



Community Health Needs Assessment

Executive Report

August 2013

Bluffton Hospital

Table of Contents

Bluffton Hospital
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Executive Report
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I. Consultant’s Report1

II. Introduction.....2
Description of the Hospital.....2

III. Executive Summary3
Identified Community Health Needs3
Prioritization of Community Health Needs6

IV. Process and Methods7
Process and Document7
Community Served by the Hospital.....7
Community Input7
Prioritization of Community Health Needs9
Health Care Resources10
Additional Information10

Bluffton Hospital
Community Health Needs Assessment
Executive Report
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Consultant's Report

Board of Trustees
Blanchard Valley Health System
Bluffton, Ohio

On behalf of Bluffton Hospital (the Hospital), BKD, LLP (BKD) assisted the Hospital in conducting a Community Health Needs Assessment. The purpose of the engagement was to assist the Hospital in meeting the requirements of Internal Revenue Code §501(r)(3). BKD relied on the guidance contained in IRS Notice 2011-52 when preparing the Hospital's report. BKD also relied on certain information provided by the Hospital, specifically certain utilization data and existing community health care resources.

Based upon the assessment procedures performed, it appears Bluffton Hospital is in compliance with the provisions of §501(r)(3). Please note that, BKD was not engaged to, and did not, conduct an examination, the objective of which would be the expression of an opinion on compliance with the specified requirements. Accordingly, BKD does not express such an opinion.

BKD used and relied upon information furnished by the Hospital, its employees and representatives, and on information available from generally recognized public sources. BKD is not responsible for the accuracy and completeness of the information and is not responsible to investigate or verify it.

These findings and recommendations are based on the facts as stated and existing laws and regulations as of the date of this report. BKD's assessment could change as a result of changes in the applicable laws and regulations. BKD is under no obligation to update this report if such changes occur. Regulatory authorities may interpret circumstances differently than BKD does. BKD's services do not include interpretation of legal matters.

August 7, 2013

II. Introduction

As a result of the *Affordable Care Act*, tax-exempt hospitals are required to assess the health needs of their communities. Per IRC section 501(r), a byproduct of the *Affordable Care Act*, these hospitals must conduct a community health needs assessment in order to comply with federal tax-exemption requirements and maintain their tax-exempt status.

The Hospital engaged **BKD, LLP** to prepare this executive report to document the Hospital's compliance with the new federal laws outlined above. **BKD, LLP** is one of the largest CPA and advisory firms in the United States, with approximately 2,000 partners and employees in 30 offices. BKD serves more than 900 hospitals and health care systems across the country.

Description of the Hospital

Bluffton Hospital, part of the Blanchard Valley Health System, is a tax exempt, licensed 25 bed, short-term acute care facility located in Bluffton, Ohio. The Hospital primarily serves patients from parts of four counties - Allen, Hancock, Hardin and Putnam. It is a primary care facility where patients are referred, followed and primarily attended by their family physicians or obstetricians/gynecologists. Specialty surgeons from Findlay and Lima support area physicians by offering services to patients locally. Bluffton Hospital received Critical Access Hospital status in 2004 after being deemed eligible through the state of Ohio as a "necessary provider." Bluffton Hospital provides a full range of services, including inpatient medical care, inpatient surgical care, 24-hour emergency care, outpatient surgery, and enhanced diagnostic and rehab services. The facility also features a state-of-the-art Level I obstetrics unit.



In 2012, Bluffton Hospital was one of only 44 inpatient hospitals and one of six Ohio hospitals to receive the Press Ganey Summit Award for patient satisfaction. It is the only non-profit critical access acute care hospital in the nation to have received this award for four consecutive years. Bluffton Hospital has ranked first out of 164 Ohio hospitals for patient satisfaction by Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS). In 2012, the Hospital was also named one of the Health Strong Top 100 Critical Access Hospitals in the nation. Bluffton Hospital strives to provide care consistent with its vision statement, "Extraordinary people. Exceptional care."



III. Executive Summary

With funding from the Ohio Department of Health’s Flex Program, critical access hospitals and community representatives in Northwest Ohio met to discuss the health care needs and issues in the region. The process relied on a data-driven, facilitated planning approach, and was conducted between November 2011 and May 2012. This information was used to develop the Regional Health Needs Assessment Project: Ohio’s Critical Access Hospitals’ *North West Regional Plan* (Regional Plan). The regional plan was used to develop this Community Health Needs Assessment Executive Report for Bluffton Hospital. Health needs of the community have been identified and prioritized so that the Hospital may adopt an implementation strategy to address specific needs of the community.

Identified Community Health Needs

The Regional Plan identified health needs of the community and placed the identified needs into four different categories. The following health needs were identified in the Regional Plan, based on the information gathered and analyzed through the community health needs assessment process. Additionally, each health need is accompanied by management’s assessment of the significance of the urgency of each health need to be addressed. Management categorized each of the needs as either “Critical”, “Urgent”, or “Important”.

Wellness, Prevention, and Health Education	Significance
<p>▲ Obesity</p> <ul style="list-style-type: none"> • Roughly two-thirds of all adults in the region are categorized as either obese or overweight. • Roughly one-third of all children in the region are categorized as either obese or overweight. • This risk factor is linked to other severe and chronic health conditions. 	<p>Urgent</p>
<p>▲ Tobacco Use</p> <ul style="list-style-type: none"> • More than a fifth of all adults in the region are current smokers. • This risk factor is linked to other severe and chronic health conditions 	<p>Important</p>

Medication Management and Reconciliation	Significance
<p>▲ Heart Disease / Stroke</p> <ul style="list-style-type: none"> • Heart disease is the leading cause of death for the region with more than 4,000 deaths between 2006 and 2008. • More than 900 people died from a stroke between 2006 and 2008, making it the third most common cause of death for the region. • These two causes of death are both either preventable or postpone-able with improved chronic condition management and reduced risk factors. 	<p>Urgent</p>

III. Executive Summary

▲ Diabetes

Urgent

- Almost 10% of the adult population reported being diagnosed with diabetes.
- More than 600 people died from diabetes between 2006 and 2008, making it the seventh most common cause of death for the region.
- Many of these deaths would have been preventable or postpone-able with improved chronic condition management, including medication management.

▲ Medication Management and Electronic Health Records

Important

- Individuals with chronic conditions, or those in poor health, may have multiple prescribing providers and are often unable to accurately communicate all of the prescriptions they are taking or have had prescribed.
- The lack of a common electronic medical record system among pharmacies, hospitals and doctors' offices further complicates medication management efforts.

▲ Educational Attainment

Important

- Nearly 11% of all adults over the age of 25 in the region have not graduated high school or obtained a GED, which negatively affects their ability to understand or follow medical instructions.

▲ Elderly

Important

- More than 100,000 people in the region are 60+ years old, an age group that is more prone to multiple chronic conditions.

Access to Care, Services, and Programs	Significance
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▲ Poverty

Important

- Nearly 42% of the population in the region is considered poor or low-income, making less than 200% of the federal poverty level.

▲ Uninsured

Urgent

- 11% of the population is uninsured, while another 30% rely on either Medicaid or Medicare.
- Limited financial access to health care can result in untreated or complex existing health conditions.

III. Executive Summary

▲ Preventative Care **Critical**

- Roughly one-third of the adults have not had a flu shot in the past year and the same number has never had a pneumonia vaccination.
- Low-income individuals may not seek preventative care or treatment due to lack of insurance or co-pay requirements.

▲ Health Care Costs **Urgent**

- Uninsured and underinsured individuals are less likely to adhere to treatment plans based on costs, including medications and equipment.

▲ Transportation **Important**

- The lack of public or low cost transportation is a major obstacle to seeking and acquiring care for low-income individuals.

▲ Specialty Care **Urgent**

- The lack of particular specialty care services was identified throughout the region, specifically the shortage/absence of endocrinology, gastroenterology, and rheumatology.

Behavioral Health Care Access	Significance
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▲ Substance Abuse **Important**

- Nearly 24,000 people, or almost 6%, are considered heavy drinkers.
- In 2010, nearly 4,500 people received treatment for substance abuse.
- Substance abuse can further contribute to and complicate the treatment of medical conditions, particularly chronic conditions.

▲ Mental and Behavioral Health Services **Critical**

- In 2010, nearly 8,500 children and adults received treatment through Medicaid or other public funds for primary diagnosis of major affective disorder.
- Both critical access hospitals and community representatives report a serious lack of access, services, reimbursement as well as an impending behavioral health-funding crisis as a major issue in the region.
- Of all of the health care needs assessed for the region, the most prominent theme was the need to address access to behavioral health care.

III. Executive Summary

▲ Comorbidity

Urgent

- Co-morbid diagnoses present a huge care issue relative to inpatient care.

Prioritization of Community Health Needs

Management reviewed the identified health needs of the community and prioritized the top ten health needs for the Hospital's community. The process for prioritizing the health needs is described in Part IV of this report.

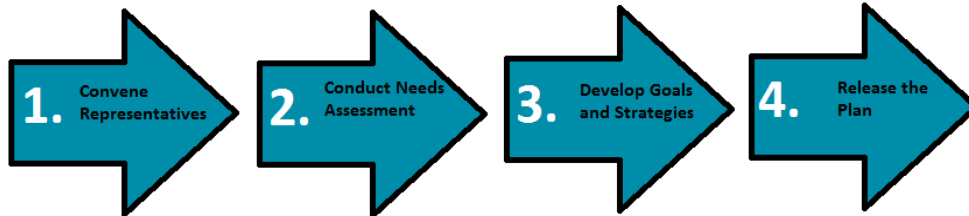
The following is a listing of the top ten health needs, as identified through the Hospital's community health needs assessment, for the community served by the Hospital, which will be addressed through its implementation strategy:

1. Mental and Behavioral Health Services
2. Preventative Care
3. Obesity
4. Heart Disease / Stroke
5. Diabetes
6. Uninsured
7. Comorbidity
8. Health Care Costs
9. Tobacco Use
10. Medication Management and Electronic Health Records

IV. Process and Methods

Process and Document

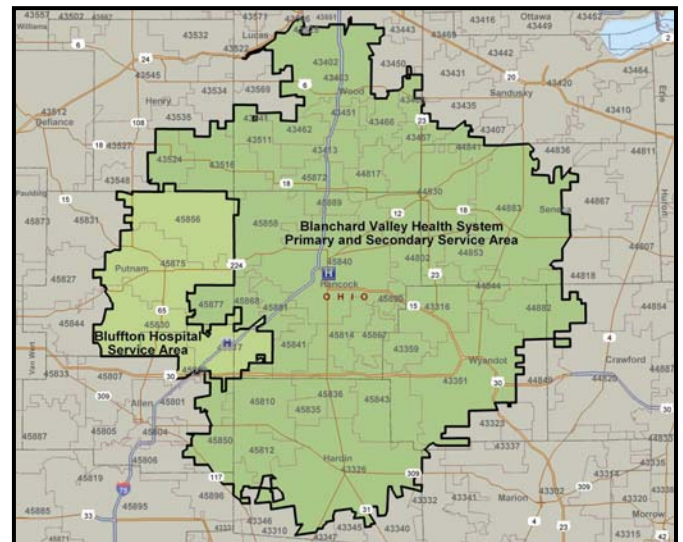
With funding from the Ohio Department of Health's Flex Program, critical access hospitals and community representatives in Northwest Ohio met to discuss the health care needs and issues in the region. The process relied on a data-driven facilitated planning approach, and was conducted between November 2011 and May 2012. This information was used to develop the *Regional Health Needs Assessment Project: Ohio's Critical Access Hospitals North West Regional Plan*. The regional plan describes the planning process used, along with the goals and strategies developed. The figure below provides an overview of the process utilized.



The regional plan and information from Hospital management was used to develop this community health needs assessment executive report.

Community Served by the Hospital

Hospital's primary service area is in the three counties of Allen, Hancock, and Putnam. All three of these counties are included in the nine counties that make up the North West Ohio Region identified as the community in the North West Regional Plan. The Hospital's service area does include a small portion of Hardin County, which is not one of the nine counties in the North West Ohio Region. However, management agrees that the profile of Hardin County is the same as the profiles of the other counties in the region, and the region identified in the North West Regional Plan is representational of the community served by the Hospital. The identified community health needs, community input process and other documents used to develop the regional plan were used to assess the needs of the community served by the hospital.



Community Input

Critical access hospitals and community representatives collectively met to identify and discuss the health needs of the community. These key informants (community stakeholders that represent the broad interest of the community with knowledge of or expertise in public health) were gathered to assess public perceptions of the community's health status and unmet needs. Additionally, it was intended to collect opinions among individuals likely to be knowledgeable about the community and influential over the opinions of others about health concerns in the community.

IV. Process and Methods

The following individuals provided community input as key informants and represented the following organizations and agencies:

- ▲ Benjamin Enders, *Director Ancillary Service*, Bluffton Hospital
- ▲ William D. Watkins, *Chief Administrative Officer*, Bluffton Hospital
- ▲ Jane Zachrich, *Nursing Officer/VP Patient Services*, Community Memorial Hospital
- ▲ Susan Wiley, *Founder*, Fountain of Faith Free Clinic
- ▲ Gaye Martin, *Manager Community Advocacy*, Defiance Regional Hospital and Fostoria Community Hospital
- ▲ Brittney Ward, *Assistant Director of Health Planning*, Hospital Council of Northwest Ohio
- ▲ Michelle VonLehmden, *Health Assessment Coordinator*, Hospital Council of Northwest Ohio
- ▲ Virginia Haugh, Fostoria Community Hospital
- ▲ Ruth Ann Beidelschies, Fostoria Community Hospital
- ▲ Steve McCoy, *Director of Marketing and Planning*, Fulton County Health Center
- ▲ Mick Oricko, *Health Commissioner*, Fulton County Health Department
- ▲ Todd Almedinger, *Vice President of Finance/CFO*, H.B. Magruder Hospital
- ▲ Nancy Osborne, *Health Commissioner*, Ottawa County Health Department
- ▲ Kimberly Bordenkircher, *CEO*, Henry County Hospital
- ▲ Anne Goon, *Health Commissioner*, Henry County Health Department
- ▲ Lucrecia Johnson, *FLEX/SHIP Program Coordinator*, Ohio Department of Health
- ▲ Pam Hunt, *Coordinator*, Ohio Department of Health
- ▲ Laura Milazzo, *Senior Research Associate*, Ohio University's Voinovich School of Leadership and Public Affairs
- ▲ Sara Boyd, *Senior Project Manager*, Ohio University's Voinovich School of Leadership and Public Affairs
- ▲ Cindy Poole, *Senior Research Analyst*, Ohio University's Voinovich School of Leadership and Public Affairs
- ▲ Kathleen Vasquez, *Associate Vice President of Governmental Relations*, University of Toledo

IV. Process and Methods

Prioritization of Community Health Needs

Management used a ranking system to prioritize the identified community health needs. The following prioritization metrics were used to rank each identified health need on a score between 1 and 5:

- ▲ **How many people are affected by the issue or size of the issue?**
For this metric, ratings were based on the percentage of the community that is impacted by the identified health need. The following scale was utilized: >25% of the community= 5; >15% and <25%=4; >10% and <15%=3; >5% and <10%=2 and <5%=1.
- ▲ **What are the consequences of not addressing this problem?**
Identified health needs which have a high death rate or have a high impact on chronic diseases received a higher rating for this metric.
- ▲ **What is the impact of the problem on vulnerable populations?**
The effect of health needs on vulnerable populations were rated for this metric.
- ▲ **How important the problem is to the community?**
The effect of health needs from community input and/or focus groups were rated for this metric.
- ▲ **What is the Hospital's ability to affect the need?**
For this metric, needs were rated based on the hospital's ability to affect the identified health need.

The following table outlines the prioritization of the identified health needs:

Bluffton Hospital
Prioritization of Community Health Needs

Rank	Health Need	How many people are affected by the issue?	What are the consequences of not addressing this problem?	What is the impact on vulnerable populations?	How important is it to the community?	What is the Hospital's ability to affect the need?	Total Score
1	Mental and Behavioral Health Services	5	5	5	5	5	25
2	Preventative Care	5	5	5	5	5	25
3	Obesity	5	4	5	4	4	22
4	Heart Disease / Stroke	5	4	5	4	3	21
5	Diabetes	5	4	5	4	3	21
6	Uninsured	5	4	5	4	2	20
7	Comorbidity	3	4	5	4	2	18
8	Health Care Costs	3	3	4	4	1	15
9	Tobacco Use	4	3	4	3	1	15
10	Medication Management and Electronic Health Records	1	2	2	2	5	12
11	Transportation	3	2	3	2	1	11
12	Elderly	2	2	2	2	2	10
13	Specialty Care	2	2	2	2	1	9
14	Substance Abuse	2	2	2	1	2	9
15	Poverty	2	1	3	1	1	8
16	Educational Attainment	1	1	2	1	1	6

IV. Process and Methods

Health Care Resources

The availability of health resources is a critical component to the health of a county's residents and a measure of the soundness of the area's health care delivery system. An adequate number of health care facilities and health care providers are vital for sustaining a community's health status. Fewer health care facilities and health care providers can impact the timely delivery of services. A limited supply of health resources, especially providers, results in the limited capacity of the health care delivery system to absorb charity and indigent care as there are fewer providers upon which to distribute the burden of indigent care. This section will address the availability of health care resources to the residents of the nine counties in which the community resides.

