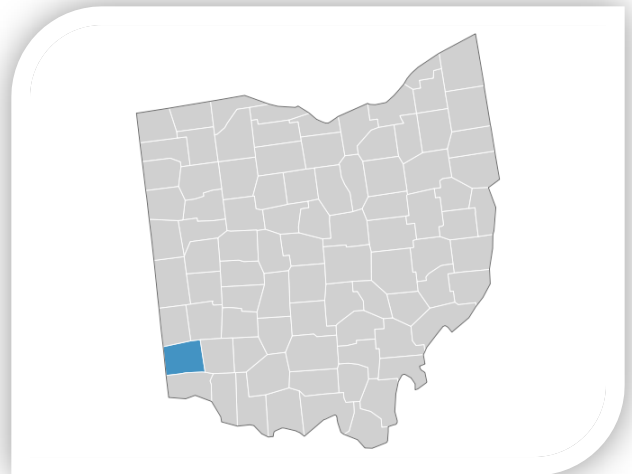
Cincinnati Community Health Status Survey. Aggregate hospital ICD-9 emergency department and hospital inpatient discharge diagnoses data were obtained from the Ohio Hospital Association via the Greater Dayton Area Hospital Association. Cancer data and vital statistics were obtained from the Ohio Department of Health. Other data were obtained from national sources such as the Health Resources and Services Administration (HRSA), the Bureau of the Census, and the Robert Wood Johnson Foundation; and other state sources such as the Ohio Development Services Agency and the Ohio Department of Job & Family Services. The framework for the report was based on key areas of need. The report, in some cases, compares the service area's status to state and/or 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 Fort Hamilton Hospital's service area.

Definition of the Community Served

The primary service area for Fort Hamilton Hospital is defined as Butler County which is located in West Ohio. The population for the Fort Hamilton Hospital service area is 368,130 and is expected to be 430,360 by 2040 according to the Ohio Development Services Agency. The service area is comprised of Butler County, the 9th fastest growing county of Ohio's 88 counties. The total number of jobs in this area is 183,300 with a forecasted job growth rate of 15.7% to the year 2023, outpacing the growth rate for Ohio and the nation (9.2% and 13.1%, respectively). The industry that employs the most people in this service area is the health care industry with the manufacturing industry being a close second (21,063 and 20,023, respectively), while the government sector employs 19,667 people. The ten-year forecast provided by Economic Modeling Specialists, Intl., shows that the health care industry in this service area will grow at a faster pace than the other large industries, resulting in the health care industry being the top employer by 2023 with an expected 27,982 jobs while annual health care job openings are expected to be about 770 a year.

The characteristics of the County are generally a younger population (the median age in Butler County is 36), and a more racially diverse county than many in West Ohio. Over 7% of the

population is African American, 4% percent of the population is Hispanic/Latino and about 2.5% of the population is Asian. Economic Modeling Specialists, Intl. estimates the White Hispanic/Latino population in Butler County to be 17,148 in 2013 and growing to 21,619 by 2023, a growth rate of 26%. The Greater Cincinnati Community Health Status Survey estimates the percentage of the White Appalachian population in the Butler/Clinton/Warren county area to be 29%. According to the Cleveland Clinic, learned behaviors such as lifestyle and customs that are specific to ethnic groups are factors in disease risk and prevention.



Consulting Persons and Organizations

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 Fort Hamilton Hospital, community health collaboratives featuring community, health, and business stakeholders/advocates organized by both Fort Hamilton Hospital, and the Greater Dayton Area Hospital Association with its member hospitals.

Demographics of the Community

Characteristics of the Population

Figure 1: Population Trends, 2010-2040

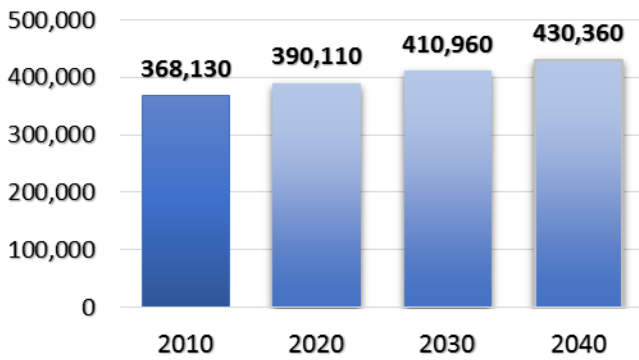


Figure 2: Age, 2011

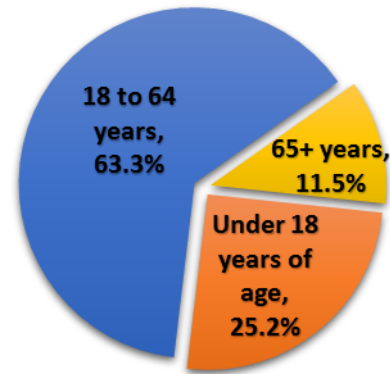
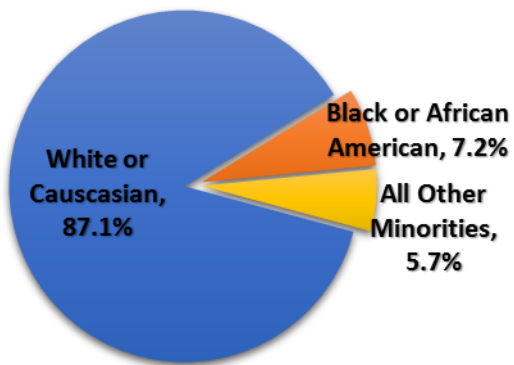


Figure 3: Race, 2011



The population in Butler County in West Ohio is projected to increase 16.9% through the year 2040. The racial composition of the region is mainly White or Caucasian (29% are White Appalachian*), with African Americans comprising 7.2% of the population and other minorities comprising 5.7%. Four percent of Butler County’s population is Hispanic/Latino. In 2011, the senior population was estimated as one of every nine individuals. By 2040, the senior population is expected to increase to one of every six. (*Greater Cincinnati Community Health Status Survey)

Source: U.S. Census Bureau, 2007-2011 American Community Survey

Figure 4: Household Type

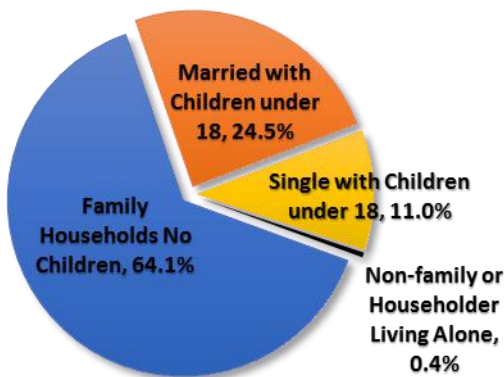


Figure 5: Senior Population Projections

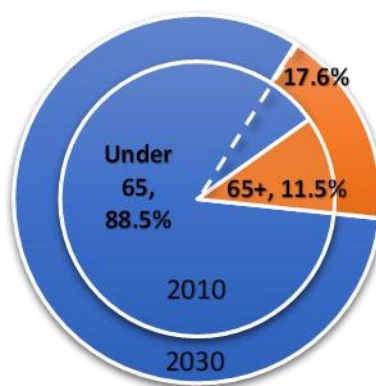


Figure 6: Occupied Housing Units

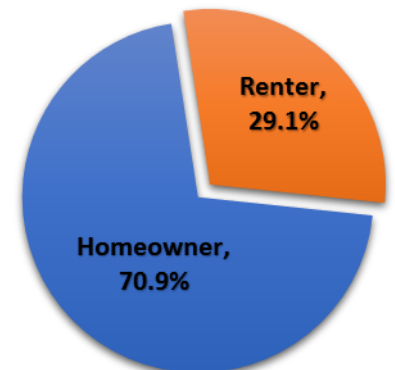


Figure 7: Educational Attainment for the Population 25 Years of Age & Older, 2011

