2016 Community Health Needs Assessment
EXECUTIVE SUMMARY

Akron Children's Hospital Mahoning Valley
Beeghly Campus
6505 Market Street
Boardman, Ohio 44512

www.akronchildrens.org

Akron Children's Hospital

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EXECUTIVE SUMMARY

Akron Children's Hospital operates two hospitals: one at its Akron campus in Summit County and one at its Beeghly campus in Boardman, Ohio in Mahoning County. The area's only pediatric hospital, Akron Children's Hospital Mahoning Valley opened in December 2008. This nonprofit, 43-bed pediatric hospital offers a full range of pediatric services for the Mahoning Valley and surrounding areas, including access to a 24/7 emergency department, a laboratory, radiology services, an outpatient surgical center, endocrinology services, rehabilitation, and EEG/ECHO/EKG services, as well as a hematology/oncology clinic and infusion center and child advocacy center.

In 2016, Akron Children's Hospital Mahoning Valley partnered with Kent State University to conduct a Community Health Needs Assessment (CHNA). During the CHNA process, epidemiologic data were reviewed for Trumbull, Mahoning, and Columbiana counties and compared to the rates of two peer counties, the state, the nation, and the Healthy People 2020 objectives. Input was also obtained from community leaders and community residents, and CHNAs conducted by other community groups were consulted. All of this information was used to develop a list of significant health needs for children in Trumbull, Mahoning, and Columbiana counties.

The significant health needs for children that were identified across all three counties are shown below.

Table 1. Significant Health Needs Identified for the Service Area

Access to Health Care
- Access to dental care
- Dental health insurance coverage
- Health insurance coverage
- Mental health insurance coverage
- Vision insurance coverage

Child Lifestyle Factors
- Food insecurity
- Obesity

Chronic Disease
- Asthma
- Diabetes

Crime & Violence
- Child abuse and neglect
- Child trafficking
- Teen felony rate

Environmental Factors
- Elevated blood lead levels

Injury
- Falls
- Motor vehicle crashes

Maternal & Infant Health
- Infant mortality
- Low birth weight
- Teen pregnancy

Mental Health
- ADHD/Autism
- Geographic access to services
- Self-harm/Teen suicide

Substance Abuse
- Opioid/Heroin use and abuse
- Neonatal abstinence syndrome

These significant health needs are being used by Akron Children's Hospital to guide intervention and outreach efforts aimed at improving community health. For the 2016 CHNA, the hospital's prioritization team identified the following priorities on which to focus implementation strategies: chronic disease, maternal and infant health, mental health, and (new in 2016) intentional and unintentional injuries. Another priority noted, currently being studied by the hospital, but which is currently having an oversized effect on the community, was opiate and heroin abuse.

Chronic Diseases

Chronic diseases are diseases that a person has for a long time, sometimes indefinitely. People with chronic diseases usually need to see their doctors on a regular basis to monitor the progression of their disease and receive treatment. The prioritized chronic disease health needs for children in our community include **asthma** and **diabetes**.

Maternal and Infant Health

Maternal and infant health includes many factors that affect pregnancy and childbirth. The prioritized maternal and infant health need in our community is **infant mortality**.

Mental Health

Mental health refers to the successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and cope with adversity. Mental health is particularly important for children, since it can affect psychological and emotional development, school performance, family and peer relationships, and physical health. For this reason, **mental health** was identified as a prioritized community health need for children in our community

Injury

This category covers both **intentional** and **unintentional** injuries. Injuries are occurrences where a child was harmed including both intentional and unintentional cases. Intentional injuries include child abuse and neglect, domestic violence and suicide. Examples of unintentional injuries include injuries related to sports and recreational activities, motor vehicle crashes and suffocation. The prioritized injury health need in our community includes both intentional and unintentional injuries.

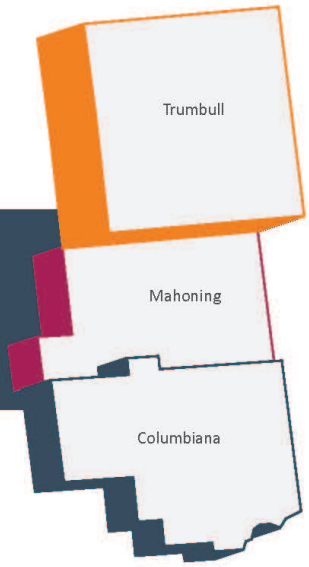
Data and Charts

Detailed charts and data on these significant health needs for our community are included in the *Detailed Data Appendix*. The graphics shown on the following pages highlight the challenges these health issues pose for the Akron Children's Hospital service area. Note that if data are not reported for a particular county, it was unavailable.