The Hospital has 25 acute beds and is one of the acute care hospitals located in the community. Residents of the community also take advantage of services provided by hospitals in neighboring counties, as well as services offered by other facilities and providers.

The following health care providers and services are available to the residents of the community:

- ▲ Lima Memorial Health System – This health system includes a 195 licensed beds short-term acute care hospital that offers a variety of services, including: emergency, heart & cardiovascular, orthopedics, and cancer.
- ▲ St. Rita's Medical Center – This short-term acute care medical center consists of 322 licensed beds and offers a variety of services, including: emergency, heart & cardiovascular, and cancer.
- ▲ Kindred Hospital Lima – This long-term care hospital consists of 26 licensed beds and offers services that include: rehabilitation, therapy, complex care, and pulmonary care.
- ▲ Institute for Orthopedic Surgery – Consisting of only 12 beds, this short-term surgery center specializes in surgery, therapy, and sports medicine.
- ▲ Blanchard Valley Hospital – This short-term acute care hospital consists of 141 licensed beds and offers a variety of services, including: emergency, heart & cardiovascular, orthopedics, cancer, and rehabilitation.
- ▲ Hardin Memorial Hospital – This 25 licensed bed critical access hospital offers services that include: emergency, surgery, behavioral health, therapy, cancer, and rehabilitation.

Additional Information

This executive report was developed as a result of collaborative efforts from Hospital management, **BKD, LLP.**, the Regional Health Needs Assessment Project: Ohio's Critical Access Hospital's *North West Regional Plan (June 2012)*, and the process involved with developing the regional plan. For further information or requests, please contact Hospital management.

Regional Health Needs Assessment Project

Ohio's Critical Access Hospitals

NORTH WEST REGIONAL PLAN

REVISED JUNE 2012

Funded by Ohio Department of Health's Rural Hospital Flex Program
Prepared by Ohio University's Voinovich School of Leadership and Public Affairs
in partnership with the University of Toledo's Area Health Education Center Program

Preface

Ohio's Flex Program

States with critical access hospitals receive funding from the Medicare Rural Hospital Flex Program (Flex Program) to support quality and performance improvements in critical access hospitals, and the development of cooperative systems of care. The Ohio Department of Health, State Office of Rural Health oversees the Ohio Flex Program.

To be considered a critical access hospital, a hospital has to be located in an area designated as rural, have no more than 25 acute and swing beds, provide 24-hour emergency care and maintain an annual average length of stay of 96 hours. Critical access hospitals are reimbursed by Medicare on a cost plus basis for their inpatient, outpatient and swing bed services. Currently, there are 34 critical access hospitals in Ohio, with the majority located in the northwest and north central areas.

Health Care Needs Assessment

The 2010 Affordable Care Act requires all 501(c)3 hospitals to conduct health needs assessments every three years that consider health needs from the perspective of the community. Ohio's Flex Program awarded a contract to Ohio University's Voinovich School of Leadership and Public Affairs, and project partner, The University of Toledo's Area Health Education Center Program, to facilitate four regional planning processes throughout the state of Ohio. The Ohio Flex Program funded the regional planning process described in this report with the goal of supporting the efforts of individual critical access hospitals to complete their individual needs assessments.

Contents

Introduction	1
1. Convene Representatives	1
2. Conduct Needs Assessment	2
3. Develop Goals and Strategies	2
4. Regional Goal Areas and Strategies	3

Table of Figures

Figure 1. Regional Planning Process	1
Figure 2. North West Ohio Needs Assessment Region	2
Figure 3. Goal Areas for the North West Region	3

Acknowledgement

A note of gratitude is extended to the hospital and community representatives who participated in this process. Your knowledge and expertise were critical in analyzing the needs and issues in the region and in developing strategies to help address them.

Introduction

With funding from the Ohio Department of Health’s Flex Program, critical access hospitals and community representatives in North West Ohio met to discuss the health care needs and issues in the region. The process relied on a data-driven, facilitated planning approach, and was conducted between November 2011 and May 2012. This report describes the regional planning process used, along with the goals and strategies developed. The figure below provides an overview of the process utilized, and is followed by a description of each step.

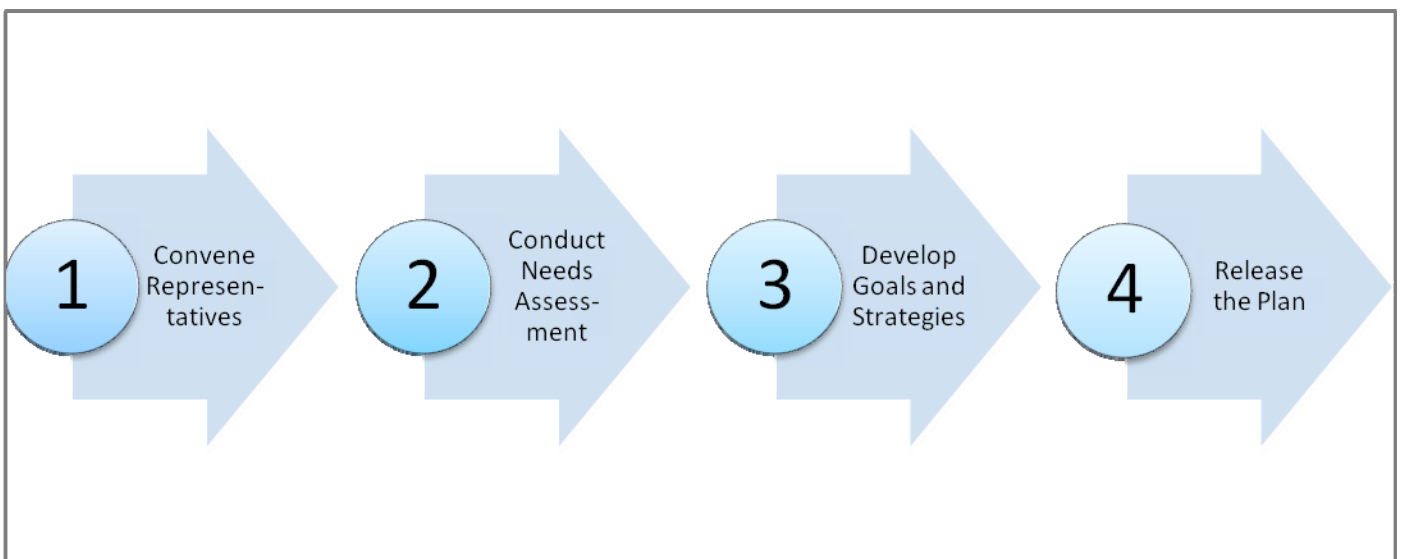
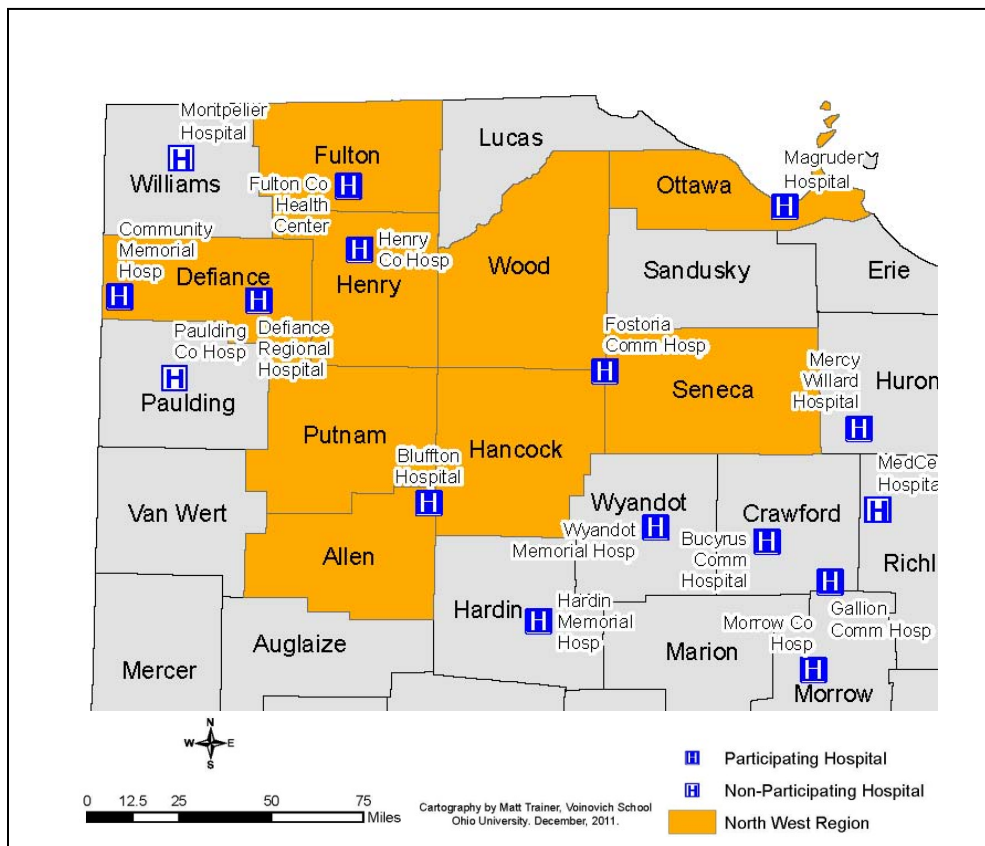


Figure 1. Regional Planning Process

1. Convene Representatives

Critical access hospital representatives met to identify priority health care needs in the region and strategies to address them. The figure on the following page shows the counties identified by hospitals as part of their primary service area. Each hospital recruited a community participant with broad knowledge of the health care needs within their community.

Figure 2. North West Ohio Needs Assessment Region



2. Conduct Needs Assessment

Critical access hospital and community representatives worked together to analyze the current health care needs in the region. This analysis included reviewing results from a survey of critical access hospitals completed by the hospital representatives. They identified the available and needed inpatient, outpatient and community-based services within their hospital service area. The hospital and community representatives also reviewed health data on the incidence and prevalence of cardiovascular disease, cancer, respiratory disease, diabetes, oral health, perinatal and childhood health, mental health and substance abuse, and a variety of health risk factors. They also considered the region’s demographic composition, educational attainment, poverty status and types of insurance coverage. The reviewed regional needs assessment data is available in a separate report titled, “Regional Health Needs Assessment Project: North West Ohio Profile” (January 2012).

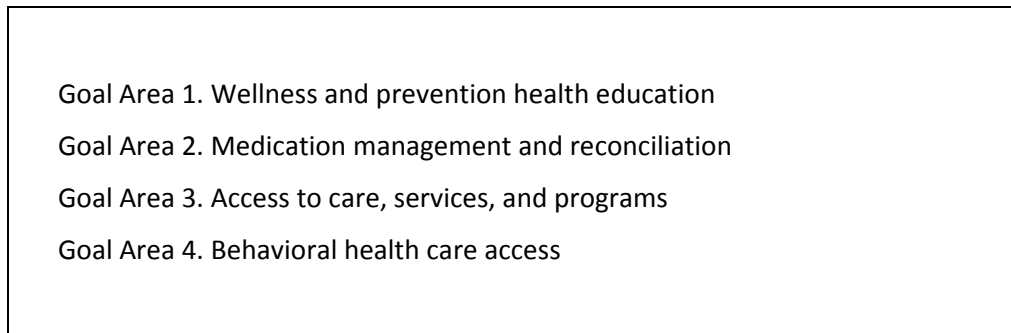
3. Develop Goals and Strategies

The representatives generated a list of health related needs and issues in the region and then prioritized those issues. Based on the prioritized needs, four key goal areas were developed. For those goal areas, hospital and community representatives brainstormed strategies to address the needs. These strategies were then grouped thematically.

Regional Goal Areas and Strategies

The four goal areas for the North West region are listed below.

Figure 3. Goal Areas for the North West Region



The remainder of this report outlines the needs and issues related to the four goal areas and the strategies proposed by the hospitals and community representatives to address them. The strategies are presented as examples of ways to accomplish each of the goal areas.

Goal Area 1. Wellness and prevention health education

IDENTIFIED HEALTH CARE NEED

Roughly two-thirds of adults, and approximately one-third of children ages of 10 and 17 in the region are categorized as either overweight or obese. Additionally, more than one in five adults are current smokers. These and other risk factors are linked to higher rates of diabetes, heart disease, stroke, certain cancers and chronic respiratory conditions. Addressing these risk factors could significantly improve health outcomes for area residents.

PROPOSED STRATEGIES

Although a variety of preventative health education initiatives are currently underway, hospital and community representatives identified the need for a more comprehensive and coordinated approach. In particular, they discussed the need to tailor prevention education and outreach efforts to the interests of specific target populations, especially for children. Examples of potential strategies include:

Education, Screening and Wellness Programs

- Conduct a regional inventory of existing initiatives and programs and use it to identify programs which are replicable.
- Further use the inventory to identify gaps and to focus on each critical access hospital's strengths.
- Utilize social media to reach younger audiences with information and announcements.
- Develop a regional approach to diabetes education to address all aspects of the disease and life style.
- Promote and make available a variety of free cancer screening opportunities.
- Submit weekly newspaper columns written by health care professionals on key health topics.
- Identify evidence-based practices for improving health and wellness and affecting change.
- Incentivize employee wellness programs to encourage healthy lifestyle choices. Consider changing employer policies to encourage and incentivize healthy behaviors.

#

Build Partnerships

Delivering health education in collaboration with public, private and not-for-profit organizations was identified as a key strategy for more effective information dissemination and to leverage existing, limited resources. Potential partnerships that could be considered include:

- Approach YMCAs and other non-profit and for-profit facilities to explore limited 'open access' hours to use facilities.
- Area schools to partner with community organizations, e.g. United Way, to augment elementary school health education.
- Local health departments to provide parent education seminars; engage parents in taking an early and active role in promoting child health and wellness.

- Faith-based organizations and local health departments to conduct quarterly health and wellness events at local religious institutions.
- Local employers to provide screenings and employee health education. Engage small employers in the coordination and provision of workplace wellness programs.
- Bring together regional leaders and decision makers to establish a regional 'walking' (competitive?) program which emphasizes the economic and health benefits.
- Community groups and farmers' markets to provide nutritious, seasonal produce to groups.#

Goal Area 2. Medication management and reconciliation

IDENTIFIED HEALTH CARE NEED

Heart disease is the leading cause of death in the region, with more than 4,000 individuals dying from the disease from 2006 to 2008. Further, an additional 907 individuals died from a stroke during this period, making it the third leading cause of death in the region. The number of adults who report ever being diagnosed with diabetes is 40,766, or 9.7 % of the population, and between 2006 and 2008 there were 602 deaths from diabetes, making it the seventh leading cause of death. Many of these deaths are preventable or postponable with improved chronic condition management, including medication management. Individuals with chronic conditions, or those in poor health, may have multiple prescribing providers and are often unable to accurately communicate all the prescriptions they are taking or have had prescribed. Further, nearly 11% of adults over the age of 25 have not graduated high school or obtained a GED, which negatively impacts their ability to understand or follow medical instructions. More than 100,000 of area residents are age 60+, an age group, which is more prone to multiple chronic conditions. The lack of a common electronic medical record system among pharmacies, hospitals and doctors' offices further complicates medication management efforts. The group identified several medication management strategies as well as strategies for reducing medication costs to improve treatment outcomes.

PROPOSED STRATEGIES

Patient Education and Medication Reconciliation

- Provide pre-diabetes and diabetes education across the region which utilizes 'clear communication' methods.
- Collaborate with local pharmacies to conduct medication sessions where individuals bring in all of their medications or a medication list for review by pharmacy techs/students. Provide each participant with a dated medication card and highlight medication concerns to take to the individual's physician.
- Provide medication management education and medication reconciliation services at health fairs. Provide free pill boxes and show individuals how to sort pills. Include medication 'take back' days to allow individuals to dispose of unused medications.
- Conduct community education sessions on targeted topics such as living with chronic conditions like hypertension, diabetes and congestive heart failure.
- Provide continuing education for community physicians and other providers on the topic of coordination of medications between primary/specialty care and behavioral health.