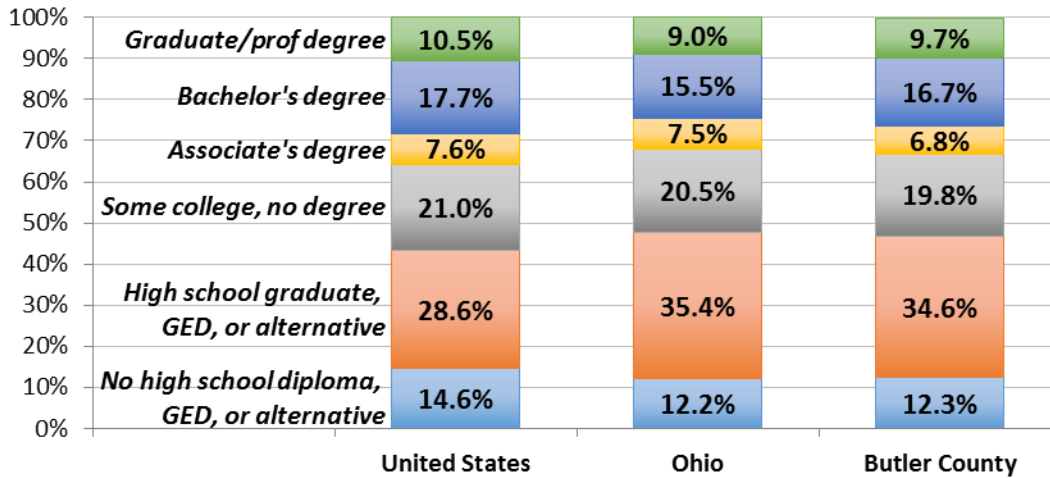


Figure 8: Median & Per Capita Income, 2011

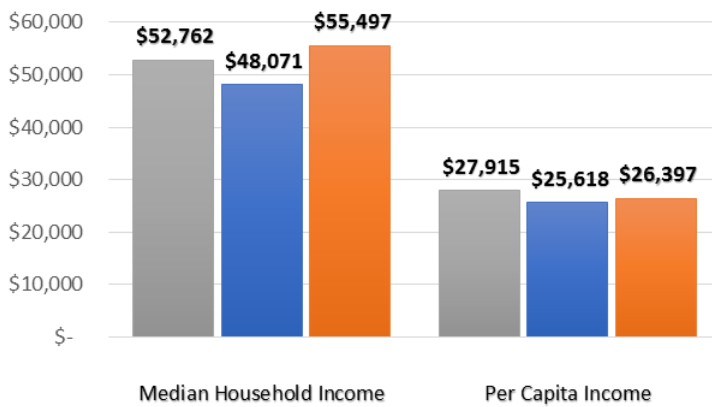
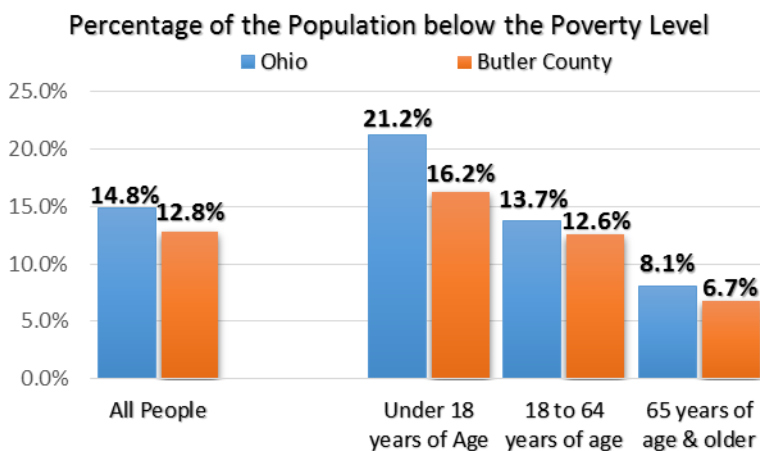


Figure 9: Percentage of the Population below the Poverty, 2011



This page presents elements of socioeconomic status (SES). SES is important to health not only for those in poverty, but at all levels of SES. On average, the more advantaged individuals are, the better their health. The percentage of the age 25 and over population with a higher education degree in this service area is 33.2%, which is similar to the State rate of 32% and lower than the national rate of 35.8%. Higher income is correlated with better health status. There is higher income in this service area compared to State and national averages. And there is less poverty in this County versus the State.

Source: U.S. Census Bureau, 2007-2011 American Community Survey

Health Care Facilities and Resources within the Community

This service area's health care infrastructure is comprised of seven hospitals of which five are short-term acute care general hospitals, one is a short-term acute care "other" hospital, and one is a children's medical center; 22 state licensed nursing homes; 21 state licensed residential care facilities; two hospice centers; three state licensed ambulatory surgery facilities; eight state licensed dialysis centers; and three birthing centers, per the Ohio Department of Health. There are county level and city level health departments in Butler County: Butler County Health Department, Middletown Health Department, and Hamilton City Health Department. These Health agencies offer services such as environmental health services, nursing/clinics (including vaccinations, lead level tests and TB program), vital statistics, among other services. The chart below presents information about the health care and hospital capacity per the Health Resources and Services Administration and the Ohio Department of Health.

Primary Care Physicians	188
PCP Physicians/100K Pop	50.8
General/Family Practice	87
General/Family/100K Pop	23.5
Internal Medicine	55
Internal Medicine/100K Pop	14.9
Pediatricians	46
Pediatricians/100K Pop	44
Obstetricians/Gynecologists	23
OB/GYN /100K Pop	12.2
General Surgeons	16
General Surgeons/100K Pop	4.3

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)

Psychiatrists	13
Psychiatrists/100K Pop	3.5
Dentists	154
Dentist/100K Pop	41.8
Hospitals	
Total Hospitals	7
Total Hospital Beds	745
Short-Term General Hospitals (including the Children's Hospital)	6
STG Beds	737
*Source: Ohio Department of Health, Health Care Provider Report & Information Extract, last accessed 1/12/2013	
Health Centers	
Community Health Centers	7
Federally Qualified Health Centers	2

According to the Health Resources and Services Administration, Butler County is a Health Professional Shortage Area (HPSA) for primary medical care, dental care, and mental health care. The HPSA designation for primary and mental health care pertains to the comprehensive health center called "Primary Health Solutions," which is an FQHC with two locations. The Dental HPSA includes the FQHC as well as low income areas in East Hamilton and in Middletown.

Hospital

This service area is served by seven hospitals of which five are short-term acute care general hospitals and one is a children's hospital. One other facility called University Pointe Surgical Hospital is not classified as a "general" hospital; it has 8 medical/surgical beds.

One of the short-term general hospitals is Fort Hamilton Hospital, a Joint Commission accredited 274-bed hospital. This Hospital represents 37% of this service area's registered hospital beds and 100% of the service area's psychiatric beds. A member of the Kettering Health Network, Fort Hamilton Hospital was founded in 1929 and is located in Hamilton, Ohio. The Hospital employs 778 full-time equivalent employees, and 211 physicians have admitting privileges there.

Fort Hamilton has recently remodeled its Emergency Department (ED) to enable immediate triage, and creating seven fast track patient rooms, easy and identifiable access, and private rooms to accommodate behavioral health patients. In 2011, Fort Hamilton had about 36,000 ED patient visits. In 2012, the estimate was for 40,000 ED patient visits, with the expansion able to accommodate more than 52,000 patients a year.

Short-term Care Acute Care General Hospitals		
	Registered Beds	Fort Hamilton Hospital
Special Care	83	16
Medical/Surgical-Gen	442	125
Psychiatric	52	52
OB Level I	9	
OB Level II	44	27
Subtotal	630	220
Neo Level I	69	40
Neo level II	14	6
Pediatric/Gen	16	
Subtotal	99	46
Total	729	266

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

According to the Health Resources and Services Administration (HRSA), there are seven Community Health Centers in Butler County. “Community Health Centers were developed in 1965 in response to community need for improved health services for inner city populations. As part of the federal government’s War on Poverty, funding was made available for communities to establish primary care centers to provide comprehensive health services, regardless of ability to pay. Although there have been many changes in the Community Health Center program over the years, its foundation remains the same—to provide high-quality primary and preventive health care to people in rural and urban medically underserved areas” (Ohio Association of Community Health Centers).

Primary Health Solutions is a full Federally Qualified Health Center (FQHC) in Butler County serving 15,000 uninsured or underinsured patients. It is a non-profit, safety-net healthcare provider with three health centers located in Hamilton and Middletown (HRSA and other sources count the number of FQHC’s in Butler County as two). A dental center is located at the Middletown site. These centers have been awarded the distinction of a Patient Centered Medical Home by the National Committee for Quality Assurance (NCQA).

This center offers bilingual primary care. Services include:

- Family Medicine
- Internal Medicine
- Pediatrics
- Expanded Dental Center
- Expanded Pharmacy services
- Lab services
- X-ray services
- Behavioral Health services
- Pharmacy services
- Pre-natal care
- WIC (Women, Infants & Children) services
- After-hours care

Mental Health Care Capacity

The Butler County Mental Health Board contracts with 12 certified mental health agencies to provide a variety of mental health services to all citizens of Butler County such as outpatient counseling and psychotherapy for children, adults, and families. It also provides for a 24-Hour crisis intervention/information and referral hotline.