Status of Priority Needs Identified in the 2013 CHNA Implementation Plan

Each implementation team addressing a prioritized health need from the 2013 Community Health Needs Assessment evaluated the impact of their efforts over the past three years. Details regarding their evaluation can be found in the Appendix at the end of this report.

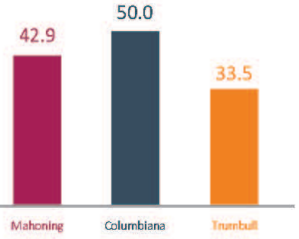
Injuries



Columbiana County has the highest rate of injuries due to falls, vehicle-related injuries and overexertion and strenuous movement injuries per 1,000 children. Mahoning County has the highest rate of sports and recreation injuries and struck by / struck against injuries per 1,000 children, as well as the highest rate of substantiated cases of child abuse and neglect per 1,000 children.

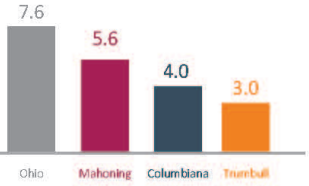
Falls

Rate of injuries due to fall per 1,000 children living in the respective county



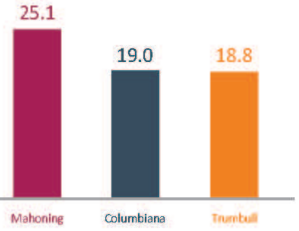
Child Abuse and Neglect

The number of substantiated reports of child abuse and neglect per 1,000 children in the population



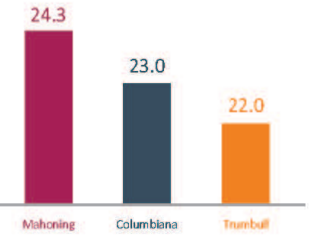
Sports & Recreation

Injury rate per 1,000 children living in the respective county



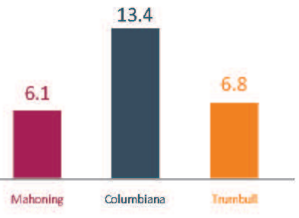
Struck by/ Struck against

Injury rate per 1,000 children living in the respective county



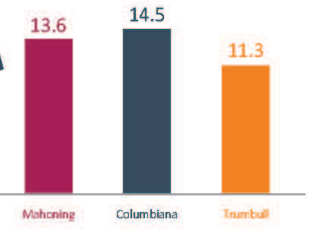
Overexertion & Strenuous Movements

Injury rate per 1,000 children living in the respective county



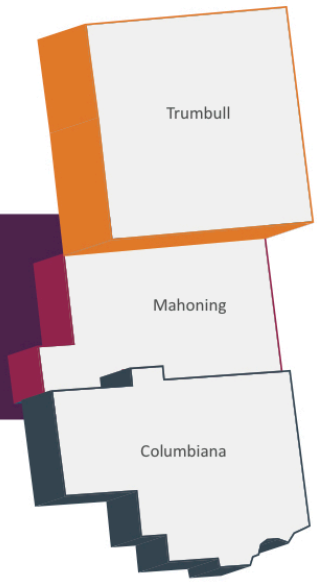
Vehicle Related Injuries

Injury rate per 1,000 children living in the respective county



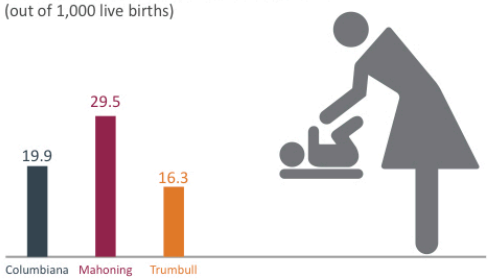
Substance Use and Abuse

Focus groups with 89 residents in our service area and telephone interviews with 47 community leaders identified opioid and heroin abuse as critical problems today in our region. The negative repercussions on children and families, especially single family households, for parents using these drugs are a major concern to citizens and social service agencies alike throughout our hospital's service area.