Reduce Medication Cost

- Form a partnership to create charitable community pharmacies that provide free or discounted medications to low-income, uninsured and underinsured individuals. Examples of existing programs include MedAssist of North Carolina and Charitable Pharmacy of Central Ohio.
- Many pharmaceutical companies and pharmacies provide medication vouchers and discounts for low-income individuals; educate social workers and caseworkers about these programs and have them assist with applications for discounted medications.
- Identify other assistance programs, which reduce prescription costs; educate patients about these programs.

Goal Area 3. Access to care, services, and programs

IDENTIFIED HEALTH CARE NEED

The North West region has high rates of poverty with 220,204, or nearly 42% of the population, with incomes below 200% of poverty. The uninsured rate is 11% and the combined Medicaid and Medicare rates include 30% of the population. One out of three adults over 65 have not had a flu shot in the past year, and the same number have never had a pneumonia vaccination. Low-income individuals may not seek preventative care or treatment due to lack of insurance or co-pay requirements, and both uninsured and underinsured individuals may be less likely to adhere to treatment plans based on costs, including medications and equipment. The lack of public or low cost transportation is a major obstacle to seeking and acquiring care for low-income individuals. Specialty care, in particular the shortage/absences of endocrinology, gastroenterology, and rheumatology, is an identified service gap across the region.

PROPOSED STRATEGIES

- In many communities, multiple not-for-profit and for-profit organizations provide immunization, vaccination and screening services. These services, however, are often not coordinated across organizations, resulting in duplication of services. Collaborate with local health departments and private practices to institute a regional campaign to raise awareness about, provide public and professional education, and promote availability of vaccinations.
- Encourage organizations conducting vaccinations and immunizations to have their providers consistently and routinely enter immunization information into the Ohio Impact Statewide Immunization Information System (ImpactSIIS).
- Provide school district immunization rates to school superintendents; work with schools to increase immunization and vaccination rates in districts with low rates.
- Notify primary care physicians when immunizations or vaccinations are being administered at a hospital or health department.
- Offer flu vaccinations to emergency department patients.
- Build relationships with leaders in hard-to-reach communities, such as the Amish.
- Target Medicare recipients for education on the increased availability of low cost prescription drugs and free screenings now available through the Affordable Care Act.
- Spearhead a community wide, public and private blue ribbon group of leaders to identify and address transportation issues.
- Collectively focus upon diabetes as the ‘disease to decrease’ through a broad regional approach to include in-depth needs analysis, research, education, treatment and prevention.
- Collaboratively develop a joint recruitment plan for specialty providers to serve the region and include telemedicine options.

Goal Area 4. Behavioral health care access

IDENTIFIED HEALTH CARE NEED

Substance abuse and mental health issues can further contribute to and complicate the treatment of medical conditions, in particular chronic conditions. In 2010, nearly 8,500 children and adults received treatment through Medicaid or other public funds for a primary diagnosis of major affective disorder, and nearly 4,500 received treatment for substance abuse. Both critical access hospitals and community representatives reported a serious lack of access, services, reimbursement as well as an impending behavioral health funding crisis as a major issue in the region. In particular, co-morbid diagnoses present a huge care issue relative to in-patient care. Of all of the health care needs assessment issues in the region, there was a striking consensus for the need to address access to behavioral health care on a regional basis.

PROPOSED STRATEGIES

- Develop a ‘bed tracking’ system across the region, similar to a system in Columbus to reduce individual staff time at each critical access hospital, to locate beds for co-morbid and behavioral health patients. The Hospital Council of Northwest Ohio could lead the coordination around the issue and perhaps host the system.
- In anticipation of shifts in state behavioral health funding, organize the region across service sectors to develop a public policy platform, calling attention to the desperate need in the region.
- Explore relationship building with Federally Qualified Health Centers.
- Establish a regional ‘best practices’ work group to identify specific tactics.

Regional Health Needs Assessment Project

North West Ohio Profile

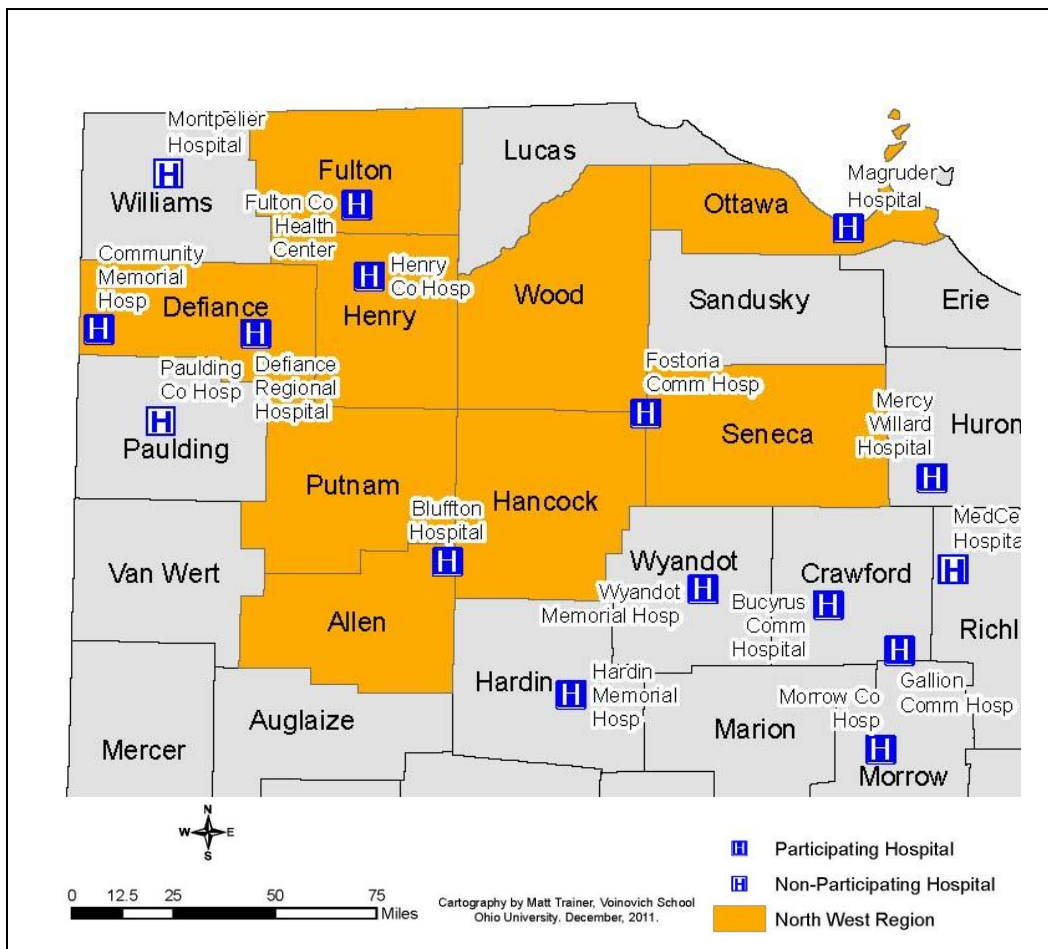
January, 2012

Introduction

The following data presentation is designed to help guide the next steps in the community health assessment process for critical access hospitals – identifying the health concerns in the region. The data are drawn from state and national sources and provide measures and indicators of the health and wellbeing of the population in the region. Where available, regional data are compared to state and national figures. Data labeled “estimates” have been calculated using methodologies recommended by the U. S. Department of Health and Human Services. Specific information on data sources and methodology can be found at the end of the report.

The North West region is comprised of nine Ohio counties, as designated by the critical access hospitals in November 2011. As seen in Figure 1, seven critical access hospitals serve predominately rural populations in the region.

Figure 1. Needs assessment region



Race and Ethnicity

The total population of the nine-county region in 2010 was 549,223 individuals. Over ninety percent of the population in the region is white and only 4.8 percent of residents identify themselves as Hispanic or Latino (see Tables 1 and 2). Consequently, linguistic and ethnic diversity considerations generally are not as notable in this region as in other areas.

Table 1. Population by race, 2010

Race and Ethnicity	Region		U.S. Percent
	Number	Percent	
White Only	505,105	92.0%	72.4%
Black Only	19,567	3.6%	12.6%
American Indian and Alaska Native Only	1,221	0.2%	0.9%
Asian Only	4,874	0.9%	4.8%
Native Hawaiian and Other Pacific Islander Only	103	0.0%	0.2%
One Other Race Only	8,343	1.5%	6.2%
Two or more races	10,010	1.8%	2.9%
Total	549,223	100.0%	100.0%

Table 2. Hispanic or Latino ethnicity, 2010

Ethnicity	Region		U.S. Percent
	Number	Percent	
Hispanic or Latino	26,318	4.8%	16.3%

Population Age

Health needs may vary by age, with younger populations requiring more pediatric and primary care services and older populations requiring more frequent treatment for chronic conditions.

Table 3. Population by age and gender, 2010

Age Group	Region				U.S. Percent
	Female	Male	Total	Percent	
Under 5	16,273	17,307	33,580	6.1%	6.5%
5 to 19	55,994	58,946	114,940	20.9%	20.4%
20 to 39	66,798	68,414	135,212	24.6%	26.8%
40 to 59	77,429	77,030	154,459	28.1%	27.7%
60 to 79	45,987	41,476	87,463	15.9%	14.9%
80 and older	15,282	8,287	23,569	4.3%	3.6%
Total	277,763	271,460	549,223	100.0%	100.0%

- Almost 150,000 residents are less than 19 years of age and may require pediatric care.
- Adolescents may need reproductive health education, and prevention and treatment of injuries from athletics and risky behaviors.
- Almost 67,000 women in the region are between the ages of 20 and 39 and may require women’s health care, reproductive health and family planning services, and prenatal care.
- Almost 155,000 area residents are between the ages of 40 and 59 and should have routine screenings for breast or prostate cancer, diabetes, obesity and hypertension to prevent disability and premature death from cancer, diabetes, and heart disease.
- More than 100,000 area residents are age 60 or older. This age group typically has multiple chronic conditions and accesses services at higher rates than younger populations.

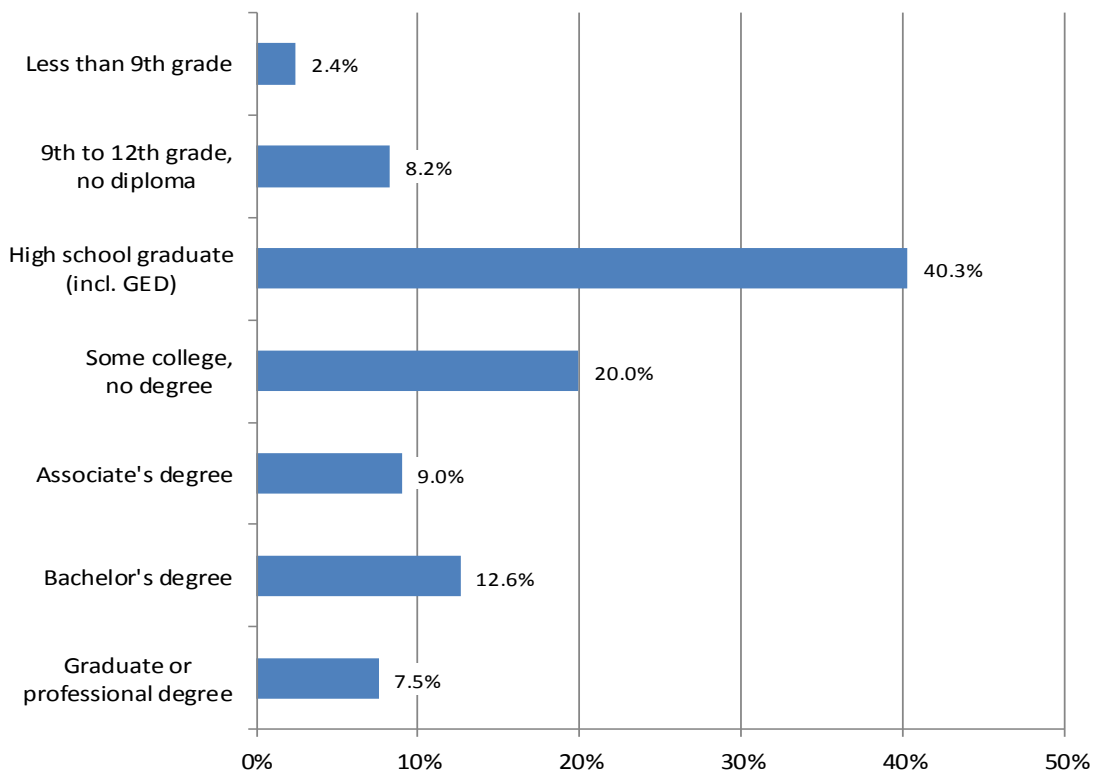
Educational Attainment

Roughly 9,000 residents age 25 and older do not have a 9th grade education. An additional 29,000 have not graduated high school or obtained a GED. Among these individuals, low literacy may be a barrier to the understanding and use of health education and informational materials, and may prevent or minimize patient adherence to medical advice.

Table 4. Educational attainment of the population age 25 and older, 2006 to 2010

Attainment Level	Region		U.S. Percent
	Number	Percent	
Less than 9th grade	8,691	2.4%	6.2%
9th to 12th grade, no diploma	29,416	8.2%	8.7%
High school graduate (includes equivalency)	144,245	40.3%	29.0%
Some college, no degree	71,435	20.0%	20.6%
Associate's degree	32,074	9.0%	7.5%
Bachelor's degree	45,158	12.6%	17.6%
Graduate or professional degree	26,949	7.5%	10.3%

Figure 2. Educational attainment of the population age 25 and older in the region, 2010



Income, Poverty and Payer Mix

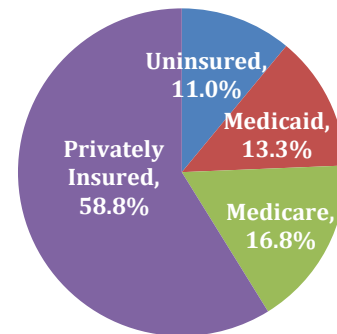
More than 40 percent of area residents have incomes below 200 percent of the poverty threshold and 24 percent of residents are uninsured or covered through Medicaid. High rates of poverty combined with the region’s payer mix may be an obstacle to both patients and health care providers.

Table 5. Income and poverty, 2006 to 2010

Income and Poverty	Region		U.S. Percent
	Number	Percent	
Below 100% of poverty	63,988	12.1%	13.8%
Between 100 and 199% of poverty (low-income)	156,216	29.5%	18.2%
Total with incomes below 200% of poverty	220,204	41.5%	32.0%

Table 6 and Figure 3. Regional payer mix

Payer Source	Number	Percent
Uninsured	60,440	11.0%
Medicaid	73,293	13.3%
Medicare	92,413	16.8%
Privately Insured	323,077	58.8%
Total	549,223	100.0%



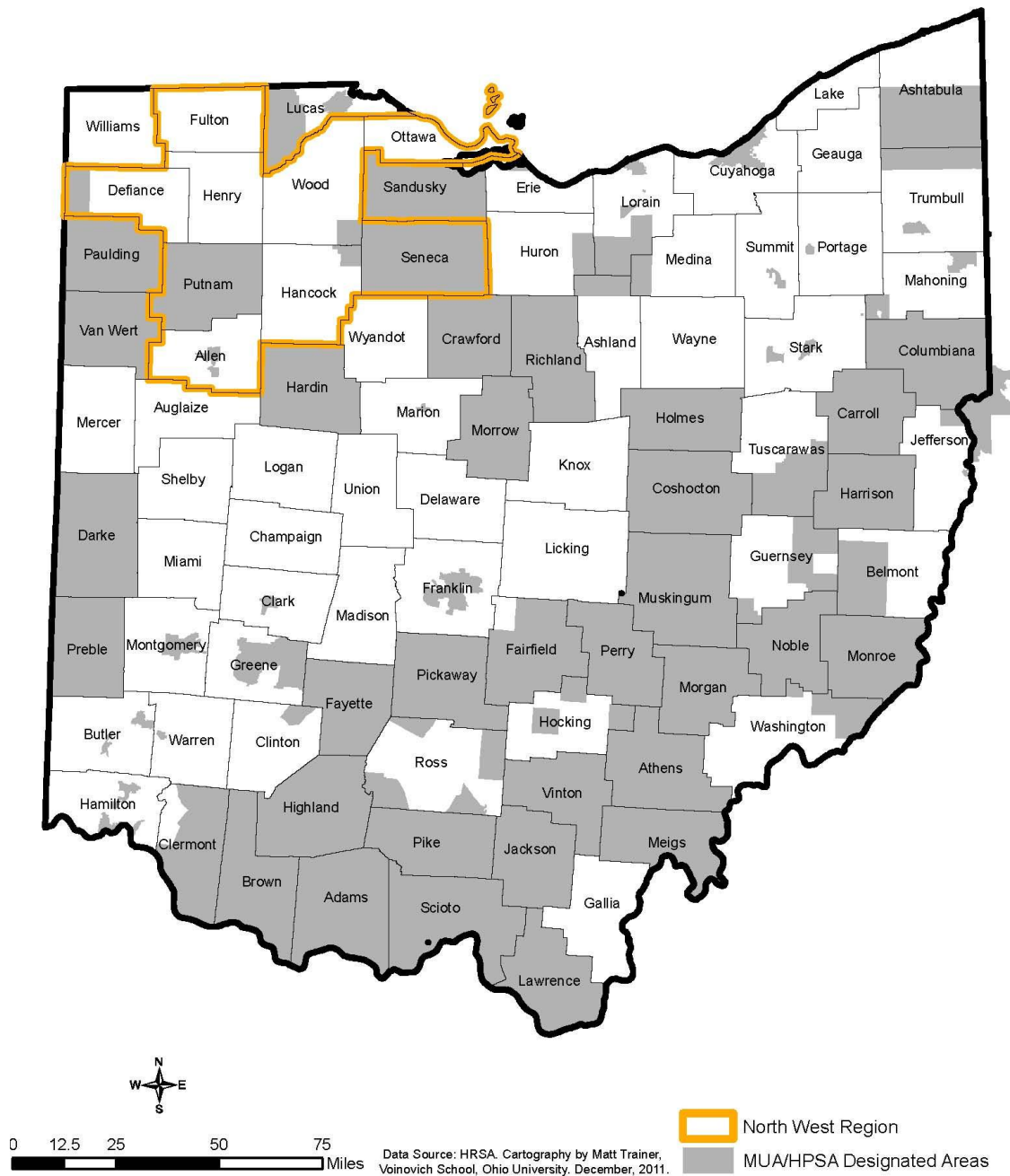
Below are some examples of the way in which poverty and payer mix may affect access, availability and utilization of health care services.