The 12 agencies served 7,863 people in the first quarter of fiscal year 2014. The website presents the wait times for services for each of these 12 agencies. The longest wait time is for forensic and mental health services, with an average 71-day wait time. The second longest wait time is for child mental health assessments, with an average wait time of 43 days, which is three times as long as an adult mental health assessment wait time.¹

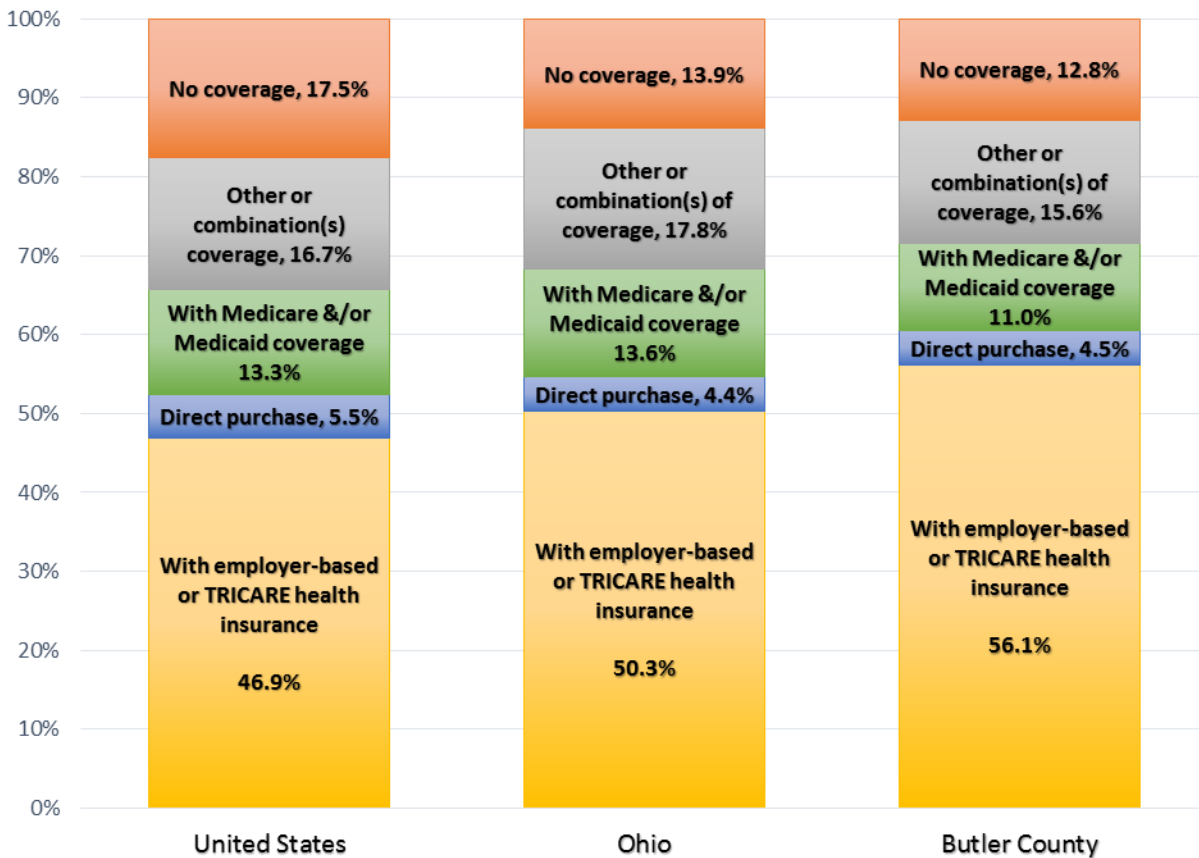
¹ http://www.bcmhb.org/index.php?option=com_content&view=article&id=35&Itemid=36

Access to Care

The distribution of health insurance coverage in the service area is substantially different than the State’s and the nation’s (see the figure below). A higher percentage of adults are covered by employer-based or TRICARE health insurance in the service area. Wright-Patterson Air Force Base, located in West 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. A smaller percentage of the service area population is covered by Medicare and/or Medicaid coverage. The service area 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



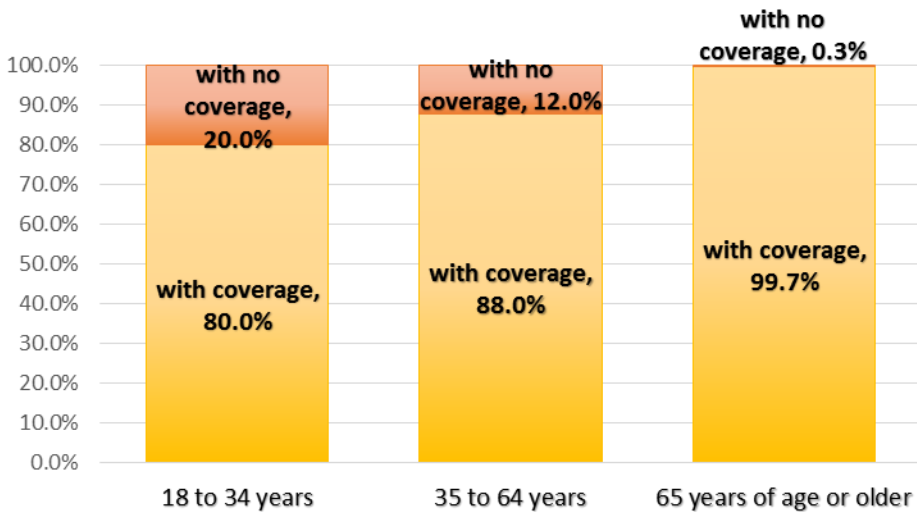
Source: U.S. Census Bureau, American Community Survey

According to the Greater Cincinnati Community Health Status Survey (GCCHSS), 83% of Butler County residents have an appropriate, regular source of health care. About 70% of adults have dental coverage and 62% have vision coverage (per the Ohio Family Health Survey of 2008). Those who lack coverage delay dental care (26%), medical care (16%), prescription drug purchases (12%), and have problems paying medical bills (21%) per the 2010 GCCHSS.

The figure below presents the distribution of health care coverage across different age cohorts for the service area. About 20% of the service area’s young adult population (18-34 years old) has no health insurance coverage. Twelve percent (12%) of those ages 35-64 have no health insurance coverage.

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

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



Source: U.S. Census Bureau, American Community Survey

Health Needs of the Community

County Health Rankings Data

	Butler County	Ohio	National Benchmark	National Median	Rank of 88
HEALTH OUTCOMES					36
Maternal and Infant Health					
Teen Pregnancy (per 1,000)	37	38			
Low Birth Weight	7.9%	8.6%	6.0%		
Percentage of pregnant mothers who smoked	19.1%	17.8%	1.4%		
Percent of Mothers without 1 st trimester care	43.9%	43.6%	22.1%		
Behavioral Risk Factors					41
Adult smoking	23%	22%	13%		
Adult obesity	32%	30%	25%		
Physical inactivity	26%	27%	21%		
Excessive drinking	19%	18%	7%		
Motor vehicle crash death rate	10	11	10		
Chlamydia Rate	301.8	461.7	10% reduction		
Gonorrhea Rate	92.4	143.5	10% reduction		
Clinical Care					37
Uninsured	13%	14%	11%		
Primary care physicians	2,027:1	1,348:1	1,067:1		
Dentists	2,499:1	1,928:1	1,516:1		
Mental health providers	3,323:1	2,553:1	Not available		
Preventable hospital stays	83	79	47		
Diabetic screening	85%	83%	90%		
Mammography screening	59%	63%	73%		
Disease					33
Poor or fair health	16%	15%	10%		
Poor physical health days	4.1	3.6	2.6		
High blood pressure*	33.8%	31.7%		28.7%	
Blood cholesterol*	27.6%	33.9%		37.5%	
Angina/Coronary heart disease*	8.7%	4.3%		4.1%	
Cancer Rates					
Leading Causes of Death					37
Premature age-adjusted mortality	369	378			

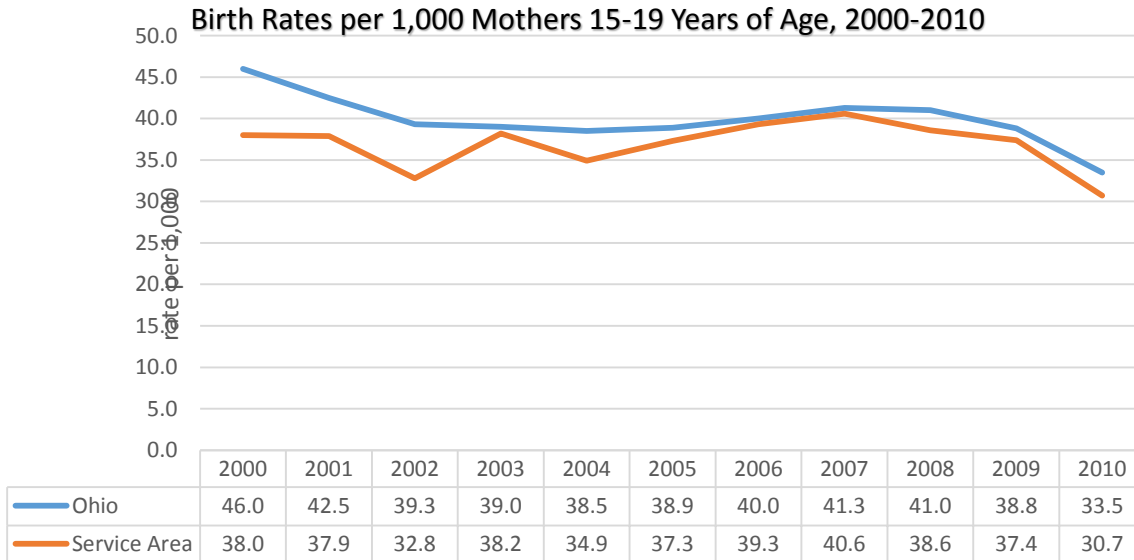
*Greater Cincinnati Community Health Status Survey, 2010; estimates are for Butler/Clinton/Warren county-area

Maternal and Infant Health

Teen Birth Rates

Consistent with the State’s trend, the service area’s teen birth rate is on the decline and is lower than the State’s rate.