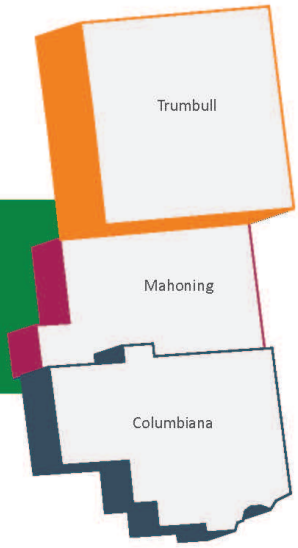
8 out of 10
community leaders identified **substance abuse** as one of the **most significant health problems** in the Mahoning Valley.

Neonatal Abstinence Syndrome Rate
Rate of neonates with illicit substance abstinence syndrome;
Neonatal abstinence syndrome occurs when babies are born exposed to opiates and experience withdrawal symptoms.
(out of 1,000 live births)



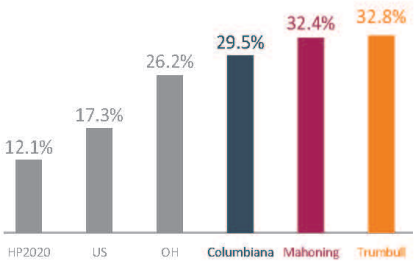
Maternal and Infant Health

All three counties in the hospital service area exceed the Ohio, US and Healthy People 2020 for the percentage of women who did not receive prenatal care in the first trimester of pregnancy. Mahoning County leads the other counties in the percentage of infants born at low birth weight, as well as in the infant death rate and infant death rate 0-28 days per 1,000 live births.



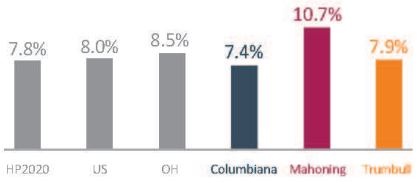
% Women without 1st Trimester Care

Percentage of women who do not obtain prenatal care during their first trimester of pregnancy



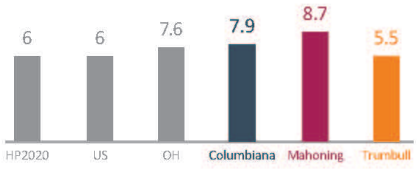
% Infants with Low Birth Rate

Infants born at low birth weight (Below 5 pounds 8 oz)



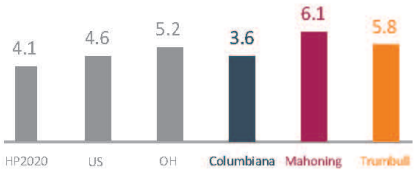
Infant Death Rate

Number of infants that die prior to their first birthday (per 1,000 live births)



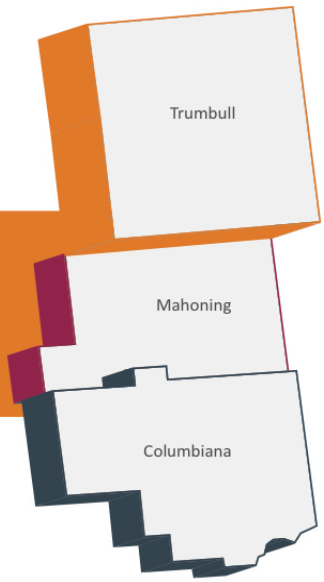
Infant Death Rate, 0-28 Days

Number of infants that die between their birth and 28th day of life (per 1,000 live births)



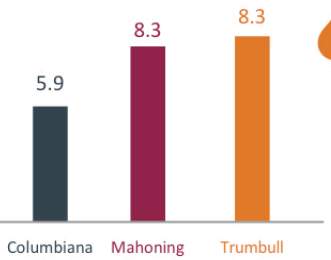
Mental Health

Trumbull County exceeds the other two counties in the hospital service area for the rate of mental health problems ages 0-18 at 8.26 per 1,000 children, followed closely by Mahoning County. On the other hand, Columbiana County exceeds the State of Ohio rate and the other two counties in the percentage of children under age 18 without mental health insurance coverage.