- Low-income households may not seek preventative care or treatment due to lack of insurance or co-pay requirements.
- Uninsured or underinsured households may be less likely to fully adhere to costly treatment plans, including prescription medication and other expenses.
- Populations with limited financial access to health care may have “pent-up,” untreated, and complex health issues.
- The recruitment of healthcare providers in the region may be difficult due to low reimbursement rates and potentially high levels of charity care.
- Charity and other uncompensated care may be a significant financial burden on existing health care providers.

Primary Care Health Professional Shortage and Medically Underserved Areas

A large portion of the region has been designated a primary care Health Professional Shortage Area or Medically Underserved Area (see Figure 4). Residents in these areas may lack access to primary care. Inadequate access to primary care has been linked to poorer health outcomes and complications from untreated conditions and greater reliance on emergency departments for urgent health care needs.

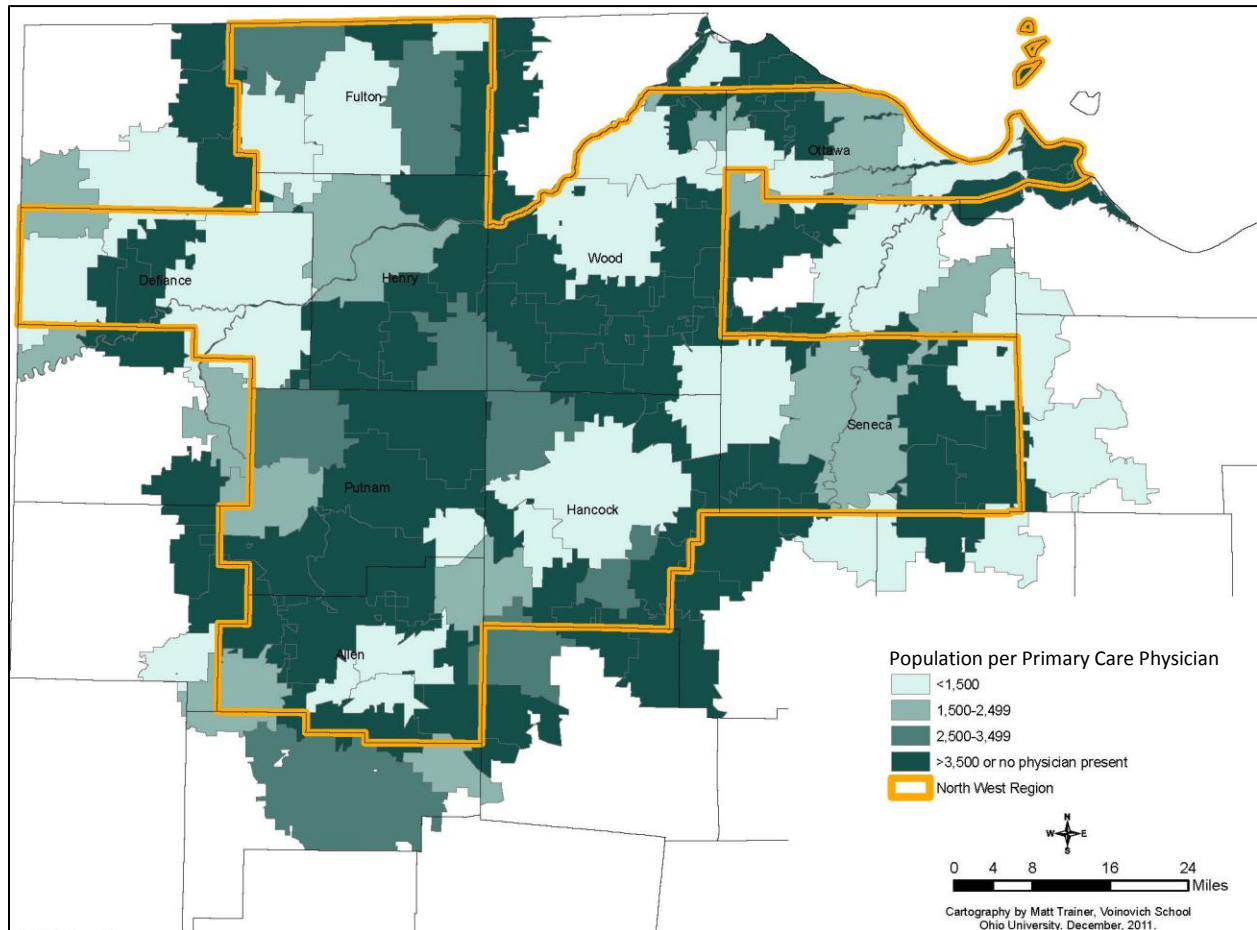
Figure 4. Medical primary care health professional shortage and medically underserved areas, 2010



Population to Physician Ratios

The map below displays population to physician ratios by zip code. The darker the color, the fewer primary care physicians there are relative to the number of residents. As can be seen, physicians tend to be concentrated in only certain areas of the region. Residents residing outside these areas may have difficulty accessing care.

Figure 5. Population to physician ratio, 2007



Leading Causes of Death

Table 7 below presents an overview of the leading causes of death in the region between 2006 and 2008. Many of these causes of death may be preventable or postponed with improved prevention and chronic disease management.

Table 7. Leading causes of mortality, 2006 to 2008

Cause of Death	Region			Ohio Rate per 100,000
	Rank	Number of Deaths	Rate per 100,000	
Heart Disease	1	4,014	244.9	238.1
Cancer	2	3,417	208.4	217.9
Cerebrovascular Disease (stroke)	3	907	55.3	50.2
Chronic Lower Respiratory Diseases	4	903	55.1	56.3
Accidents , Unintentional Injuries	5	672	41.0	42.5
Alzheimer's Disease	6	607	37.0	33.4
Diabetes Mellitus	7	603	36.8	32.0
Influenza and Pneumonia	8	213	13.0	16.8
Kidney Disease	9	184	11.2	15.4
Infections of the Blood	10	92	5.6	11.4
Total (includes leading & other causes of death)		14,896	908.7	936.2

The following sections focus on the most notable and preventable causes of death, along with high risk behaviors and conditions that may become life-threatening. Each of these sections may be suggestive of strategies that could be taken to prevent or postpone death and disability.

Health Risk Factors

Health risk factors and risky behavior play a role in determining the leading causes of death outlined in the previous table. Obesity, smoking, and heavy alcohol use are all linked to higher rates of diabetes, heart disease, stroke, certain cancers, and chronic respiratory conditions. Addressing these risk factors could significantly improve health outcomes for area residents.

Table 8. Risk factor prevalence estimates, 2010

Risk Factors	Region		Ohio/U.S. Percent
	Number	Percent	
Overweight non-obese children ages 10 to 17	10,222	17.0%	17.0% (OH)
Obese children, ages 10 to 17	11,488	19.1%	19.1% (OH)
Overweight non-obese adults	150,928	35.9%	36.2% (U.S.)
Obese adults	125,757	29.9%	27.5% (U.S.)
Current smokers, adults	94,167	22.4%	17.3% (U.S.)
Heavy drinkers, adults (men >2 drinks/day, women >1 drink/day)	23,785	5.7%	5.0% (U.S.)
Health status reported as fair or poor, adults	65,282	15.5%	14.7% (U.S.)

- More than 26 percent of children and 66 percent of adults in the region are estimated to be overweight or obese.
- Approximately 94,000 adults in the region smoke and nearly 24,000 are heavy drinkers.

Heart Disease and Stroke

Heart disease was the number one cause of death in the region; more than 4,000 residents died from heart disease between 2006 and 2008 (see Table 9). An additional 907 residents died from a stroke during this time period, making it the number three cause of death in the region. Both of these causes of death are preventable or postpone-able with improved chronic condition management and reduced risk factors.

Table 9. Mortality due to heart disease and stroke, 2006 to 2008

Primary Cause of Death	Region		Ohio Rate per 100,000
	Number of Deaths	Rate per 100,000	
Heart Disease	4,014	244.9	238.1
Cerebrovascular Disease (stroke)	907	55.3	50.2

Three of every 10 individuals in the region are estimated to have been told by a health professional that they have high blood pressure, while almost four of every 10 tested adults have been told they have high cholesterol.

Table 10. Cardiovascular and cerebrovascular health estimates

Cardiovascular Health Risk Indicators	Region		U.S. Percent
	Number	Percent	
Blood cholesterol not checked within the last 5 years, adults	15,938	22.3%	23.0%
Blood cholesterol never checked, adults	77,849	18.5%	19.3%
Adults ever told they have high cholesterol, of those tested	15,8876	37.8%	37.5%
Adults ever told they have high blood pressure	134,255	32.0%	28.7%
Adults ever told they have angina or coronary heart disease	18,819	4.5%	4.1%
Adults ever told they had a stroke	12,691	3.0%	2.7%
Adults ever told they had a heart attack	18,677	4.4%	4.2%

Cancer

Cancer was the second most common cause of death in the region. The table below shows the most common forms of cancer in the region.

Table 11. Cancer mortality by type/site, 2006 to 2008

Type/Site of Cancer	Region		Ohio Rate per 100,000
	Number	Rate per 100,000	
Lung, Trachea, and Bronchus	955	58.3	64.6
Colon, Rectum & Anus	324	19.8	21.1
Breast (female)	249	29.9	31.4
Pancreas	213	13.0	12.9
Prostate	157	19.5	21.5
Non-Hodgkins Lymphoma	152	9.3	8.0
Leukemia	147	9.0	8.3
Esophagus	97	5.9	5.8
Bladder	90	5.5	5.6
Brain and Central Nervous System	86	5.2	4.9
Other	944	57.6	60.0

In addition to healthy lifestyle choices including diet, exercise, not smoking, and limited alcohol consumption, early detection is key to preventing deaths from some of the leading forms of cancer.

Table 12. Cancer screening estimates, 2010

Cancer Screenings	Region		U.S. Percent
	Number	Percent	
Women (18+) with no pap test in the past 3 years	45,951	21.4%	18.9%
Women (40+) with no mammogram in the last 2 years	35,958	25.9%	24.4%
Women (50+) with no mammogram in the last 2 years	23,698	23.3%	22.1%
Adults (50+) with no blood stool test in the past 2 years	156,845	81.5%	82.7%
Adults (50+) who have never had a colonoscopy	68,607	35.7%	34.7%
Men (40+) who have not had a PSA test within the past 2 years	56,657	44.7%	46.7%

Respiratory Disease

Cancer of the lungs, trachea, and bronchus accounted for 955 deaths and chronic lower respiratory diseases (emphysema, asthma, and chronic bronchitis) accounted for an additional 903 deaths in the region between 2006 and 2008. Also during the period, 213 deaths were attributed to influenza and pneumonia, making it the 8th leading cause of death in the region.

Table 13. Leading respiratory-related causes of death, 2006 to 2008

Cause of Death	Region		Ohio Rate per 100,000
	Number of Deaths	Rate per 100,000	
Lung, Trachea, and Bronchus Cancer	955	58.3	64.6
Chronic Lower Respiratory Diseases	903	55.1	56.3
Influenza and Pneumonia	213	13.0	16.8

As a group, respiratory conditions leading to death may be acute or chronic. The chronic conditions may be caused by high risk behaviors (e.g. tobacco use), inherited traits (e.g. some asthma) or environmental exposure to toxic substances. More acute causes (influenza and pneumonia) derive from infectious sources, but may be prevented with appropriate immunization.

Table 14. Respiratory health estimates

Respiratory Health Prevalence and Risk Indicators	Region		Ohio/U.S. Percent
	Number	Percent	
Children 6-17 ever diagnosed with asthma	15,158	17.1%	17.1% (OH)
Adults currently diagnosed with asthma	39,070	9.3%	9.1% (U.S.)
Adults ever diagnosed with asthma	56,705	13.5%	13.8% (U.S.)
Adults 65+ who have not had a flu shot in the past year	26,769	33.8%	32.5% (U.S.)
Adults 65+ who have never had a pneumonia vaccination	24,591	31.1%	31.2% (U.S.)

Diabetes

Diabetes has been increasing as a cause of death over recent decades, becoming the seventh leading cause of death in the region. Diabetes also is often a contributing or underlying cause of death from heart and kidney disease.

Table 15. Mortality due to diabetes, 2006 to 2008

Cause of Death	Region		Ohio Rate per 100,000
	Number of Deaths	Rate per 100,000	
Diabetes Mellitus	603	36.8	32.0

Table 16. Diabetes prevalence estimates

Diabetes Prevalence	Region		Ohio/U.S. Percent
	Number	Percent	
Children 6-17 currently diagnosed with diabetes	NR	NR	0.5% (OH)
Adults ever diagnosed with diabetes	40,766	9.7%	8.7% (U.S.)

NR: Not reported due to the small number of cases.

Oral Health

Oral health status is linked to general physical health, educational performance, and employability. In addition to the impact of poor oral health and tooth loss on digestion and nutrition, research has established potential links between oral health in adults and heart disease. Children experiencing pain from oral infections perform more poorly in school. Adults with cosmetic damage from missing or infected teeth have difficulty gaining and maintaining employment, especially in positions requiring public interaction (e.g. sales, restaurant service, reception).

Table 17. Dental care, 2010

Oral Health	Region		Ohio/U.S. Percent
	Number	Percent	
Adults without a dental visit in the past year	117,914	28.1%	29.9% (U.S.)
Adults 18-64 needing dental care but could not secure, past 12 months	56,681	16.6%	16.7% (OH)
Adults that have had permanent teeth extracted	187,785	44.7%	43.6% (U.S.)

Perinatal and Early Childhood Health

Perinatal concerns are both health-related and social. Babies with low weights at birth are at higher risk of many costly and disabling conditions, including chronic respiratory problems and cognitive delays. Many low weight births are preventable by reducing risky behaviors during pregnancy (e.g. tobacco, drug, and alcohol use), ensuring the mother is healthy during pregnancy (e.g. having normal weight, blood pressure, and blood sugar), and adequate medical monitoring throughout the pregnancy.

Toxic blood levels of lead in young children were a significant health issue in urban areas during the era of lead additives in gasoline. Today, childhood lead exposure is primarily found in older, poorly maintained housing stocks. There remains a sizeable supply of housing stock in the region that is old, having been built before 1950. Unknown numbers of these structures continue to contain old paint and other contaminants that expose young children to toxic levels of lead. Testing for lead, especially among children at risk of living in older, unimproved homes, is key to identifying and mitigating environmental risks that affect cognitive development in school-age children.

Table 18. Prenatal and child health, 2006 to 2008

Prenatal and Child Health	Region		Ohio Rate
	Number	Rate	
Infant mortality (per 1,000 live births)	218	6.4	7.8
Low-weight births (per 100 live births)	1,475	7.1	8.7
Live births with late entry into prenatal care (per 100 live births)	3,886	22.3	29.0
Births to teens age 17 and younger (per 1,000 females)	592	6.7	8.1
Children < 72 months not tested for blood lead levels (per 100 children)*	33,872	83.4	80.8

*Data from 2007 only.