Figure 12: Teen Birth Rate

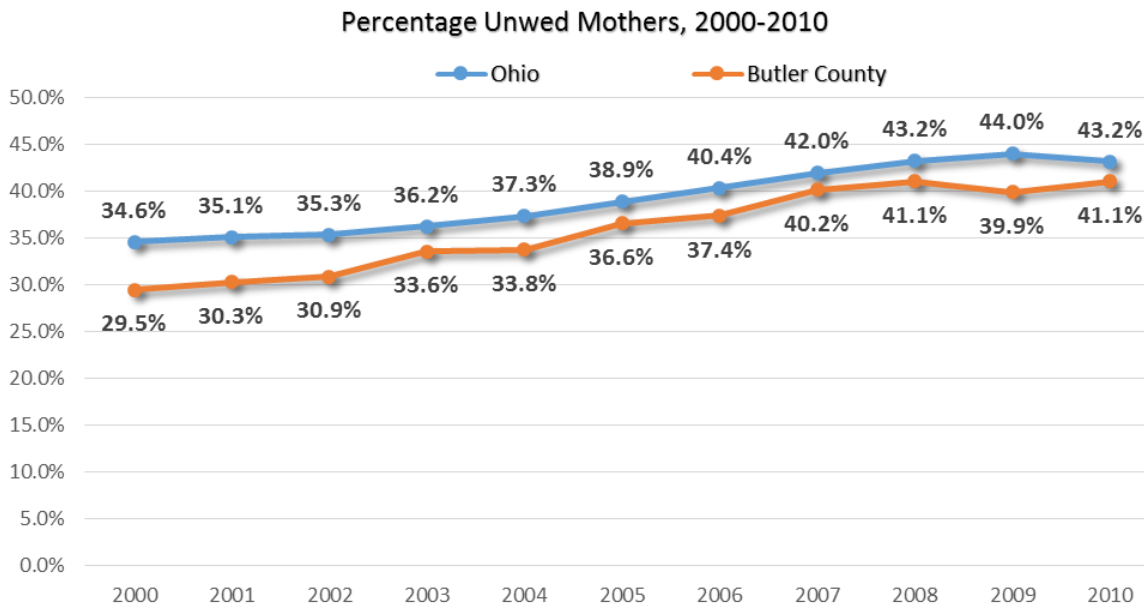


Source: 2000-2010, Ohio Department of Health, Vital statistics annual birth summaries. Last updated 05/24/2013.

Births to Unwed Mothers

The percentage of births to unwed mothers also follows the State trend and has risen over the past ten years. However, the service area’s percentage still remains lower than that of the State.

Figure 13: Births to Unwed Mothers

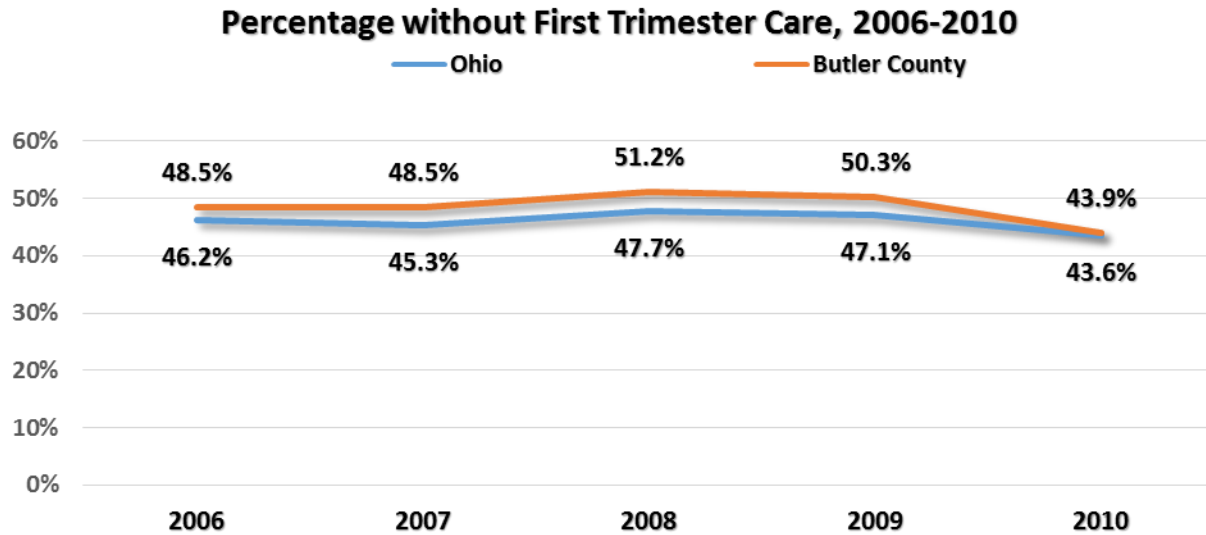


Source: 2000-2010, Ohio Department of Health, Vital statistics annual birth summaries. Last updated 05/24/2013.

First Trimester Prenatal Care

Consistent with the State’s trend, the service area’s teen birth rate is on the decline. The service area’s rate is slightly above the State’s rate.

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

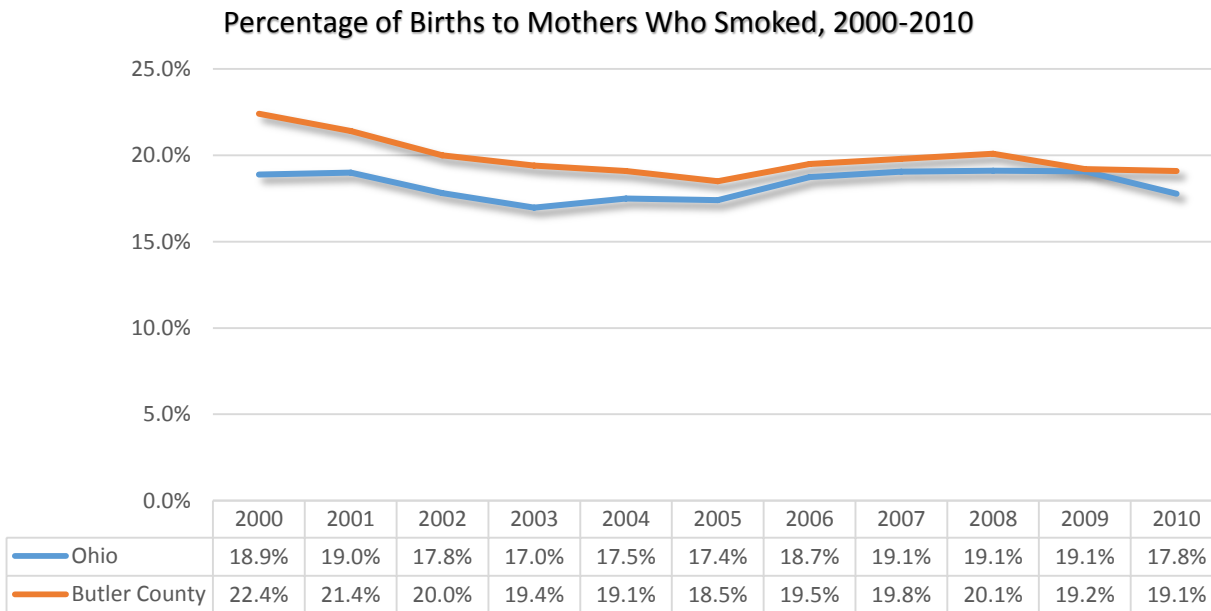


Source: 2000-2010, Ohio Department of Health, Vital statistics annual birth summaries. Last updated 05/24/2013.

Births to Mothers Who Smoke

The percentage of births to mothers who smoke is fairly level in the State but is generally declining in the service area. However, the service area’s rate is higher than the State’s rate.