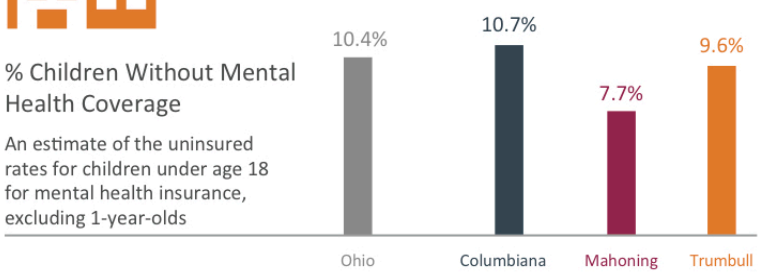
Rate of Mental Health Problems, Ages 0-18

Rate of Mental Health Problems Ages 0-18 per 1,000 children



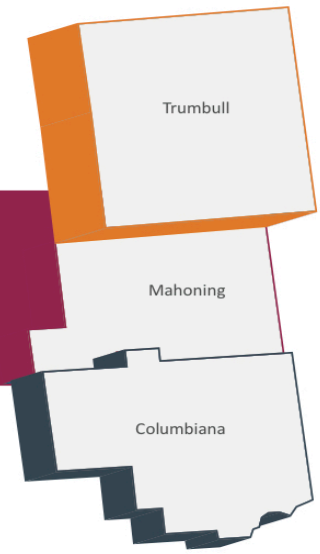
% Children Without Mental Health Coverage

An estimate of the uninsured rates for children under age 18 for mental health insurance, excluding 1-year-olds



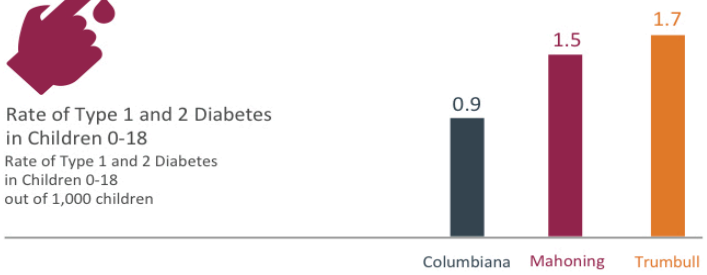
Chronic Disease

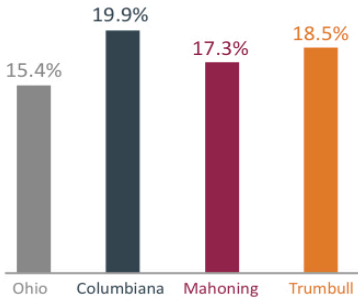
Asthma is a significant problem in all three counties in the hospital service area where the rates are well above the State of Ohio average of 15.5%. Columbiana County, the highest of the three, has a rate about 30% higher than the Ohio average. Trumbull and Mahoning Counties have the highest rates of Type 1 and Type 2 diabetes per 1,000 children in the hospital service area.



Rate of Type 1 and 2 Diabetes in Children 0-18

Rate of Type 1 and 2 Diabetes in Children 0-18 out of 1,000 children





% Children with Asthma

Percentage of children who have been diagnosed with asthma

CHNA BACKGROUND

Purpose of the CHNA

In keeping with Akron Children's Hospital's mission, relationships have been established with various community and professional organizations who share common goals for the delivery of services to children and families with a focus on access and improvement of health outcomes. To better identify the health needs of the community, Akron Children's Hospital Mahoning Valley engaged in a formalized process with Kent State University to provide a Community Health Needs Assessment to validate and prioritize the needs of the community we serve.