Mental Health and Substance Abuse

Substance abuse and mental health issues can further contribute to and complicate the treatment of chronic conditions. The Ohio Department of Health and the Ohio Department of Alcohol and Drug Addiction Services have recently released a number of reports which provide in-depth information about the rise of substance abuse and use of opioids in Ohio.¹ The tables below provide a brief regional snap-shot of mental health and substance abuse mortality and treatment in the region.

Table 19. Mental health and unintentional drug mortality

Cause of Death	Region		Ohio Rate per 100,000
	Number	Rate per 100,000	
Unintentional drug or medication mortality (2005 - 2009)	151	5.5	11.3
Suicide (2006 to 2008)	163	9.9	11.6

Table 20. Major affective disorder and substance abuse treatment, 2010

Mental Health and Substance Abuse	Number of Children	Number of Adults
Individuals with a primary diagnosis of major affective disorder who received treatment through Medicaid or other public funds	749	7,737
Individuals with a primary diagnosis of substance abuse who receive treatment through Medicaid or other public funds	370	4,106

Note: Data are reported by the Ohio Department of Mental Health at the Board level and may therefore include individuals residing outside the region. Due to the nature of the data, rates cannot be calculated.

¹ The Burden of Poisoning in Ohio, Ohio Department of Health:
<http://www.healthyohioprogram.org/ASSETS/0E9B51A79D3E4654BD0E01779E14667E/Burden.pdf>

Unintentional Drug Overdose Death Rates by County, Ohio Department of Health:

<http://www.healthyohioprogram.org/ASSETS/2A9C2B99A15F44839F3E9125DD0B40B4/countypoisondeaths04to09.pdf>

Ohio's Opiate Epidemic, Ohio Department of Alcohol and Drug Addition Services, July 2011:

<http://www.odadas.state.oh.us/public/OpenFile.aspx?DocumentID=e934f58b-74cf-4e1c-b2a0-52eca5f6c271>

Data Sources

The data for this report came from multiple sources as identified below. The sources for the tables are listed first, followed by the sources for the figures. All regional values were obtained by aggregating county-level data unless otherwise noted. All rates contained in this report represent crude rates and are not age adjusted.

Table 1. Population by race and ethnicity. U.S. Census Bureau, 2010 Census.

Table 2. Hispanic or Latino ethnicity. U.S. Census Bureau, 2010 Census.

Table 3. Population age and gender. U.S. Census Bureau, 2010 Census.

Table 4. Educational attainment of the population age 25 and older. U.S. Census Bureau, 2006 to 2010 American Community Survey.

Table 5. Income and poverty. U.S. Census Bureau, 2006 to 2010 American Community Survey.

Table 6. Regional payer mix. Multiple sources of data were utilized:

- *Medicare* coverage is based on enrollment as of July 1, 2010, as reported by the Centers for Medicare and Medicaid Services <https://www.cms.gov/MedicareEnrpts/>
- *Medicaid* coverage is based on enrollment as of January, 2010 for the population less than 65 years of age as reported by the Ohio Department of Job and Family Services. <http://jfs.ohio.gov/OHP/reports/data/MedDataTotalElig.stm>.
- *Uninsured* rates for the population less than 65 years of age were obtained from the U.S. Census Bureau's Model-Based Small Area Health Insurance Estimates (SAHIE) for Counties and States (<http://www.census.gov/did/www/sahie/data/2009/dataset.html>). The Census Bureau does not produce SAHIE estimates for the population age 65 and older. To adjust for differences in reporting year between the 2009 SAHIE and the 2010 Medicare and Medicaid enrollment values, the 2009 SAHIE uninsured rates were applied to the 2010 Census population counts to estimate the number of individuals in the region that were uninsured.
- The remainder of the population (those not covered through Medicare or Medicaid or identified as uninsured) were classified as being covered by private insurance. Note: some individuals may not have been covered by private insurance for the entire period and many of these individuals may have been underinsured.

Table 7. Leading causes of mortality. Ohio Department of Health's Data Warehouse, 2006 to 2008.

Table 8. Risk factor prevalence estimates. Data from the Ohio Behavioral Risk Factor Surveillance System and the Ohio Family Health Survey were used to generate synthetic estimates for the region by applying age-, gender- and/or race-specific Ohio rates to the respective regional 2010 population totals.

- *Overweight non-obese children ages 10 to 17.* Ohio Family Health Survey, 2010. Children with a BMI score greater than or equal to the 85th percentile but less than the 95th percentile were classified as overweight.
- *Obese children ages 10 to 17.* Ohio Family Health Survey, 2010. Children with a BMI score greater than or equal to the 95th percentile were classified as obese.
- *Overweight non-obese adults.* Behavioral Risk Factor Surveillance System, 2010.
- *Obese adults.* Behavioral Risk Factor Surveillance System, 2010.
- *Current smokers, adults.* Behavioral Risk Factor Surveillance System, 2010
- *Heavy drinkers, adults (men > 2 drinks/day, women >1 drink/day).* Behavioral Risk Factor Surveillance System, 2010

Table 9. Mortality due to heart disease and stroke. Ohio Department of Health's Data Warehouse, 2006 to 2008.

Table 10. Cardiovascular and cerebrovascular health estimates. Data from the Ohio Behavioral Risk Factor Surveillance System and the Ohio Family Health Survey were used to generate synthetic estimates for the region by applying age-, gender- and/or race-specific Ohio rates to the respective regional 2010 population totals.

- *Blood cholesterol not checked within the last 5 years.* Behavioral Risk Factor Surveillance System, 2009. Note: individuals who have never had their cholesterol checked are included in the reported rates and counts.
- *Blood cholesterol never checked.* Behavioral Risk Factor Surveillance System, 2009.
- *Adults ever told they have high cholesterol, of those tested.* Behavioral Risk Factor Surveillance System, 2009. Note: Only individuals who reported previously having undergone a blood cholesterol test were included in the calculation of this rate.
- *Adults ever told they have high blood pressure.* Behavioral Risk Factor Surveillance System, 2009.
- *Adults ever told they have angina or coronary heart disease.* Behavioral Risk Factor Surveillance System, 2010.
- *Adults ever told they had a stroke.* Behavioral Risk Factor Surveillance System, 2010.
- *Adults ever told they had a heart attack.* Behavioral Risk Factor Surveillance System, 2010.

Table 11. Cancer mortality by types/site. Ohio Department of Health's Data Warehouse, 2006 to 2008. Note: Prostate cancer and female breast cancer and mortality rates were calculated using gender-specific population totals.

Table 12. Cancer screening estimates. Data from the 2010 Ohio Behavioral Risk Factor Surveillance System were used to generate synthetic estimates for the region by applying age-, gender- and/or race-specific Ohio rates to the respective regional 2010 population totals.

Table 13. Leading respiratory-related causes of death. Ohio Department of Health's Data Warehouse, 2006 to 2008.

Table 14. Respiratory health estimates. Data from the Ohio Behavioral Risk Factor Surveillance System and the Ohio Family Health Survey were used to generate synthetic estimates for the region by applying age-, gender- and/or race-specific Ohio rates to their respective regional 2010 population totals.

- *Children 6 to 17 ever diagnosed with asthma.* Ohio Family Health Survey, 2008.
- *Adults currently diagnosed with asthma.* Behavioral Risk Factor Surveillance System, 2010.
- *Adults ever diagnosed with asthma.* Behavioral Risk Factor Surveillance System, 2010.
- *Adults 65+ who have not had a flu shot in the past year.* Behavioral Risk Factor Surveillance System, 2010.
- *Adults 65+ who have never had a pneumonia vaccination.* Behavioral Risk Factor Surveillance System, 2010.

Table 15. Mortality due to diabetes. Ohio Department of Health's Data Warehouse, 2006 to 2008.

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- *Adults ever diagnosed with diabetes.* Behavioral Risk Factor Surveillance System, 2010.

Table 17. Dental care. Data from the Ohio Behavioral Risk Factor Surveillance System and the Ohio Family Health Survey were used to generate synthetic estimates for the region by applying age-, gender- and/or race-specific Ohio rates to the respective regional 2010 population totals.

- *Adults without a dental visit in the past year.* Behavioral Risk Factor Surveillance System, 2010.
- *Adults 18 to 64 needing dental care but could not secure, past 12 months.* Ohio Family Health Survey, 2010.
- *Adults that have had permanent teeth extracted.* Behavioral Risk Factor Surveillance System, 2010.

Table 18. Prenatal and child health. Data on, infant mortality, low-weight births, live births with late entry into prenatal care and births to teens age 17 and younger were obtained from the Ohio Department of Health's Data Warehouse and represent a 3-year period ending in 2008. Data on children not tested for blood lead levels were obtained from the Centers for Disease Control and Prevention and are for the year 2007.

Table 19. Mental health and unintentional drug mortality. Data on unintentional drug and medication mortality for 2005 to 2009 were obtained from the following report produced by the Ohio Department of Health: Unintentional Drug Overdose Death Rates by County, Ohio Department of Health. <http://www.healthyohioprogram.org/ASSETS/2A9C2B99A15F44839F3E9125DD0B40B4/countypoisondeaths04to09.pdf>. Data on suicides for 2006 to 2008 were obtained from the Ohio Department of Health's data warehouse.

Table 20. Major affective disorder and substance abuse treatment. Board-level data were obtained from the Ohio Department of Mental Health's MACSIS datamart for the year 2010. Because data are reported at the Board level, the reported values may include individuals residing outside the region. Only those individuals receiving treatment paid for through Medicaid or other public funds are included.

Figure 1. Needs assessment region. The counties comprising the region as shown in Figure 1 were selected by critical access hospitals in November 2011.

Figure 2. Educational attainment of the population age 25 and older. Data were obtained from the 2006 to 2010 American Community Survey.

Figure 3. Regional payer mix. Multiple sources of data were utilized. Refer to the Table 6 documentation for additional information.

Figure 4. Medial primary care health professional shortage and medically underserved areas, 2010. Data were downloaded from the US Department of Health and Human Services Health Resources and Services Administration (HRSA) website on Oct 24, 2011.

Figure 5. Population to physician ratio, 2007. Data were obtained from the Dartmouth Atlas of Health Care and are derived from the 2007 HRSA American Medical Association physician master files.

Critical Access Hospital Health Needs Assessment Project

Indicator Data for Counties in the North West Region

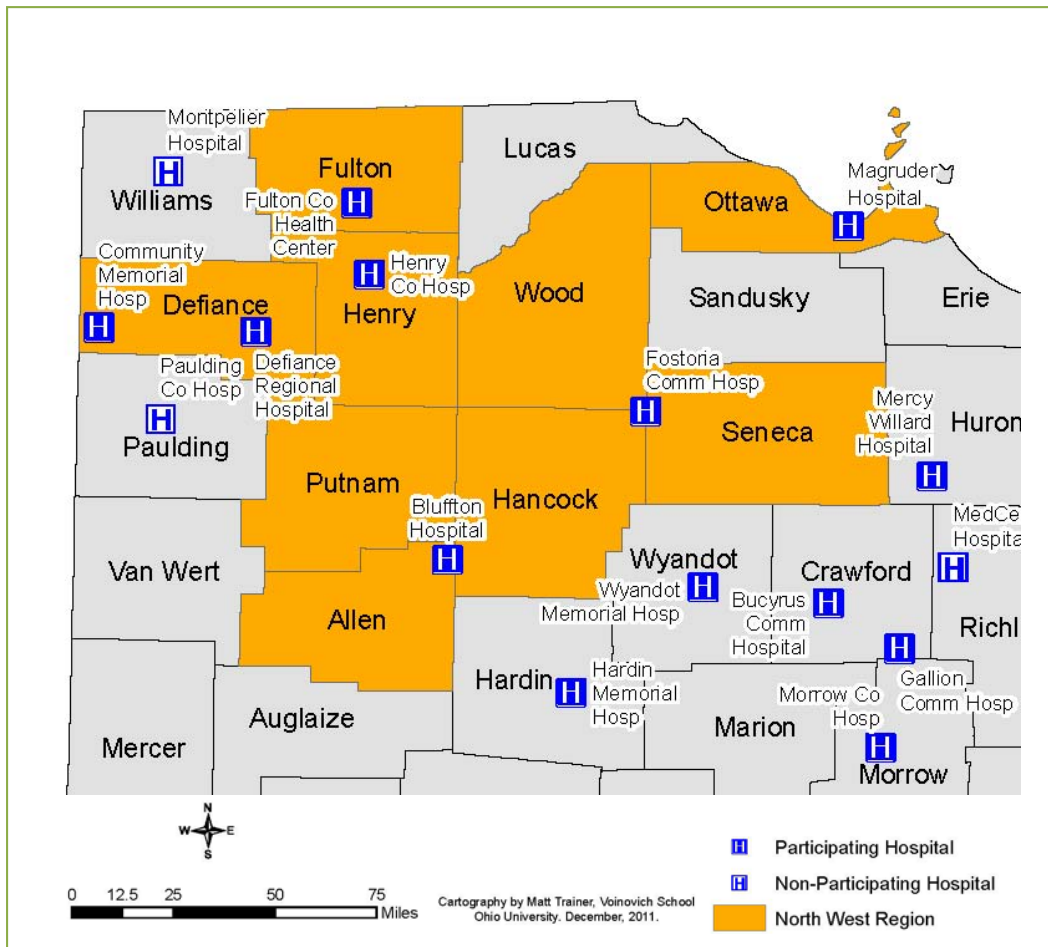
March 2012

Introduction

This document supplements the Health Needs Assessment Indicator Report for the North West Region by providing county-level data on selected health indicators. This information is designed to assist Critical Access Hospitals and their local partners in identifying local health needs. The data are drawn from state and national sources and provide measures and indicators of the health and wellbeing of the population in the counties of the region. Data labeled “estimates” have been calculated using methodologies recommended by the U. S. Department of Health and Human Services. Specific information on data sources and methodology can be found at the end of the report.

The North West region is comprised of nine Ohio counties, as designated by the critical access hospitals in November 2011. As seen in Figure 1, seven critical access hospitals serve predominately rural populations in the region.

Figure 1. Needs assessment region



Race and Ethnicity

The total population of the nine-county region in 2010 was 549,223 individuals.