Figure 15: Births to Mothers Who Smoke

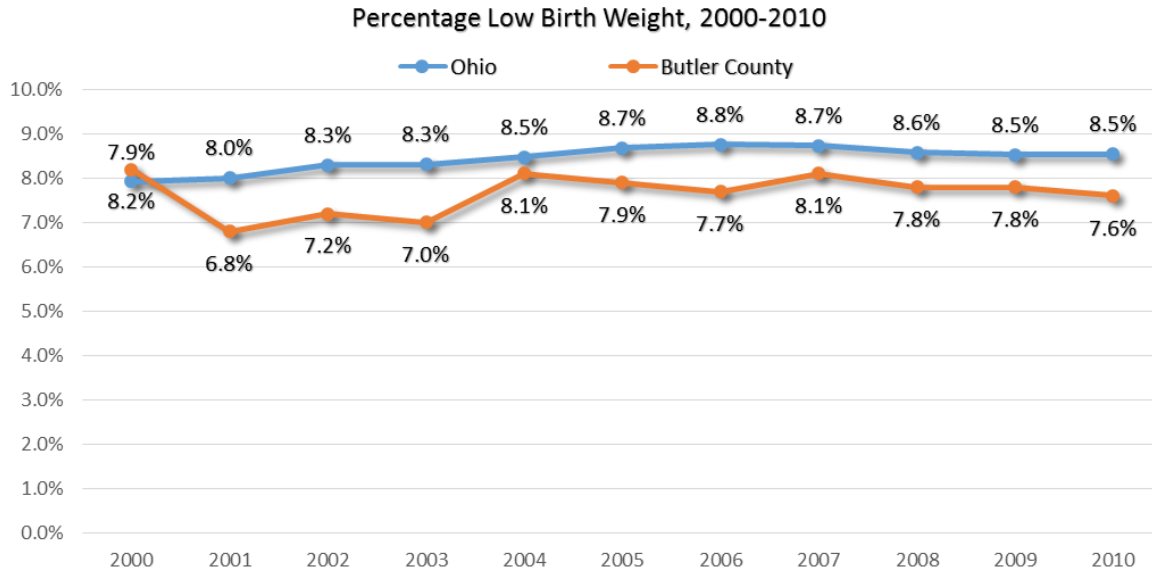


Source: 2000-2010, Ohio Department of Health, Vital statistics annual birth summaries. Last updated 05/24/2013.

Low Birth Weight Rate

Smoking during pregnancy causes low birth-weight in at least 1 in 5 infants. The low birth weight rate in the service area is lower than the State’s rate since the year 2000.

Figure 16: Percentage of Low Birth Weight Babies

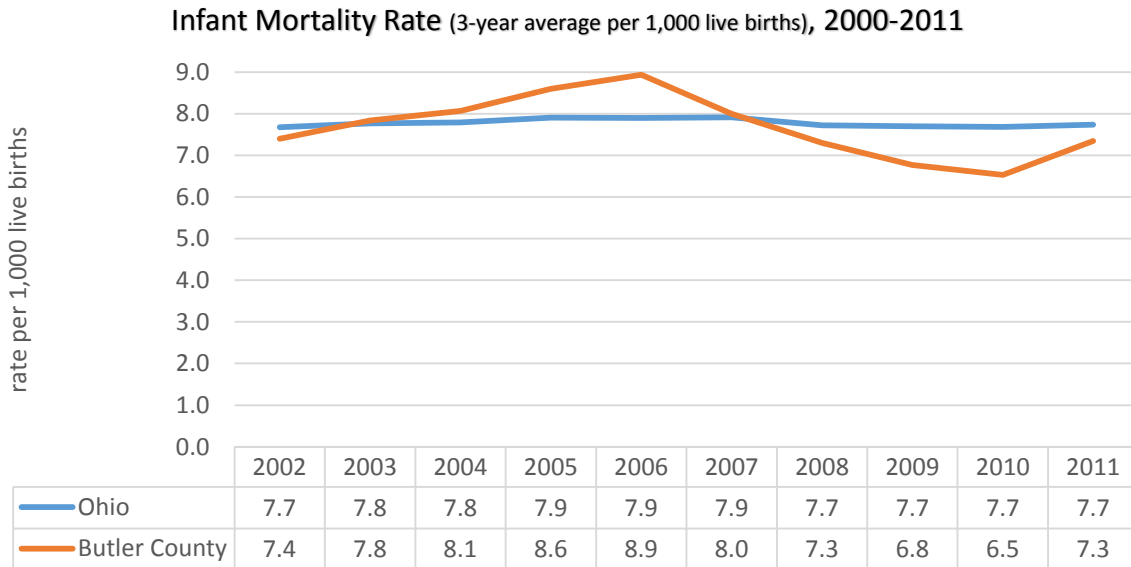


Source: 2000-2010, Ohio Department of Health, Vital statistics annual birth summaries. Last updated 05/24/2013.

Infant Mortality Rate

The chart below presents the general trend of infant mortality in the service area and the State using a three-year rolling average. The rate is currently more favorable in the service area.

Figure 17: Infant Mortality Rate



* 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.

Note: Small numbers are unstable and should be interpreted with caution.

Behavioral Risk Factors

County Health Rankings for behavioral risk factors rank Butler County as 41st among Ohio's 88 counties.

Adult smoking

According to the Journal of the American Medical Association, tobacco use is the leading cause of preventable death in the U.S. The percentage of adults who smoke is 23% in Butler County versus 22% for the State.

Physical Activity & Obesity

Twenty-six percent of Butler County adults lead a sedentary life style compared to 27% on average in Ohio. Lack of physical activity and poor diet contribute to overweight and obesity, which are prevalent in the service area. Over 32% of Butler County adults self-report a height and weight (without shoes) that constitutes obesity (BMI ≥ 30). Overweight and obesity contribute to approximately 400,000 of the 2 million annual deaths in the U.S. (Dietary Guidelines for Americans, 2005). Additionally being overweight or obese increases the risk of heart disease, diabetes, cancer, high blood pressure, high total cholesterol, stroke, liver disease, sleep apnea, respiratory problems, and osteoarthritis (Centers for Disease Control and Prevention).

Excessive drinking

Excessive drinking can take three forms: chronic drinking, heavy drinking or binge drinking. Adult Behavioral Risk Factor Surveillance System (BRFSS) data from the County Health Rankings show that 19% of Butler County adults were binge drinkers, on average, having consumed five or more drinks on any one occasion within the month prior to the survey. This compares to a State average of 18%.

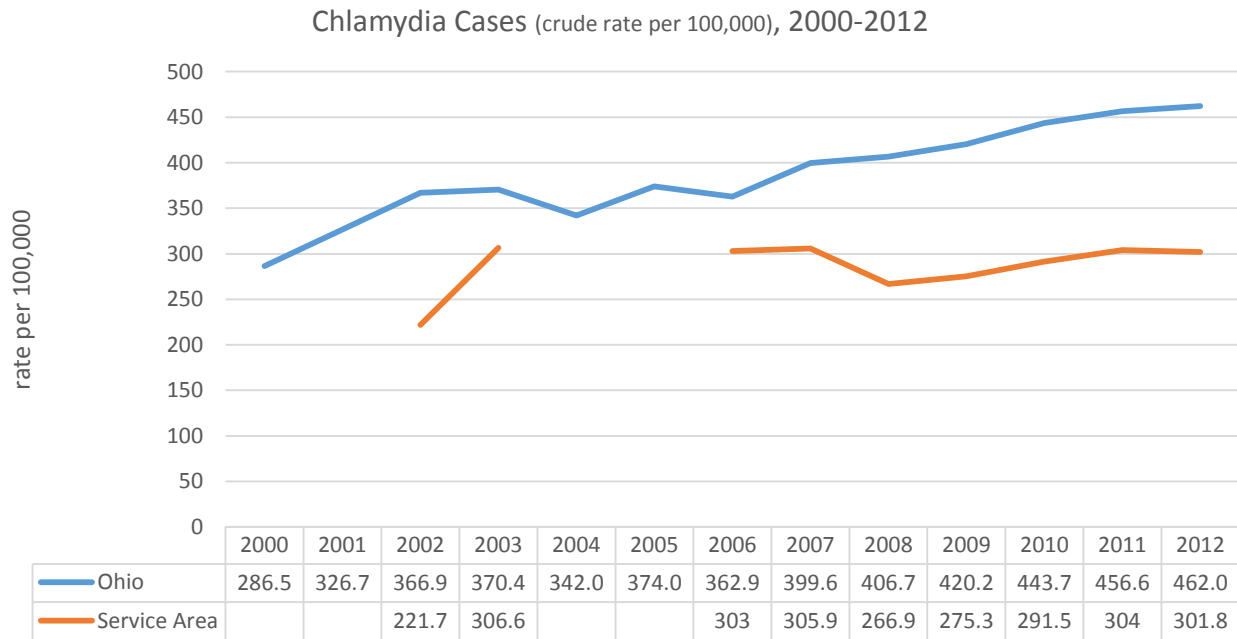
Motor vehicle crash death rate

For Ohioans of all ages, the leading causes of injury-related death include unintentional motor vehicle traffic crashes, suicide, unintentional poisonings, unintentional falls and homicides. In the County Health Rankings data, the motor vehicle crash death rate was 10 for Butler County versus 11 for Ohio overall. An average of 41 Butler County residents died annually from 2004-2006 as a result of a motor vehicle traffic crash (ODH Community Profile).