In March 2010, the U.S. Congress passed and President Obama signed the Patient Protection and Affordable Care Act (ACA). The ACA contains numerous changes to the U.S. health care system, including requiring nonprofit hospitals to conduct CHNAs every three years. The Internal Revenue Service (IRS), the federal agency that is charged with enforcing these new requirements, has issued regulations pertaining to these new reporting requirements of non-profit hospitals. These regulations require CHNAs to describe:

- The community served and how it was defined;
- The process and methods used to conduct the assessment, including the sources and dates of the data and other information used in the assessment and the analytical methods applied to identify community health needs;
- The information gaps that impact the ability to assess health needs;
- Collaborating hospitals and vendors used while conducting the CHNA;
- How input was received from persons who have expertise in public health and from persons who represent the broad interests of the community, including a description of when and how these persons were consulted;
- The prioritized community health needs, including a description of the process and criteria used in prioritizing the health needs;
- Existing health care facilities and other resources within the community available to meet the prioritized community health needs;
- The evaluation of impact of actions that were taken to address significant health needs identified in previous CHNA(s).

Thus, the purpose of this CHNA is to build upon our history of collaborative efforts aimed at improving community health. This report will also act as a resource for other community groups working toward improving the health of the community. In addition, this report will fulfill the CHNA requirements established by the ACA for the hospital facilities listed.

Description of Hospital Facility

Akron Children's Hospital operates two hospital campuses: one in Akron and one in Boardman in Mahoning County. Our Boardman campus facility is the only pediatric hospital in the Mahoning Valley. This 43-bed pediatric hospital offers a full range of pediatric services to the children of the Mahoning Valley and surrounding areas, including an 18-bed, Level II Special Care Nursery. The hospital provides access to a 24/7 emergency department, a laboratory, radiology services, an outpatient surgical center, endocrinology services, rehabilitation services, neurology/EEG services, sedation services, gastroenterology services, psychiatry services, rheumatology services, and ophthalmology services, as well as a hematology/oncology clinic and infusion center and child advocacy center. During 2015, the following patient encounters occurred on the Beeghly campus: 718 inpatient admissions, 32,153 emergency room visits, and 36,401 specialist visits.

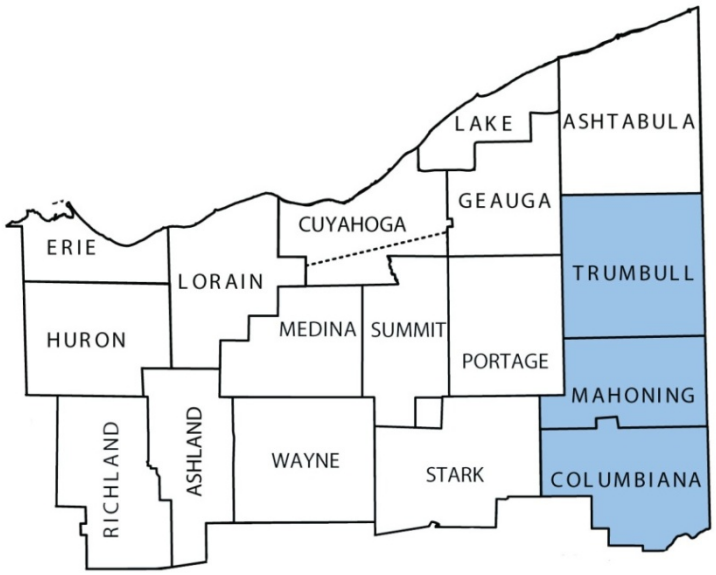
Akron Children's owns and operates a 25-bed Level IIIB Neonatal Intensive Care Unit at St. Elizabeth Boardman Hospital in Boardman. Additionally, the hospital operates the 6 neonatal beds and 5 pediatric inpatient beds at St. Joseph Warren Hospital. Akron Children's neonatal team is committed to providing the most effective and efficient care for our tiniest patients, and to providing parents with the emotional and educational support they need.

Also located in the Mahoning Valley is the Hospital's Community Outreach, Education, and Support Center, which provides education and support for children and their families. These programs meet the specified criteria of nationally accredited disease management programs, as well as Akron Children's criteria and monitoring requirements. Our community health outreach includes asthma and diabetes education and support, school programs, disease-specific camps and support groups, fitness programs, community events, and educational programs.