Table 1. Population by race, 2010

County	White Only	Black Only	American Indian and Alaska Native Only	Asian Only	Native Hawaiian and Other Pacific Islander Only	One Other Race Only	Two or more races
Allen	89,089	12,639	207	740	15	845	2,796
Defiance	36,208	725	98	119	12	1,105	770
Fulton	40,538	183	124	183	4	1,034	632
Hancock	69,828	1,158	167	1,263	12	1,026	1,328
Henry	26,857	117	89	105	2	675	370
Ottawa	39,968	324	67	116	7	391	555
Putnam	33,012	94	74	81	4	921	313
Seneca	53,183	1,305	109	324	10	747	1,067
Wood	116,422	3,022	286	1,943	37	1,599	2,179

Table 2. Population by Hispanic or Latino ethnicity, 2010

County	Hispanic or Latino (All Races)
Allen	2,513
Defiance	3,409
Fulton	3,341
Hancock	3,363
Henry	1,860
Ottawa	1,755
Putnam	1,890
Seneca	2,524
Wood	5,663

Population Age

Table 3. Male population by age group, 2010

County	Males					
	Under 5	5 to 19	20 to 39	40 to 59	60 to 79	80 and Older
Allen	3,501	11,966	13,802	14,746	7,922	1,693
Defiance	1,298	4,198	4,551	5,478	3,143	557
Fulton	1,417	4,837	4,539	6,369	3,182	640
Hancock	2,400	7,626	9,228	10,364	5,572	1,094
Henry	951	3,072	3,240	4,070	2,163	478
Ottawa	1,005	3,850	3,961	6,450	4,407	764
Putnam	1,362	3,861	3,854	5,140	2,493	532
Seneca	1,852	6,181	7,070	8,033	4,261	940
Wood	3,521	13,355	18,169	16,380	8,333	1,589

Table 4. Female population by age group, 2010

County	Females					
	Under 5	5 to 19	20 to 39	40 to 59	60 to 79	80 and Older
Allen	3,260	10,671	12,208	14,385	8,967	3,210
Defiance	1,191	4,023	4,598	5,531	3,360	1,109
Fulton	1,338	4,457	4,814	6,507	3,437	1,161
Hancock	2,351	7,599	9,662	10,527	6,287	2,072
Henry	874	2,908	3,145	4,050	2,406	858
Ottawa	1,028	3,608	3,892	6,568	4,559	1,336
Putnam	1,204	3,678	3,766	4,934	2,709	966
Seneca	1,701	5,757	6,560	7,845	4,792	1,753
Wood	3,326	13,293	18,153	17,082	9,470	2,817

Table 5. Total population by age group, 2010

County	Total						Total Population
	Under 5	5 to 19	20 to 39	40 to 59	60 to 79	80 and Older	
Allen	22,637	26,010	29,131	16,889	4,903	106,331	22,637
Defiance	8,221	9,149	11,009	6,503	1,666	39,037	8,221
Fulton	9,294	9,353	12,876	6,619	1,801	42,698	9,294
Hancock	15,225	18,890	20,891	11,859	3,166	74,782	15,225
Henry	5,980	6,385	8,120	4,569	1,336	28,215	5,980
Ottawa	7,458	7,853	13,018	8,966	2,100	41,428	7,458
Putnam	7,539	7,620	10,074	5,202	1,498	34,499	7,539
Seneca	11,938	13,630	15,878	9,053	2,693	56,745	11,938
Wood	26,648	36,322	33,462	17,803	4,406	125,488	26,648

Educational Attainment

Table 6. Educational attainment of the population age 25 and older, 2006 to 2010

County	Less Than 9 th Grade	9 th to 12 th Grade, No Diploma	High School Graduate (Includes Equivalency)	Some College, No Degree	Associate's Degree	Bachelor's Degree	Graduate or Professional Degree
Allen	1,696	7,191	29,125	14,040	6,216	6,826	4,130
Defiance	628	2,534	11,692	4,774	2,040	2,509	1,716
Fulton	775	2,523	12,276	6,315	2,156	2,904	1,316
Hancock	956	3,623	18,571	9,951	4,096	7,758	4,227
Henry	572	1,792	8,708	3,825	1,645	1,726	772
Ottawa	773	2,301	10,936	7,351	2,951	3,471	2,206
Putnam	672	1,382	10,408	3,376	2,578	2,734	1,346
Seneca	1,136	3,553	16,388	7,052	3,247	3,666	2,369
Wood	1,483	4,517	26,141	14,751	7,145	13,564	8,867

Income, Poverty and Payer Mix

Table 7. Income and poverty, 2006 to 2010

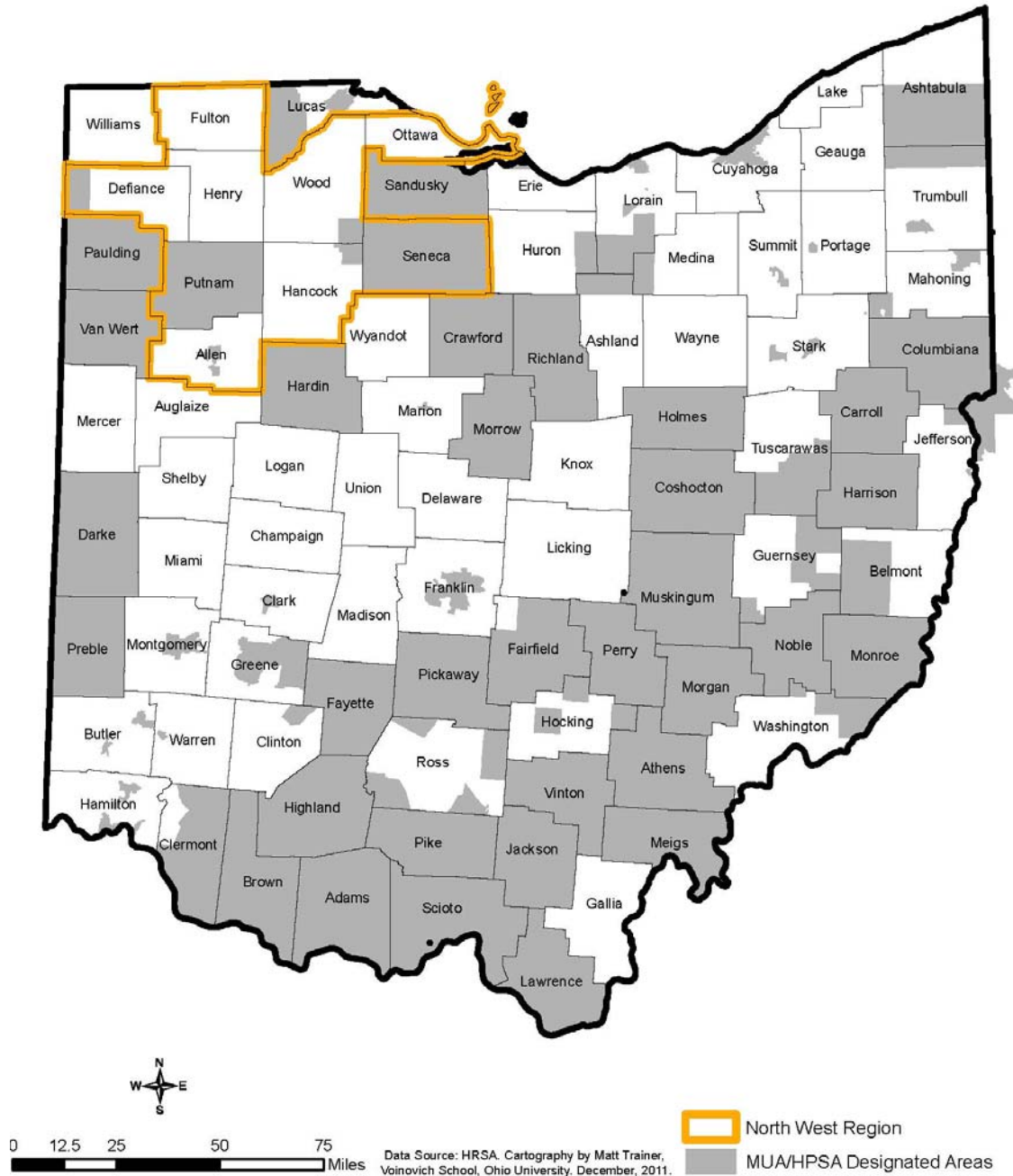
County	Total Number for Whom Poverty has been Determined	Number Below 100% of Poverty	Number Between 100 and 199% of Poverty (Low-Income)	Total with Income Below 200% of Poverty
Allen	102,319	16,655	35,145	51,800
Defiance	38,358	4,875	12,049	16,924
Fulton	42,263	4,417	12,325	16,742
Hancock	72,385	8,217	21,505	29,722
Henry	27,812	2,945	8,101	11,046
Ottawa	41,191	3,714	9,433	13,147
Putnam	34,332	2,447	7,183	9,630
Seneca	54,972	6,562	18,847	25,409
Wood	116,374	14,156	31,628	45,784

Table 8. Estimated Payer Mix

County	Total Population	Number of Uninsured	Number with Medicaid	Number with Medicare	Number of Privately Insured
Allen	106,331	13,574	18,305	18,074	56,378
Defiance	39,037	4,153	6,438	7,323	21,123
Fulton	42,698	4,393	5,620	7,572	25,113
Hancock	74,782	7,671	9,374	11,399	46,338
Henry	28,215	3,205	3,864	5,031	16,115
Ottawa	41,428	4,388	5,052	8,976	23,012
Putnam	34,499	3,345	3,307	5,500	22,347
Seneca	56,745	6,924	9,443	11,034	29,344
Wood	125,488	12,787	11,890	17,504	83,307

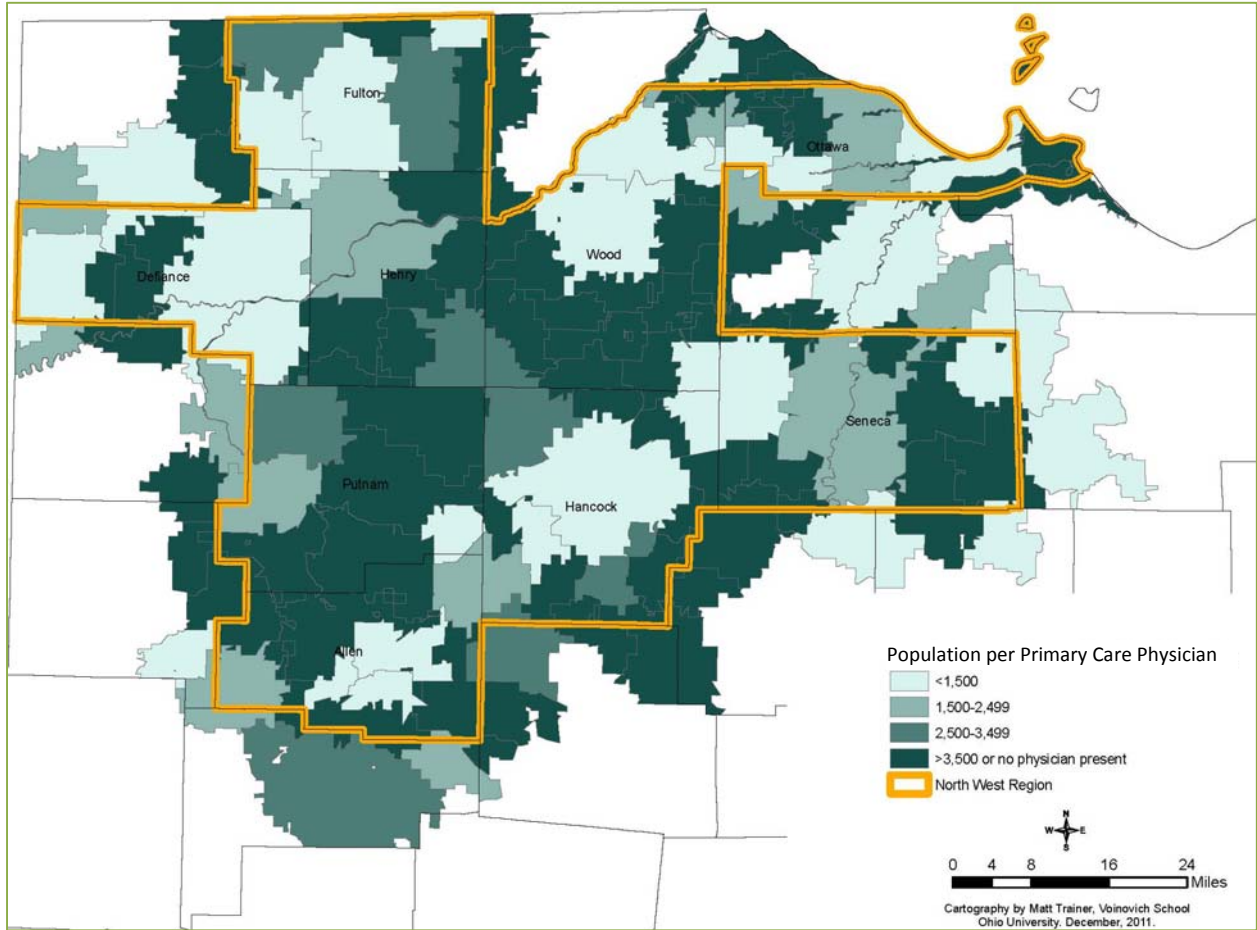
Primary Care Health Professional Shortage and Medically Underserved Areas

Figure 2. Medical primary care health professional shortage and medically underserved areas, 2010



Population to Physician Ratios

Figure 3. Population to physician ratio, 2007



Leading Causes of Death

Table 9. Number and rate (per 100,000 people) of deaths due to heart disease, 2006 to 2008

County	Population	Number of Deaths: Heart Disease	Rate of Deaths: Heart Disease (per 100,000 People)
Allen	315,503	863	273.5
Defiance	115,967	254	219.0
Fulton	127,479	286	224.4
Hancock	222,255	504	226.8
Henry	86,953	183	210.5
Ottawa	123,092	380	308.7
Putnam	103,789	208	200.4
Seneca	170,009	481	282.9
Wood	374,278	855	228.4

Table 10. Number and rate (per 100,000 people) of deaths due to cancer, 2006 to 2008

County	Population	Number of Deaths: Cancer	Rate of Deaths: Cancer (per 100,000 People)
Allen	315,503	705	223.5
Defiance	115,967	266	229.4
Fulton	127,479	264	207.1
Hancock	222,255	433	194.8
Henry	86,953	193	222.0
Ottawa	123,092	345	280.3
Putnam	103,789	182	175.4
Seneca	170,009	366	215.3
Wood	374,278	663	177.1

Table 11. Number and rate (per 100,000 people) of deaths due to cerebrovascular disease (stroke), 2006 to 2008

County	Population	Number of Deaths: Cerebrovascular Disease (Stroke)	Rate of Deaths: Cerebrovascular Disease (per 100,000 People)
Allen	315,503	191	60.5
Defiance	115,967	74	63.8
Fulton	127,479	67	52.6
Hancock	222,255	125	56.2
Henry	86,953	59	67.9
Ottawa	123,092	63	51.2
Putnam	103,789	54	52.0
Seneca	170,009	110	64.7
Wood	374,278	164	43.8

Table 12. Number and rate (per 100,000 people) of deaths due to chronic lower respiratory diseases, 2006 to 2008

County	Population	Number of Deaths: Chronic Lower Respiratory Diseases	Rate of Deaths: Chronic Lower Respiratory Diseases (per 100,000 People)
Allen	315,503	202	64.0
Defiance	115,967	75	64.7
Fulton	127,479	50	39.2
Hancock	222,255	119	53.5
Henry	86,953	31	35.7
Ottawa	123,092	84	68.2
Putnam	103,789	47	45.3
Seneca	170,009	144	84.7
Wood	374,278	151	40.3

Table 13. Number and rate (per 100,000 people) of deaths due to accidents and unintentional injuries, 2006 to 2008

County	Population	Number of Deaths: Accidents and Unintentional Injuries	Rate of Deaths: Accidents and Unintentional Injuries (per 100,000 People)
Allen	315,503	115	36.4
Defiance	115,967	57	49.2
Fulton	127,479	66	51.8
Hancock	222,255	73	32.8
Henry	86,953	46	52.9
Ottawa	123,092	52	42.2
Putnam	103,789	45	43.4
Seneca	170,009	83	48.8
Wood	374,278	135	36.1

Table 14. Number and rate (per 100,000 people) of deaths due to Alzheimer's disease, 2006 to 2008

County	Population	Number of Deaths: Alzheimer's Disease	Rate of Deaths: Alzheimer's Disease (per 100,000 People)
Allen	315,503	124	39.3
Defiance	115,967	37	31.9
Fulton	127,479	51	40.0
Hancock	222,255	82	36.9
Henry	86,953	33	38.0
Ottawa	123,092	72	58.5
Putnam	103,789	29	27.9
Seneca	170,009	74	43.5
Wood	374,278	105	28.1

Table 15. Number and rate (per 100,000 people) of deaths due to diabetes mellitus, 2006 to 2008

County	Population	Number of Deaths: Diabetes Mellitus	Rate of Deaths: Diabetes Mellitus (per 100,000 People)
Allen	315,503	106	33.6
Defiance	115,967	39	33.6
Fulton	127,479	61	47.9
Hancock	222,255	74	33.3
Henry	86,953	28	32.2
Ottawa	123,092	57	46.3
Putnam	103,789	38	36.6
Seneca	170,009	89	52.4
Wood	374,278	111	29.7

Table 16. Number and rate (per 100,000 people) of deaths due to influenza and pneumonia, 2006 to 2008

County	Population	Number of Deaths: Influenza and Pneumonia	Rate of Deaths: Influenza and Pneumonia (per 100,000 People)
Allen	315,503	42	13.3
Defiance	115,967	16	13.8
Fulton	127,479	19	14.9
Hancock	222,255	28	12.6
Henry	86,953	13	15.0
Ottawa	123,092	21	17.1
Putnam	103,789	17	16.4
Seneca	170,009	20	11.8
Wood	374,278	37	9.9

Table 17. Number and rate (per 100,000 people) of deaths due to kidney disease, 2006 to 2008

County	Population	Number of Deaths: Kidney Disease	Rate of Deaths: Kidney Disease (per 100,000 People)
Allen	315,503	37	11.7
Defiance	115,967	19	16.4
Fulton	127,479	15	11.8
Hancock	222,255	11	4.9
Henry	86,953	10	11.5
Ottawa	123,092	17	13.8
Putnam	103,789	14	13.5
Seneca	170,009	19	11.2
Wood	374,278	42	11.2

Table 18. Number and rate (per 100,000 people) of deaths due to infections of the blood, 2006 to 2008

County	Population	Number of Deaths: Infections of the Blood	Rate of Deaths: Infections of the Blood (per 100,000 People)
Allen	315,503	30	9.5
Defiance	115,967	7	6.0
Fulton	127,479	3	2.4
Hancock	222,255	5	2.2
Henry	86,953	4	4.6
Ottawa	123,092	11	8.9
Putnam	103,789	12	11.6
Seneca	170,009	5	2.9
Wood	374,278	15	4.0