Sexually Transmitted Infections

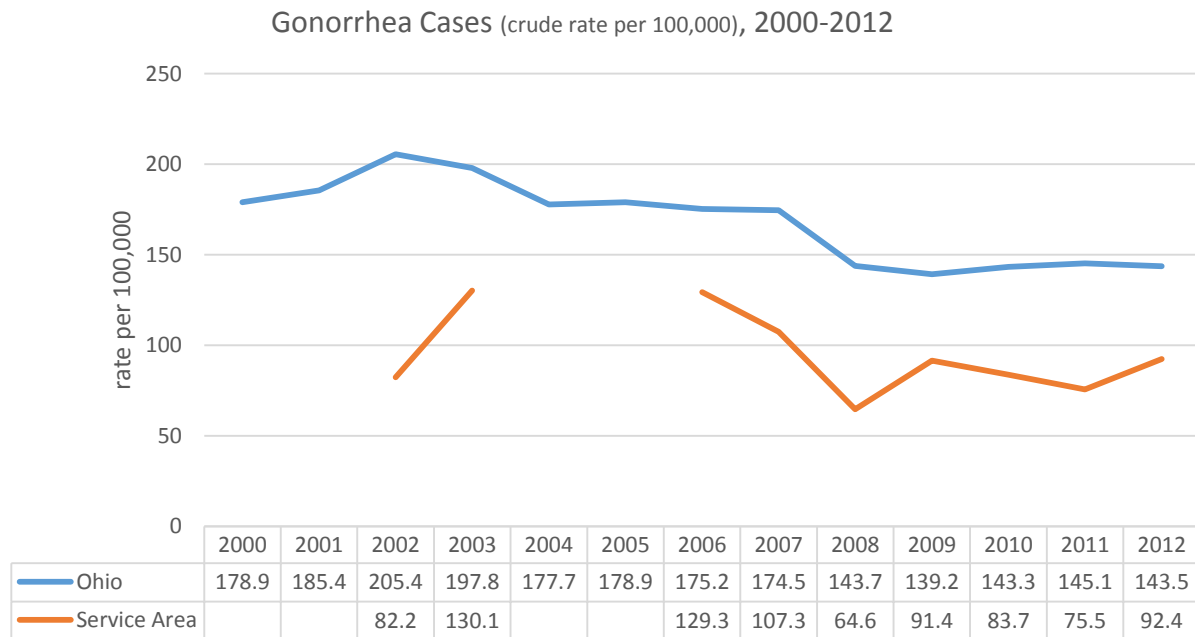
Data from the Ohio Department of Health show that the incidence of Chlamydia has been generally increasing in the State since the year 2000. The service area's rate has remained consistently below the State rate throughout the study period. Conversely, the Gonorrhea rate has been declining in the State. Again, the service area's rate is below the State rate. (Data could not be obtained for some years from the Ohio Department of Health.)

Figure 18: Chlamydia Cases, 2000-2012



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, Ohio Infectious Disease Status Report: Chlamydia, 09/21/2004.
 Ohio Department of Health Information Warehouse, 2000-2005 Chlamydia Surveillance Report, data could not be accessed

Figure 19: Gonorrhea Cases, 2000-2012



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, Ohio Infectious Disease Status Report: Gonorrhea, 09/21/2004.
 Ohio Department of Health Information Warehouse, 2000-2005 Gonorrhea Surveillance Report, data could not be accessed

Mental Health and Wellness

According to the Ohio Department of Health “Registered Hospitals Directory,” Fort Hamilton Hospital is the only short-term acute care hospital in the service area with a psychiatric unit, and it offers 52 psychiatric registered beds. Inpatient psychiatric units provide their own behavioral health crisis assessments and provide patients with access to specialty services. As mentioned earlier, the Butler County Mental Health Board also addresses mental health needs in the service area. The County Health Rankings provides a ratio of the county population to the number of mental health providers including child psychiatrists, psychiatrists, and psychologists active in patient care. The ratio of the population to mental health providers is unfavorable when compared to the State’s ratio—3,323 (Butler) versus 2,553:1 for the State. Butler County is determined by HRSA to be a mental health professional shortage area in regard to its FQHCs called *Primary Health Solutions*.

Poor mental health days

The shortage of mental health providers is a concern for this service area. In light of the prevalence of poor mental health days reported by adults in the BRFSS, this concern is further underscored. Butler County adults reported 3.5 days out of the 30 days prior to the survey when their mental health was not good. The State average is 3.8 and the national Healthy People 2020 target is 2.3.

Hospitalization due to Poor Mental Health

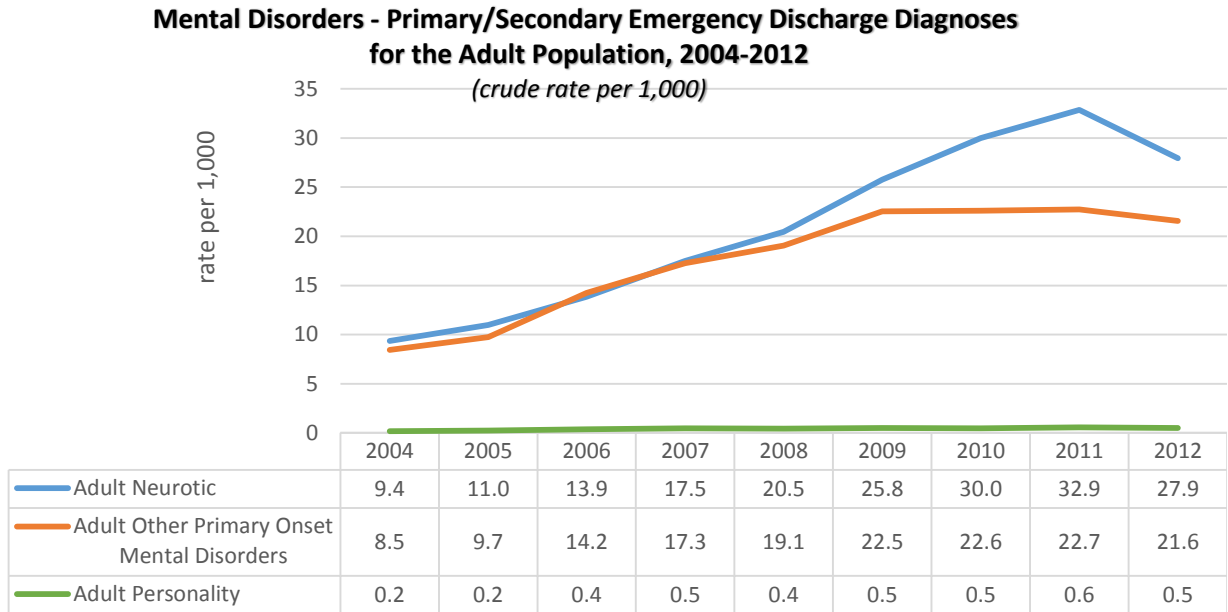
The International Classification of Diseases (also known by the abbreviation ICD) is the United Nations-sponsored World Health Organization’s “standard diagnostic tool for epidemiology, health management and clinical purposes.”² ICD-9 codes for mental disorders are presented for the Emergency Department and Hospital Inpatient discharge diagnoses in the following two figures for further exploration of mental disorder trends in the service area.

The Emergency Department trends show a diagnosis discharge rate that has increased by three times from 2004 to 2012 for adult neurotic disorders and 2.5 times for adult other primary onset mental disorders. The discharge diagnosis for adult personality disorders has remained flat.

The hospital inpatient rate shows a similar pattern but with sharp increases in 2012 for neurotic and primary onset mental disorders.

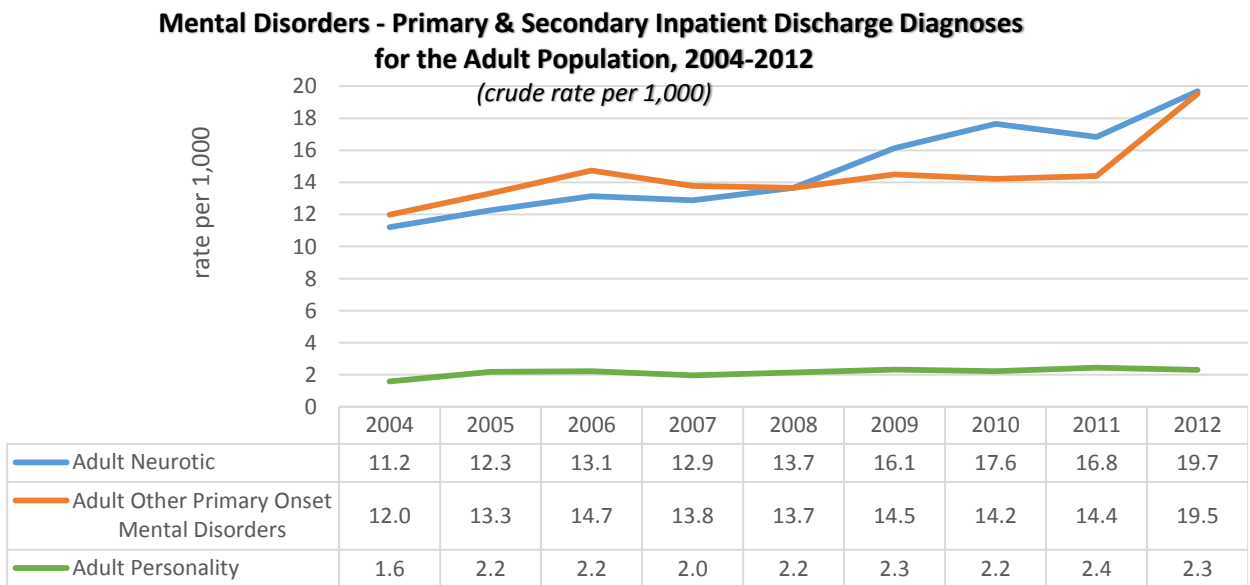
² <http://www.who.int/classifications/icd/en/>

Figure 20: Mental Disorders - Primary/Secondary Emergency Discharge Diagnoses for the Adult Population, 2004-2012



Source: Ohio Hospital Association and Greater Dayton Area Hospital Association

Figure 21: Mental Disorders - Primary & Secondary Inpatient Discharge Diagnoses for the Adult Population, 2004-2012



Source: Ohio Hospital Association and Greater Dayton Area Hospital Association

Clinical & Preventative Services

According to County Health Rankings, Butler County is ranked 37th of 88 counties in terms of residents obtaining appropriate clinical care.