In 2012, Akron Children's Hospital was re-designated as a Magnet hospital by the American Nurses Credentialing Center's (ANCC) Magnet Recognition Program®. This is the highest recognition granted by ANCC; it recognizes the very best in nursing care. Ranked a Best Children's Hospital by *U.S. News & World Report*, Akron Children's Hospital is the largest pediatric provider in northeast Ohio. Akron Children's Hospital has been caring for children since 1890, guided by three promises that we consider sacred: To care for all children as if they were our own, to treat everyone the way we would want to be treated, and to turn no child away for an inability to pay. For more information, visit **www.akronchildrens.org/mv.**

Description of Community Served

Akron Children's Hospital Mahoning Valley has served and continues to serve patients and families from many communities across the region. Most people who receive services from the hospital live in Columbiana, Mahoning, and Trumbull counties. Thus, for the purposes of this report, the community identified for this CHNA consists of those counties, as shown on the map.



Columbiana County

There are approximately 104,806 people living in Columbiana County, which is a decrease of 2.8% since 2010. There are 3 cities, 11 villages, and 18 townships in Columbiana County, with the largest being Salem. Compared to the State of Ohio, Columbiana County has a smaller proportion of children (under 18 years old) and a larger proportion of older adults (65 years and older). Approximately 2.5% percent of the population in Columbiana County is Black or African-American and 1.6% is Hispanic or Latino, compared to 12.7% and 3.6%, respectively, in the State of Ohio. The percentage of Columbiana County residents with a high school diploma or higher is lower than the State of Ohio and the percentage with a bachelor's degree or higher is nearly half the State average (13.6% versus 25.6%). The annual per capita income in Columbiana County is much lower than the State of Ohio and the percentage of Columbiana County residents living in poverty is higher than the State average.

Mahoning County

There are approximately 231,900 people living in Mahoning County, which is a decrease of 2.9% since 2010.There are 7 cities and 7 villages in Mahoning County, with the largest being Youngstown. Compared to the State of Ohio, Mahoning County has a smaller proportion of children (under 18 years old) and a larger proportion of older adults (65 years and older). Fifteen point nine percent of the population in Mahoning County is Black or African-American and 5.5% is Hispanic or Latino, compared to 12.7% and 3.6%, respectively, in the State of Ohio. The percentage of Mahoning County residents with a high school diploma or higher is a bit higher than the State of Ohio, but the percentage with a bachelor's degree or higher is lower than the State. The annual per capita income in Mahoning County is lower than the State of Ohio and the percentage of Mahoning County residents living in poverty is higher than the State average.

Trumbull County

There are approximately 203,751 people living in Trumbull County, which is a decrease of 3.1% since 2010. There are 7 cities and 5 villages in Trumbull County, with the county seat being Warren. Compared to the State of Ohio, Trumbull County has a slightly smaller proportion of

children (under 18 years old) and a larger proportion of older adults (65 years and older). In Trumbull County, 8.6% of the population is Black or African-American and 1.7% is Hispanic or Latino, compared to 12.7% and 3.6%, respectively, in the State of Ohio. Educational attainment in Trumbull County is lower than the State of Ohio, with 88.3% having a high school diploma or higher and 17.4% having a bachelor's degree or higher. Similarly, annual per capita income in Trumbull County is lower than the State of Ohio and the percentage of Trumbull County residents living in poverty is higher than that of the State.

Table 2. Demographic Characteristics of Communities Served and the State of Ohio

	Trumbull	Mahoning	Columbiana	Ohio
Total population	203,751	231,900	104,806	11,613,423
Percent population change	-3.1%	-2.9%	-2.8%	0.7%
Percent under 18 years old	20.9%	20.5%	20.9%	22.6%
Percent 65 years and older	19.9%	19.4%	18.7%	15.9%
Percent female	51.2%	51.3%	49.5%	51.0%
Percent Black or African-American	8.6%	15.9%	2.5%	12.7%
Percent Hispanic or Latino	1.7%	5.5%	1.6%	3.6%
Percent with high school diploma or higher	88.3%	89.2%	87.2%	88.8%
Percent with bachelor's degree or higher	17.4%	21.5%	13.6%	25.6%
Homeownership rate	71.3%	68.8%	71.6%	66.9%
Median value of owner-occupied housing units	$97,700	$96,900	$97,600	$129,600
Persons per household	2.35	2.34	2.44	2.46
Annual per capita income	$23,139	$23,628	$22,573	$26,520
Median household income	$43,226	$41,350	$43,707	$48,849
Percent living below poverty level	17.2%	18.9%	15.9%	15.8%

METHODOLOGY

Approach

Meetings were held to identify the process to be used to conduct the CHNA. This was determined primarily by the specific CHNA requirements mandated by the IRS. A work plan with anticipated timelines was also created and became part of the contract addendum.