Health Risk Factors

Table 19. Estimated number and percentage of adults who are overweight, 2010

County	Total Number of Adults	Estimated Number Overweight	Estimated Percent Overweight
Allen	80,886	29,170	36.1%
Defiance	29,434	10,621	36.1%
Fulton	31,689	11,436	36.1%
Hancock	57,154	20,492	35.9%
Henry	21,121	7,657	36.3%
Ottawa	32,833	12,043	36.7%
Putnam	25,299	9,167	36.2%
Seneca	43,377	15,634	36.0%
Wood	98,213	34,707	35.3%

Table 20. Estimated number and percentage of adults who are obese, 2010

County	Total Number of Adults	Estimated Number Obese	Estimated Percent Obese
Allen	80,886	24,161	29.9%
Defiance	29,434	8,845	30.0%
Fulton	31,689	9,582	30.2%
Hancock	57,154	17,093	29.9%
Henry	21,121	6,352	30.1%
Ottawa	32,833	10,010	30.5%
Putnam	25,299	7,615	30.1%
Seneca	43,377	12,993	30.0%
Wood	98,213	29,107	29.6%

Table 21. Estimated number and percentage of adults who are current smokers, 2010

County	Total Number of Adults	Estimated Number Current Smokers	Estimated Percent Current Smokers
Allen	80,886	18,032	22.3%
Defiance	29,434	6,526	22.2%
Fulton	31,689	7,041	22.2%
Hancock	57,154	12,872	22.5%
Henry	21,121	4,657	22.1%
Ottawa	32,833	6,983	21.3%
Putnam	25,299	5,630	22.3%
Seneca	43,377	9,681	22.3%
Wood	98,213	22,745	23.2%

Table 22. Estimated number and percentage of adults who are heavy drinkers (men > 2 drinks/day, women > 1 drink/day), 2010

County	Total Number of Adults	Estimated Number of Heavy Drinkers	Estimated Percent of Heavy Drinkers
Allen	80,886	4,528	5.6%
Defiance	29,434	1,633	5.5%
Fulton	31,689	1,760	5.6%
Hancock	57,154	3,226	5.6%
Henry	21,121	1,171	5.5%
Ottawa	32,833	1,751	5.3%
Putnam	25,299	1,419	5.6%
Seneca	43,377	2,452	5.7%
Wood	98,213	5,844	6.0%

Table 23. Estimated number and percentage of adults who reported their health status as “fair” or “poor”, 2010

County	Total Number of Adults	Estimated Number Fair/Poor Health	Estimated Percent Fair/Poor Health
Allen	80,886	13,254	16.4%
Defiance	29,434	4,636	15.8%
Fulton	31,689	4,896	15.5%
Hancock	57,154	8,727	15.3%
Henry	21,121	3,296	15.6%
Ottawa	32,833	5,430	16.5%
Putnam	25,299	3,887	15.4%
Seneca	43,377	6,725	15.5%
Wood	98,213	14,431	14.7%

Heart Disease and Stroke

Table 24. Estimated number and percentage of adults who have not had their cholesterol checked in the past 5 years, 2009

County	Total Number of Adults	Estimated Number No Cholesterol Check in 5 Years*	Estimated Percent No Cholesterol Check in 5 Years*
Allen	80,886	18,318	22.6%
Defiance	29,434	6,329	21.5%
Fulton	31,689	6,646	21.0%
Hancock	57,154	12,797	22.4%
Henry	21,121	4,443	21.0%
Ottawa	32,833	6,123	18.6%
Putnam	25,299	5,386	21.3%
Seneca	43,377	9,595	22.1%
Wood	98,213	24,150	24.6%

*Includes adults who have never had their blood cholesterol checked.

Table 25. Estimated number and percentage of adults who have never had their cholesterol checked, 2009

County	Total Number of Adults	Estimated Number Never Had Cholesterol Checked	Estimated Percent Never Had Cholesterol Checked
Allen	80,886	15,392	19.0%
Defiance	29,434	5,211	17.7%
Fulton	31,689	5,398	17.0%
Hancock	57,154	10,597	18.5%
Henry	21,121	3,629	17.2%
Ottawa	32,833	4,890	14.9%
Putnam	25,299	4,396	17.4%
Seneca	43,377	7,951	18.3%
Wood	98,213	20,385	20.8%

Table 26. Estimated number and percentage of adults who have ever been told they have high cholesterol (of those tested), 2009

County	Total Number of Adults	Estimated Number Ever Told High Cholesterol	Estimated Percent Ever Told High Cholesterol
Allen	80,886	30,520	37.7%
Defiance	29,434	11,355	38.6%
Fulton	31,689	12,273	38.7%
Hancock	57,154	21,547	37.7%
Henry	21,121	8,200	38.8%
Ottawa	32,833	13,468	41.0%
Putnam	25,299	9,768	38.6%
Seneca	43,377	16,549	38.2%
Wood	98,213	35,197	35.8%

Table 27. Estimated number and percentage of adults who have ever been told they have high blood pressure, 2009

County	Total Number of Adults	Estimated Number Ever Told High Blood Pressure	Estimated Percent Ever Told High Blood Pressure
Allen	80,886	26,540	32.8%
Defiance	29,434	9,635	32.7%
Fulton	31,689	10,280	32.4%
Hancock	57,154	18,036	31.6%
Henry	21,121	6,940	32.9%
Ottawa	32,833	11,696	35.6%
Putnam	25,299	8,182	32.3%
Seneca	43,377	13,987	32.2%
Wood	98,213	28,961	29.5%

Table 28. Estimated number and percentage of adults who have ever been told they have angina or coronary heart disease, 2010

County	Total Number of Adults	Estimated Number Have Angina or CHD	Estimated Percent Have Angina or CHD
Allen	80,886	3,658	4.5%
Defiance	29,434	1,375	4.7%
Fulton	31,689	1,460	4.6%
Hancock	57,154	2,528	4.4%
Henry	21,121	997	4.7%
Ottawa	32,833	1,779	5.4%
Putnam	25,299	1,165	4.6%
Seneca	43,377	1,978	4.6%
Wood	98,213	3,879	3.9%

Table 29. Estimated number and percentage of adults who have ever been told they had a stroke, 2010

County	Total Number of Adults	Estimated Number Had Stroke	Estimated Percent Had Stroke
Allen	80,886	2,544	3.1%
Defiance	29,434	922	3.1%
Fulton	31,689	969	3.1%
Hancock	57,154	1,702	3.0%
Henry	21,121	669	3.2%
Ottawa	32,833	1,167	3.6%
Putnam	25,299	777	3.1%
Seneca	43,377	1,325	3.1%
Wood	98,213	2,615	2.7%

Table 30. Estimated number and percentage of adults who have ever been told they had a heart attack, 2010

County	Total Number of Adults	Estimated Number Had Heart Attack	Estimated Percent Had Heart Attack
Allen	80,886	3,707	4.6%
Defiance	29,434	1,361	4.6%
Fulton	31,689	1,434	4.5%
Hancock	57,154	2,493	4.4%
Henry	21,121	985	4.7%
Ottawa	32,833	1,753	5.3%
Putnam	25,299	1,147	4.5%
Seneca	43,377	1,958	4.5%
Wood	98,213	3,838	3.9%

Cancer Mortality

Table 31. Number and rate (per 100,000 people) of deaths due to lung, tracheal and bronchial cancer, 2006 to 2008

County	Population	Number of Deaths: Type/Site of Cancer: Lung, Trachea and Bronchus	Rate of Deaths: Type/Site of Cancer: Lung, Trachea and Bronchus (per 100,000)
Allen	315,503	213	67.5
Defiance	115,967	81	69.8
Fulton	127,479	59	46.3
Hancock	222,255	111	49.9
Henry	86,953	40	46.0
Ottawa	123,092	97	78.8
Putnam	103,789	46	44.3
Seneca	170,009	113	66.5
Wood	374,278	195	52.1

Table 32. Number and rate (per 100,000 people) of deaths due to colon, rectal and anal cancer, 2006 to 2008

County	Population	Number of Deaths: Type/Site of Cancer: Colon, Rectum and Anus	Rate of Deaths: Type/Site of Cancer: Colon, Rectum and Anus (per 100,000)
Allen	315,503	47	14.9
Defiance	115,967	22	19.0
Fulton	127,479	34	26.7
Hancock	222,255	37	16.6
Henry	86,953	29	33.4
Ottawa	123,092	35	28.4
Putnam	103,789	18	17.3
Seneca	170,009	34	20.0
Wood	374,278	68	18.2

Table 33. Number and rate (per 100,000 people) of deaths due to breast (female) cancer, 2006 to 2008

County	Population (of Females)	Number of Deaths: Type/Site of Cancer: Breast (Female)	Rate of Deaths: Type/Site of Cancer: Breast (per 100,000 Females)
Allen	159,336	60	37.7
Defiance	58,783	14	23.8
Fulton	64,736	26	40.2
Hancock	114,107	34	29.8
Henry	43,876	16	36.5
Ottawa	62,242	26	41.8
Putnam	51,928	10	19.3
Seneca	85,442	22	25.7
Wood	192,128	41	21.3

Table 34. Number and rate (per 100,000 people) of deaths due to pancreatic cancer, 2006 to 2008

County	Population	Number of Deaths: Type/Site of Cancer: Pancreas	Rate of Deaths: Type/Site of Cancer: Pancreas (per 100,000)
Allen	315,503	43	13.6
Defiance	115,967	10	8.6
Fulton	127,479	14	11.0
Hancock	222,255	25	11.2
Henry	86,953	12	13.8
Ottawa	123,092	30	24.4
Putnam	103,789	15	14.5
Seneca	170,009	25	14.7
Wood	374,278	39	10.4

Table 35. Number and rate (per 100,000 people) of deaths due to prostate cancer, 2006 to 2008

County	Population (of Males)	Number of Deaths: Type/Site of Cancer: Prostate	Rate of Deaths: Type/Site of Cancer: Prostate (per 100,000 Males)
Allen	156,167	33	21.1
Defiance	57,184	21	36.7
Fulton	62,743	12	19.1
Hancock	108,148	17	15.7
Henry	43,077	7	16.2
Ottawa	60,850	7	11.5
Putnam	51,861	11	21.2
Seneca	84,567	18	21.3
Wood	182,150	31	17.0

Table 36. Number and rate (per 100,000 people) of deaths due to non-Hodgkin's lymphoma, 2006 to 2008

County	Population	Number of Deaths: Type/Site of Cancer: Non-Hodgkin's Lymphoma	Rate of Deaths: Type/Site of Cancer: Non-Hodgkin's Lymphoma (per 100,000)
Allen	315,503	27	8.6
Defiance	115,967	5	4.3
Fulton	127,479	8	6.3
Hancock	222,255	26	11.7
Henry	86,953	8	9.2
Ottawa	123,092	15	12.2
Putnam	103,789	10	9.6
Seneca	170,009	16	9.4
Wood	374,278	37	9.9

Table 37. Number and rate (per 100,000 people) of deaths due to leukemia, 2006 to 2008

County	Population	Number of Deaths: Type/Site of Cancer: Leukemia	Rate of Deaths: Type/Site of Cancer: Leukemia (per 100,000)
Allen	315,503	31	9.8
Defiance	115,967	14	12.1
Fulton	127,479	12	9.4
Hancock	222,255	18	8.1
Henry	86,953	11	12.7
Ottawa	123,092	12	9.7
Putnam	103,789	12	11.6
Seneca	170,009	12	7.1
Wood	374,278	25	6.7

Table 38. Number and rate (per 100,000 people) of deaths due to esophageal cancer, 2006 to 2008

County	Population	Number of Deaths: Type/Site of Cancer: Esophagus	Rate of Deaths: Type/Site of Cancer: Esophagus (per 100,000)
Allen	315,503	19	6.0
Defiance	115,967	7	6.0
Fulton	127,479	10	7.8
Hancock	222,255	18	8.1
Henry	86,953	4	4.6
Ottawa	123,092	9	7.3
Putnam	103,789	7	6.7
Seneca	170,009	9	5.3
Wood	374,278	14	3.7

Table 39. Number and rate (per 100,000 people) of deaths due to bladder cancer, 2006 to 2008

County	Population	Number of Deaths: Type/Site of Cancer: Bladder	Rate of Deaths: Type/Site of Cancer: Bladder (per 100,000)
Allen	315,503	18	5.7
Defiance	115,967	9	7.8
Fulton	127,479	6	4.7
Hancock	222,255	11	4.9
Henry	86,953	9	10.4
Ottawa	123,092	6	4.9
Putnam	103,789	3	2.9
Seneca	170,009	11	6.5
Wood	374,278	17	4.5

Table 40. Number and rate (per 100,000 people) of deaths due to brain and central nervous system cancer, 2006 to 2008

County	Population	Number of Deaths: Type/Site of Cancer: Brain and Central Nervous System	Rate of Deaths: Type/Site of Cancer: Brain and Central Nervous System (per 100,000)
Allen	315,503	17	5.4
Defiance	115,967	6	5.2
Fulton	127,479	9	7.1
Hancock	222,255	7	3.1
Henry	86,953	2	2.3
Ottawa	123,092	8	6.5
Putnam	103,789	2	1.9
Seneca	170,009	11	6.5
Wood	374,278	24	6.4

Table 41. Number and rate (per 100,000 people) of deaths due to all other cancers not previously listed, 2006 to 2008

County	Population	Number of Deaths: Type/Site of Cancer: Other	Rate of Deaths: Type/Site of Cancer: Other (per 100,000)
Allen	315,503	194	61.5
Defiance	115,967	77	66.4
Fulton	127,479	74	58.0
Hancock	222,255	129	58.0
Henry	86,953	55	63.3
Ottawa	123,092	100	81.2
Putnam	103,789	48	46.2
Seneca	170,009	95	55.9
Wood	374,278	172	46.0

Cancer Screening

Table 42. Estimated number and percentage of women (18+) with no Pap test in the past 3 years, 2010

County	Total Number of Women 18+	Estimated Number No Pap Test, Past 3 Years	Estimated Percent No Pap Test, Past 3 Years
Allen	40,299	8,682	21.5%
Defiance	15,116	3,224	21.3%
Fulton	16,404	3,424	20.9%
Hancock	29,800	6,330	21.2%
Henry	10,793	2,308	21.4%
Ottawa	16,790	3,713	22.1%
Putnam	12,792	2,706	21.2%
Seneca	21,961	4,751	21.6%
Wood	50,905	10,813	21.2%

Table 43. Estimated number and percentage of women (40+) with no mammogram in the past 2 years, 2010

County	Total Number of Women 40+	Estimated Number No Mammogram, Past 2 Years (40+)	Estimated Percent No Mammogram, Past 2 Years (40+)
Allen	26,562	6,823	25.7%
Defiance	10,000	2,582	25.8%
Fulton	11,105	2,920	26.3%
Hancock	18,886	4,912	26.0%
Henry	7,314	1,902	26.0%
Ottawa	12,463	3,172	25.5%
Putnam	8,609	2,256	26.2%
Seneca	14,390	3,728	25.9%
Wood	29,369	7,664	26.1%

Table 44. Estimated number and percentage of women (50+) with no mammogram in the past 2 years, 2010

County	Total Number of Women 50+	Estimated Number No Mammogram, Past 2 Years (50+)	Estimated Percent No Mammogram, Past 2 Years (50+)
Allen	19,741	4,562	23.1%
Defiance	7,411	1,720	23.2%
Fulton	7,959	1,863	23.4%
Hancock	13,775	3,206	23.3%
Henry	5,397	1,260	23.4%
Ottawa	9,487	2,182	23.0%
Putnam	6,211	1,458	23.5%
Seneca	10,785	2,526	23.4%
Wood	21,154	4,920	23.3%

Table 45. Estimated number and percentage of adults (50+) with no blood stool test in the past 2 years, 2010

County	Total Number of Adults 50+	Estimated Number No Blood Stool Test in 2 Years	Estimated Percent No Blood Stool Test in 2 Years
Allen	37,242	30,203	81.1%
Defiance	14,046	11,442	81.5%
Fulton	15,109	12,363	81.8%
Hancock	25,731	20,984	81.6%
Henry	10,202	8,325	81.6%
Ottawa	18,222	14,833	81.4%
Putnam	11,914	9,742	81.8%
Seneca	20,283	16,553	81.6%
Wood	39,620	32,399	81.8%

Table 46. Estimated number and percentage of adults (50+) who have never had a colonoscopy or sigmoidoscopy, 2010