Uninsured

According to American Community Survey data, 12.8% of the service area's adult population (ages 18+) has no health care coverage. The service area has a lower percentage of adults with no health coverage as compared to the State (13.9%) and the nation (17.5%). Data show that adults ages 18-34 in the service area are less likely to have coverage compared to adults ages 35-64 and 65+ (20%, 12%, and 0.3%, respectively).

Primary care physicians

The service area's ratio of population to primary care physicians is 2,027:1 versus 1,348:1 for the State. However, the national aim is 1,067:1. According to the Greater Cincinnati Community Health Status Survey (GCCHSS), 83% of Butler County residents have an appropriate, regular source of health care. About 70% of adults have dental coverage and 62% have vision coverage (per the Ohio Family Health Survey of 2008).

Dentists

Good oral health is important to one's overall health and well-being. Oral disease, particularly periodontal disease, is associated with other health issues such as problems controlling diabetes, heart disease, and premature birth (Surgeon General).

The service area's ratio of population to dentists is unfavorable when compared to the State ratio (2,499:1 in Butler and 1,928:1 in the State with a national target of 1,516:1). This finding is further corroborated in that Butler County's low income areas and its FQHCs are dental HPSAs.

Mental health providers

The service area's ratio of population to mental health providers is unfavorable when compared to the State ratio (3,323 and 2,553:1, respectively). As presented in the previous section, hospital inpatient and ED diagnoses rates for mental health disorders are increasing.

Preventable hospital stays

Since 1996, the Dartmouth Atlas of Health Care has examined patterns of health care delivery and practice across the U.S., and evaluated the quality of health care Americans receive. Preventable hospital stays is measured as the hospital discharge rate for ambulatory care-sensitive conditions per 1,000 Medicare enrollees. Preventable hospital stays in Butler County are 83, in the State are 79, and the national goal is 47.

Diabetic screening

Diabetic screening percentages are also provided by the Dartmouth Atlas and are calculated as the percent of diabetic Medicare patients whose blood sugar control was screened in the past year using a

test of their glycated hemoglobin (HbA1c) levels. The percentage for the service area is above the State percent (85% versus 83%). These percentages fall below the Healthy People 2020 goal of 90%.

According to the GCCHSS, 12% of adults in the service area have been told by a doctor or other health care provider that they have diabetes. This percentage is higher than State or national rates of 10.1% and 8.7%, respectively.

Mammography screening

Mammography screening, calculated in the Dartmouth Atlas, is a measure that represents the percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period. The percentages for Butler County, the State, and the U.S. benchmark are 59%, 63%, and 73%, respectively.

Disease

According to County Health Rankings, Butler County is ranked 33rd of 88 counties in terms of disease prevalence.

Poor or fair health

Self-reported health status is a general measure of health-related quality of life. This measure is based on BRFSS responses to the question: "In general, would you say that your health is excellent, very good, good, fair, or poor?" The value reported in the County Health Rankings is the percent of adult respondents who rate their health "fair" or "poor." In Butler County, the percentage of adults reporting "poor or fair" health status was 16% and for Ohio it was 15%.

Poor physical health days

The BRFSS also asks, "Thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?" The number of poor physical health days reported for Butler County adults was 4.1 and for Ohio was 3.6.

High blood pressure

High blood pressure is also queried in the BRFSS where adults are asked if they have ever been told by a health professional that they have high blood pressure. In this case, the estimates come from more current BRFSS data. The GCCHSS found that 33.8% of adults in the Butler/Clinton/Warren county area have this disease, compared to the State's 31.7% and 28.7% for the U.S.

Blood cholesterol

Blood cholesterol is another question in the BRFSS which was asked in the GCCHSS. The percentage for the Butler/Clinton/Warren county area was 27.6% versus 33.9% and 28.4% in Ohio and the U.S., respectively.

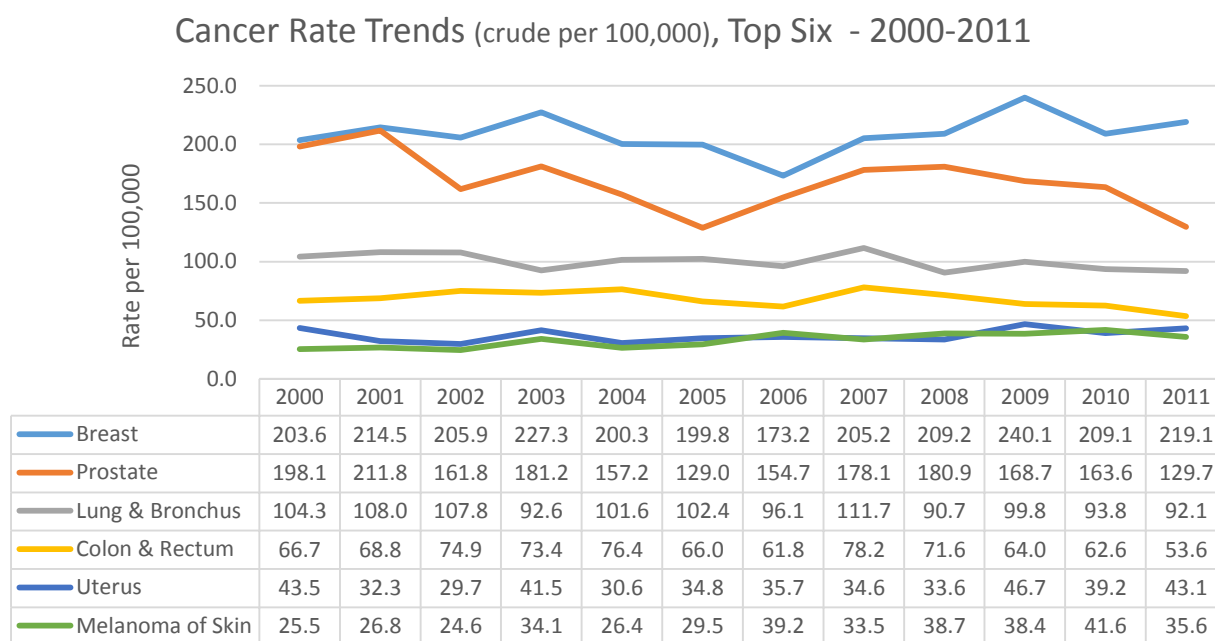
Coronary heart disease

Similarly, the BRFSS asks adult survey respondents if they have ever been told that they have coronary heart disease or angina, and the GCCHSS asked a similar question. The following percentages apply to the Butler/Clinton/Warren county area, Ohio, and the U.S., respectively: 8.7%, 4.3%, and 4.1%.

Cancer

Breast cancer rates, the most prevalent of all cancers in the service area, were declining from 2000-2006 but appear to be increasing since then. Prostate, colon & rectum, and lung & bronchus cancer rates have declined, while there is an increase in rates for melanoma of the skin over the study period.

Figure 22: Cancer Rates, 2000-2011



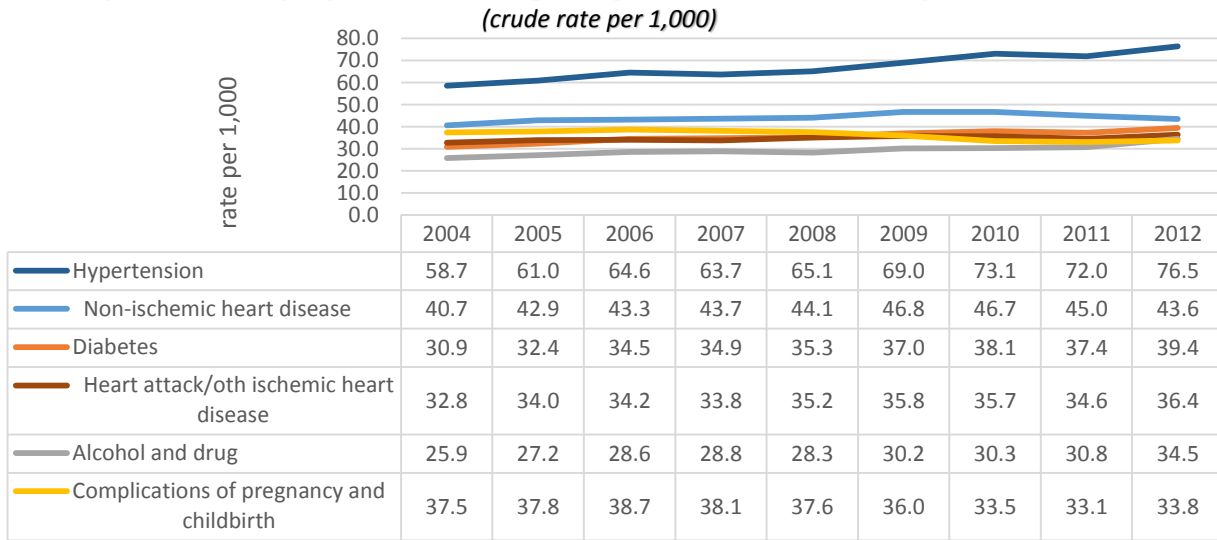
Source: Ohio Department of Health Ohio Cancer Incidence Surveillance System

Hospital Discharge Diagnoses

The top six Emergency Department (ED) and inpatient discharge diagnoses are presented in the figures below. Hypertension is the most common hospital inpatient discharge diagnosis and presents an increasing rate over time. It is the second most common ED discharge diagnoses. In the ED, alcohol and drug dependence syndrome rates have climbed more than 340% over the study period and that diagnosis is now the leading ED discharge diagnosis and is an increasing inpatient discharge diagnosis.