County	Total Number of Adults 50+	Estimated Number No Colonoscopy	Estimated Percent No Colonoscopy
Allen	37,242	13,338	35.8%
Defiance	14,046	5,000	35.6%
Fulton	15,109	5,429	35.9%
Hancock	25,731	9,135	35.5%
Henry	10,202	3,619	35.5%
Ottawa	18,222	6,380	35.0%
Putnam	11,914	4,260	35.8%
Seneca	20,283	7,208	35.5%
Wood	39,620	14,237	35.9%

Table 47. Estimated number and percentage of men (40+) who have not had a PSA test in the past 2 years, 2010

County	Total Number of Men 40+	Estimated Number No PSA Test, Past 2 Years	Estimated Percent No PSA Test, Past 2 Years
Allen	24,361	10,866	44.6%
Defiance	9,178	4,056	44.2%
Fulton	10,191	4,626	45.4%
Hancock	17,030	7,670	45.0%
Henry	6,711	2,982	44.4%
Ottawa	11,621	4,924	42.4%
Putnam	8,165	3,714	45.5%
Seneca	13,234	5,885	44.5%
Wood	26,302	11,933	45.4%

Respiratory Disease

Table 48. Estimated number and percentage of adults currently diagnosed with asthma, 2010

County	Total Number of Adults	Estimated Number Current Asthma	Estimated Percent Current Asthma
Allen	80,886	7,705	9.5%
Defiance	29,434	2,726	9.3%
Fulton	31,689	2,898	9.1%
Hancock	57,154	5,316	9.3%
Henry	21,121	1,926	9.1%
Ottawa	32,833	2,949	9.0%
Putnam	25,299	2,300	9.1%
Seneca	43,377	3,990	9.2%
Wood	98,213	9,261	9.4%

Table 49. Estimated number and percentage of adults ever diagnosed with asthma, 2010

County	Total Number of Adults	Estimated Number Ever Had Asthma	Estimated Percent Ever Had Asthma
Allen	80,886	11,121	13.7%
Defiance	29,434	3,940	13.4%
Fulton	31,689	4,185	13.2%
Hancock	57,154	7,719	13.5%
Henry	21,121	2,789	13.2%
Ottawa	32,833	4,214	12.8%
Putnam	25,299	3,339	13.2%
Seneca	43,377	5,808	13.4%
Wood	98,213	13,591	13.8%

Table 50. Estimated number and percentage of adults (65+) who have not had a flu shot in the past year, 2010

County	Total Number of Adults 65+	Estimated Number No Flu Shot in Past Year	Estimated Percent No Flu Shot in Past Year
Allen	15,697	5,426	34.6%
Defiance	5,857	1,973	33.7%
Fulton	6,000	2,013	33.6%
Hancock	10,673	3,583	33.6%
Henry	4,349	1,458	33.5%
Ottawa	7,868	2,647	33.6%
Putnam	4,930	1,654	33.5%
Seneca	8,425	2,839	33.7%
Wood	15,389	5,176	33.6%

Table 51. Estimated number and percentage of adults (65+) who have never had a pneumonia vaccination, 2010

County	Total Number of Adults 65+	Estimated Number No Pneumonia Vaccination	Estimated Percent No Pneumonia Vaccination
Allen	15,697	4,916	31.3%
Defiance	5,857	1,818	31.0%
Fulton	6,000	1,859	31.0%
Hancock	10,673	3,305	31.0%
Henry	4,349	1,345	30.9%
Ottawa	7,868	2,441	31.0%
Putnam	4,930	1,526	30.9%
Seneca	8,425	2,612	31.0%
Wood	15,389	4,769	31.0%

Diabetes

Table 52. Estimated number and percentage of adults ever diagnosed with diabetes, 2010

County	Total Number of Adults	Estimated Number With Diabetes	Estimated Percent With Diabetes
Allen	80,886	8,363	10.3%
Defiance	29,434	2,938	10.0%
Fulton	31,689	3,088	9.7%
Hancock	57,154	5,426	9.5%
Henry	21,121	2,090	9.9%
Ottawa	32,833	3,606	11.0%
Putnam	25,299	2,446	9.7%
Seneca	43,377	4,212	9.7%
Wood	98,213	8,596	8.8%

Oral Health

Table 53. Estimated number and percentage of adults who did not visit a dentist in the past year, 2010

County	Total Number of Adults	Estimated Number No Dental Visit	Estimated Percent No Dental Visit
Allen	80,886	23,264	28.8%
Defiance	29,434	8,253	28.0%
Fulton	31,689	8,796	27.8%
Hancock	57,154	15,908	27.8%
Henry	21,121	5,899	27.9%
Ottawa	32,833	9,186	28.0%
Putnam	25,299	7,053	27.9%
Seneca	43,377	12,190	28.1%
Wood	98,213	27,366	27.9%

Table 54. Estimated number and percentage of adults who have ever had permanent teeth extracted, 2010

County	Total Number of Adults	Estimated Number With Teeth Extracted	Estimated Percent With Teeth Extracted
Allen	80,886	36,913	45.6%
Defiance	29,434	13,394	45.5%
Fulton	31,689	14,339	45.2%
Hancock	57,154	25,371	44.4%
Henry	21,121	9,630	45.6%
Ottawa	32,833	15,898	48.4%
Putnam	25,299	11,388	45.0%
Seneca	43,377	19,429	44.8%
Wood	98,213	41,423	42.2%

Perinatal and Early Childhood Health

Table 55. Number and rate (per 1,000 live births) of infant mortality, 2006 to 2008

County	Total Number of Live Births	Number of Infant Mortalities	Rate of Infant Mortality (per 1,000 Live Births)
Allen	4,251	31	7.3
Defiance	1,552	8	5.2
Fulton	1,598	8	5.0
Hancock	2,851	15	5.3
Henry	1,135	5	4.4
Ottawa	1,262	8	6.3
Putnam	1,512	4	2.6
Seneca	2,159	11	5.1
Wood	4,104	32	7.8

Table 56. Number and rate (per 100 live births) of low-weight births, 2006 to 2008

County	Total Number of Live Births*	Number Low-Weight Births	Rate of Low-Weight Births (per 100 Live Births)
Allen	4,246	355	8.4
Defiance	1,549	99	6.4
Fulton	1,597	102	6.4
Hancock	2,850	221	7.8
Henry	1,135	72	6.3
Ottawa	1,262	92	7.3
Putnam	1,512	74	4.9
Seneca	2,158	167	7.7
Wood	4,102	275	6.7

*Live births total only includes live births with a known weight.

Table 57. Number and rate (per 100 live births) of live births with late entry into prenatal care, 2006 to 2008

County	Total Number of Live Births*	Number with Late Entry into Prenatal Care	Rate of Late Entry into Prenatal Care (per 100 Live Births)
Allen	3,659	913	25.0
Defiance	1,252	266	21.2
Fulton	1,255	273	21.8
Hancock	2,727	553	20.3
Henry	967	166	17.2
Ottawa	1,056	252	23.9
Putnam	1,367	214	15.7
Seneca	1,767	364	20.6
Wood	3,353	885	26.4

*Live births total only includes live births with a known entry date into prenatal care

Table 58. Number and rate (per 1,000 females) of teen births (age 17 and younger), 2006 to 2008

County	Total Number of Females (Ages 10-17)	Number of Teen Births	Rate of Teen Births (per 1,000 Females Ages 10-17)
Allen	17,245	201	11.7
Defiance	6,213	47	7.6
Fulton	7,614	26	3.4
Hancock	11,980	79	6.6
Henry	4,933	32	6.5
Ottawa	5,958	32	5.4
Putnam	6,355	24	3.8
Seneca	9,097	63	6.9
Wood	18,450	88	4.8

Table 59. Number and percentage of children younger than 72 months who have not been tested for blood lead level, 2007

County	Total Number of Children <72 Months	Number of Children <72 Months Not Tested for Blood Lead Level	Percent of Children <72 Months Not Tested for Blood Lead Level
Allen	8,602	7,167	83.3%
Defiance	2,985	2,501	83.8%
Fulton	3,192	2,757	86.4%
Hancock	5,685	5,145	90.5%
Henry	2,174	1,841	84.7%
Ottawa	2,535	2,188	86.3%
Putnam	2,881	2,655	92.2%
Seneca	4,243	2,806	66.1%
Wood	8,302	6,812	82.1%

Mental Health and Substance Abuse

Table 60. Number and rate (per 100,000 people) of unintentional drug or medication mortality, 2005 to 2009

County	Total Population 2005 to 2009	Number of Unintentional Drug/Medication Deaths	Rate of Unintentional Drug/Medication Deaths (per 100,000 People)
Allen	524,732	30	5.7
Defiance	192,579	11	5.7
Fulton	212,408	7	3.3
Hancock	370,290	18	4.9
Henry	144,881	4	2.8
Ottawa	205,662	17	8.3
Putnam	172,645	6	3.5
Seneca	283,554	16	5.6
Wood	624,876	42	6.7

Table 61. Number and rate (per 100,000 people) of suicides, 2006 to 2008

County	Total Population 2006 to 2008	Number of Suicides	Rate of Suicides (per 100,000 People)
Allen	315,503	37	11.7
Defiance	115,967	10	8.6
Fulton	127,479	12	9.4
Hancock	222,255	19	8.5
Henry	86,953	9	10.4
Ottawa	123,092	14	11.4
Putnam	103,789	7	6.7
Seneca	170,009	14	8.2
Wood	374,278	41	11

Data Sources

The data for this report came from multiple sources as identified below. The sources for the tables are listed first, followed by the sources for the figures. All rates contained in this report represent crude rates and are not age adjusted.

Table 1. Population by race. U.S. Census Bureau, 2010 Census.

Table 2. Population by Hispanic or Latino ethnicity. U.S. Census Bureau, 2010 Census.

Table 3. Male population by age group. U.S. Census Bureau, 2010 Census.

Table 4. Female population by age group. U.S. Census Bureau, 2010 Census.

Table 5. Total population by age group. U.S. Census Bureau, 2010 Census.

Table 6. Educational attainment of the population age 25 and older. U.S. Census Bureau, 2006 to 2010 American Community Survey.

Table 7. Income and poverty. U.S. Census Bureau, 2006 to 2010 American Community Survey.

Table 8. Estimated payer mix. Multiple sources of data were utilized:

- *Medicare* coverage is based on enrollment as of July 1, 2010, as reported by the Centers for Medicare and Medicaid Services <https://www.cms.gov/MedicareEnrpts/>
- *Medicaid* coverage is based on enrollment as of January, 2010 for the population less than 65 years of age as reported by the Ohio Department of Job and Family Services. <http://jfs.ohio.gov/OHP/reports/data/MedDataTotalElig.stm>.
- *Uninsured* rates for the population less than 65 years of age were obtained from the U.S. Census Bureau's Model-Based Small Area Health Insurance Estimates (SAHIE) for Counties and States (<http://www.census.gov/did/www/sahie/data/2009/dataset.html>). The Census Bureau does not produce SAHIE estimates for the population age 65 and older. To adjust for differences in reporting year between the 2009 SAHIE and the 2010 Medicare and Medicaid enrollment values, the 2009 SAHIE uninsured rates were applied to the 2010 Census population counts to estimate the number of individuals in the region that were uninsured.
- The remainder of the population (those not covered through Medicare or Medicaid or identified as uninsured) were classified as being covered by private insurance. Note: some individuals may not have been covered by private insurance for the entire period and many of these individuals may have been underinsured.

Tables 9 to 18: Leading Causes of Mortality. Ohio Department of Health's Data Warehouse, 2006 to 2008.

Tables 19 to 23: Health Risk Factors. Data from the 2010 Ohio Behavioral Risk Factor Surveillance System were used to generate synthetic estimates for the counties by applying age-, gender- and/or race specific Ohio rates to the respective county 2010 census population totals.

Tables 24 to 30. Heart Disease and Stroke. Data from the Ohio Behavioral Risk Factor Surveillance System were used to generate synthetic estimates for the counties by applying age-, gender- and/or race-specific Ohio rates to the respective county 2010 census population totals.

- **Table 24. Estimated number and percentage of adults who have not had their cholesterol checked in the past 5 years.** Behavioral Risk Factor Surveillance System, 2009. Note: individuals who have never had their cholesterol checked are included in the reported rates and counts.
- **Table 25. Estimated number and percentage of adults who have never had their cholesterol checked.** Behavioral Risk Factor Surveillance System, 2009.
- **Table 26. Estimated number and percentage of adults who have ever been told they have high cholesterol (of those tested).** Behavioral Risk Factor Surveillance System, 2009. Note: Only individuals who reported previously having undergone a blood cholesterol test were included in the calculation of this rate.
- **Table 27. Estimated number and percentage of adults who have ever been told they have high blood pressure.** Behavioral Risk Factor Surveillance System, 2009.
- **Table 28. Estimated number and percentage of adults who have ever been told they have angina or coronary heart disease.** Behavioral Risk Factor Surveillance System, 2010.
- **Table 29. Estimated number and percentage of adults who have ever been told they had a stroke.** Behavioral Risk Factor Surveillance System, 2010.
- **Table 30. Estimated number and percentage of adults who have ever been told they had a heart attack.** Behavioral Risk Factor Surveillance System, 2010.

Tables 31 to 41. Cancer Mortality. Ohio Department of Health's Data Warehouse, 2006 to 2008. Note: Prostate cancer and female breast cancer and mortality rates were calculated using gender-specific population totals.

Tables 42 to 47. Cancer Screening. Data from the 2010 Ohio Behavioral Risk Factor Surveillance System were used to generate synthetic estimates for the counties by applying age-, gender- and/or race-specific Ohio rates to the respective county 2010 census population totals. Behavioral Risk Factor Surveillance System, 2010.

Tables 48 to 51. Respiratory Disease. Data from the 2010 Ohio Behavioral Risk Factor Surveillance System were used to generate synthetic estimates for the counties by applying age-, gender- and/or race-specific Ohio rates to their respective county 2010 census population totals.

Table 52. Diabetes. Data from the 2010 Ohio Behavioral Risk Factor Surveillance System were used to generate synthetic estimates for the counties by applying age-, gender- and/or race-specific Ohio rates to the respective county 2010 census population totals.

Table 53 to 54. Oral Health. Data from the 2010 Ohio Behavioral Risk Factor Surveillance System were used to generate synthetic estimates for the counties by applying age-, gender- and/or race-specific Ohio rates to the respective county 2010 census population totals.

Tables 55 to 59. Perinatal and Early Childhood Health. Data on, infant mortality, low-weight births, live births with late entry into prenatal care and births to teens age 17 and younger were obtained from the Ohio Department of Health's Data Warehouse and represent a 3-year period ending in 2008. Data on children not tested for blood lead levels were obtained from the Centers for Disease Control and Prevention and are for the year 2007.

- **Table 55. Number and rate (per 1,000 live births) of infant mortality.** Ohio Department of Health's Data Warehouse, 2006 to 2008.
- **Table 56. Number and rate (per 100 live births) of low-weight births.** Ohio Department of Health's Data Warehouse, 2006 to 2008. Note: Live births total only includes live births for which there was a known weight.
- **Table 57. Number and rate (per 100 live births) of live births with late entry into prenatal care.** Ohio Department of Health's Data Warehouse, 2006 to 2008. Note: Live births total only includes live births for which there was a known entry date into prenatal care.
- **Table 58. Number and rate (per 1,000 females) of teen births (age 17 and younger).** Ohio Department of Health's Data Warehouse, 2006 to 2008. Note: Teen female population only includes females ages 10 to 17.
- **Table 59. Number and percentage of children younger than 72 months who have not been tested for blood lead level.** Centers for Disease Control and Prevention, 2007.

Table 60 to 61. Mental Health and Substance Abuse. Data on unintentional drug and medication mortality for 2005 to 2009 were obtained from the following report produced by the Ohio Department of Health: Unintentional Drug Overdose Death Rates by County, Ohio Department of Health. <http://www.healthyohioprogram.org/ASSETS/2A9C2B99A15F44839F3E9125DD0B40B4/countypoisondeaths04to09.pdf>. Data on suicides for 2006 to 2008 were obtained from the Ohio Department of Health's data warehouse.

- **Table 60. Number and rate (per 100,000 people) of unintentional drug or medication mortality.** Ohio Department of Health: Unintentional Drug Overdose Death Rates by County, 2005 to 2009.
- **Table 61. Number and rate (per 100,000 people) of suicides.** Ohio Department of Health's Data Warehouse, 2006 to 2008.

Figure 1. Needs assessment region. The counties comprising the region as shown in Figure 1 were selected by critical access hospitals in November 2011.

Figure 2. Medial primary care health professional shortage and medically underserved areas. Data were downloaded from the US Department of Health and Human Services Health Resources and Services Administration (HRSA) website on Oct 24, 2011.

Figure 3. Population by physician ratio. Data were obtained from the Dartmouth Atlas of Health Care and are derived from the 2007 HRSA American Medical Association physician master file.