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

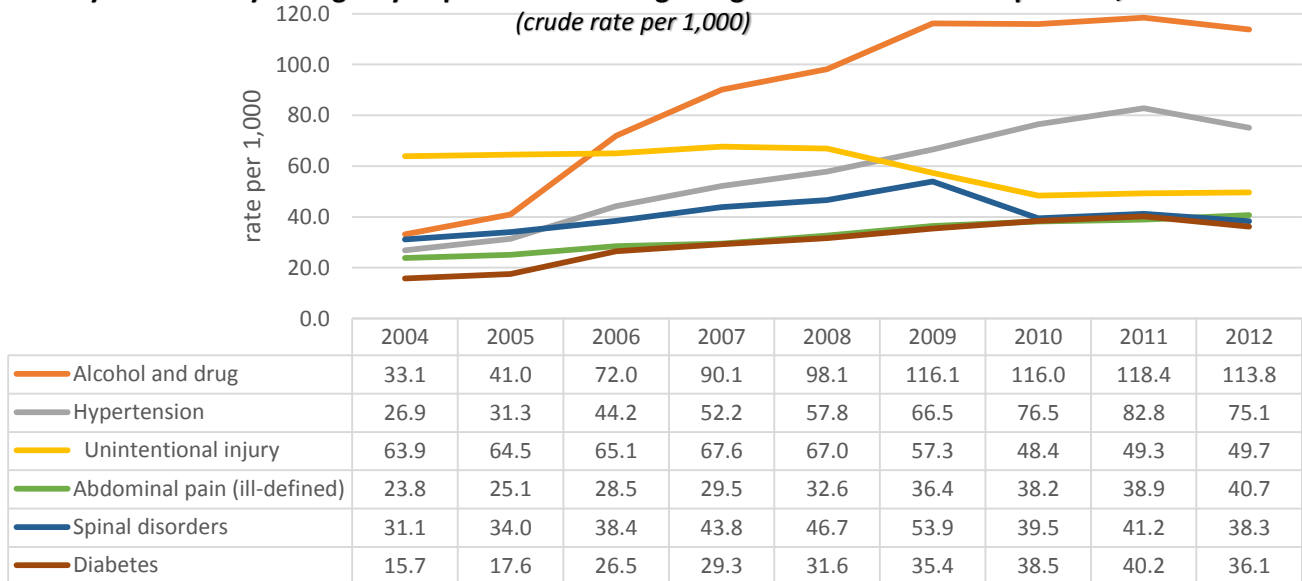
Primary & Secondary Inpatient Discharge Diagnoses for the Adult Population, 2004-2012



Source: Ohio Hospital Association and Greater Dayton Area Hospital Association

Figure 24: Hospital Discharge Diagnoses for the Adult population, 2004-2012

Primary & Secondary Emergency Department Discharge Diagnoses for the Adult Population, 2004-2012



Source: Ohio Hospital Association and Greater Dayton Area Hospital Association

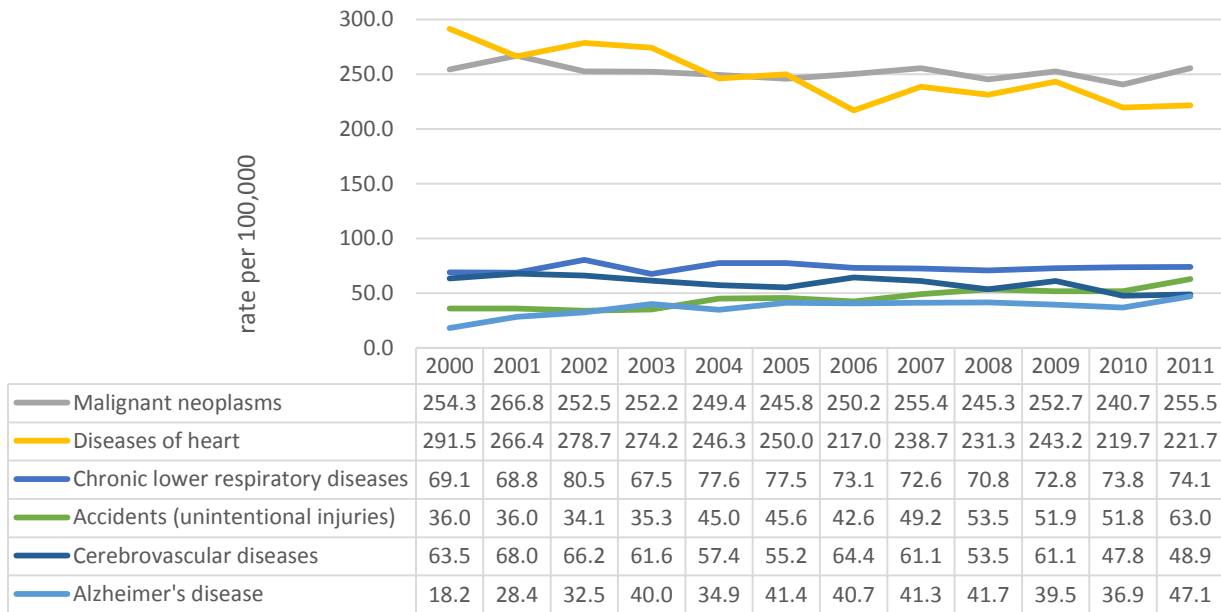
Leading Causes of Death

According to County Health Rankings, Butler County is ranked 37th of 88 counties in terms of premature death. Premature age-adjusted mortality is a common population health outcome measure.

The figure below presents the six top leading causes of death in Butler County. Cancer and diseases of the heart top the list, but the mortality rate for diseases of the heart has declined substantially since 2000. Mortality rates that are increasing include Chronic Lower Respiratory Diseases, accidents, and Alzheimer’s disease.

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)



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 service area has remained above the State percentage throughout the study period.
2. Moms who Smoke during Pregnancy—The service area’s percentage is higher than the State’s, and while the State’s rate is declining, the service area’s percentage is not (19.1 vs. 17.8).

Primary and Chronic Diseases:

1. Hypertension—Hypertension self-reported rates are higher in the service area than in the State and nation (33.8% versus 31.7% and 28.7%, respectively). It is the leading inpatient discharge diagnosis and the 2nd leading ED discharge diagnosis. Furthermore, the rate of self-reported angina is substantially higher than the State and national rates (8.7% versus 4.3% and 4.1%).
2. Diabetes—The prevalence of diabetes is substantially greater in the service area compared to the State and nation according to self-reports (12% vs. 10.1% and 8.7%). It is the 3rd most common inpatient discharge diagnosis and the 6th most common ER discharge diagnosis. Discharge diagnoses rates have increased from 2004 to 2012.
3. Breast cancer—The breast cancer rate is 219 per 100,000, and the rate is increasing as opposed to other historically prevalent cancers. Furthermore, the percentage of women obtaining mammography screenings is substantially lower than the State and national percentages.
4. Alcohol and drug dependence—From 2004 to 2012, the rate of Emergency Department discharge diagnosis for alcohol and drug dependence syndrome increased from 33.1 to 113.8 per 1,000 and from 25.9 to 34.5 per 1,000 for inpatient discharge diagnosis.
5. Hospitalization for mental health disorders is increasing. The undersupply of mental health providers may be contributing to the higher than average number of preventable hospital stays.

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, 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 West 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 primary and secondary data sources included:

- U.S. Bureau of the Census American Community Survey
- The Ohio Development Services Agency population forecasts and county descriptions
- The Ohio Department of Job and Family Services Ohio Home Care Program data
- Economic Modeling Specialists, Intl. industry and occupational data
- Hoover's (a subsidiary of Dun & Bradstreet) company records
- The Greater Cincinnati Community Health Status Survey
- 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.

³ <http://www.who.int/classifications/icd/en/>

⁴ <http://www.rtmedibus.com/educationclinicalcontent/conditions-and-diseases>