To conduct the 2016 Community Health Needs Assessment, the Kent State University College of Public Health followed several recommendations offered by the Catholic Health Association of the United States in its 2015 second edition of *Assessing and Addressing Community Health Needs*. Specifically, the College used a comparison benchmarking approach using epidemiologic data, supplemented with qualitative data from focus groups with residents throughout the hospital service area as well as personal interviews with community and organizational leaders knowledgeable about health issues. In addition, other health status reports, such as Health Department Community Health Improvement Plans (CHIPS), were reviewed for their contribution. Hospital-based data was also added to the analysis to capture child-level data not easily available in the national epidemiologic data sources. Also included was pediatric data from the Ohio Hospital Association.

After the data were collected and reported to the hospital, a follow-up meeting was held with an Ad Hoc Committee to identify health priorities. Two meetings were held with Akron Children's Hospital to determine the prioritized health needs for the Mahoning Valley, based on the epidemiologic data, the input from community leaders and residents, input from Health Commissioners, and other CHNAs that had been previously been conducted.

Implementation plans were developed that identified the strategies the hospital will undertake to address some of the identified prioritized health needs. Implementation plans will be publicly available at **www.akronchildrens.org** by May 15, 2017.

Epidemiologic Data

The epidemiologic data used in this report were collected from a variety of sources that report information at the county, state, and national levels. The epidemiologic data collected represented a very wide range of factors that affect community health, such as mortality rates, health behaviors, environmental factors, and health care access issues.

Annie E. Casey Foundation

The Annie E. Casey Foundation runs a program called KIDS COUNT®, which is a national and state-by-state effort to track the well-being of children in the United States. KIDS COUNT® collects and reports county-level data for a variety of areas related to child health, including demographics, education, economic well-being, health, safety, risky behaviors, and other indicators. Most of the Ohio data in KIDS COUNT® is supplied by Ohio's Children's Defense Fund and is taken from a variety of sources, including the Ohio Department of Health. For more information about KIDS COUNT®, visit **datacenter.kidscount.org.**

Community Health Needs Assessment Toolkit

The Community Health Needs Assessment Toolkit is a collaborative partnership between Kaiser Permanente; the Institute for People, Place, and Possibility (IP3); the Centers for Disease Control and Prevention; and other partners that seek to make freely available data that can assist hospitals, nonprofit organizations, state and local health departments, financial institutions, and other organizations working to better understand the needs and assets of their communities and to collaborate to make measurable improvements in community health and well-being. Similar to the County Health Rankings program, the Community Health Needs Assessment Toolkit project collects information from a variety of sources and creates county-level profiles for comparison purposes. For more information about the Community Health Needs Assessment Toolkit, visit **www.assessment.communitycommons.org.**

Community Health Status Indicators

The Community Health Status Indicators project is a partnership between the Centers for Disease Control and Prevention, the National Institutes of Health/National Library of Medicine, the Health Resources Services Administration, the Public Health Foundation, the Association of State and Territorial Health Officials, the National Association of County and City Health Officials, the National Association of Local Boards of Health, and the Johns Hopkins University School of Public Health. Similar to the County Health Rankings project, the Community Health Status Indicators project collects information on a variety of sources and generates county profiles. Currently, most of the data are from 2015, and contain information not included in the County Health Rankings reports. For more information about the Community Health Status Indicators project, visit **wwwn.cdc.gov/communityhealth.**

County Health Rankings

The County Health Rankings & Roadmaps program is a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute. The program collects information on mortality, morbidity, health behaviors, clinical care, social and economic factors, and physical environment at a county level for nearly all counties in the United States. Some data reported are actual counts based on reports (i.e., reported disease diagnoses), some data are estimated based on samples (i.e., the Behavioral Risk Factor Survey), and some data are modeled to obtain a more current estimate (i.e., projected 2014/2015 estimates based on 2010 census data). For more information about the County Health Rankings program, visit **www.countyhealthrankings.org.**

Help Me Grow

Help Me Grow is Ohio's birth-to-three program that provides state and federal funds to county Family and Children First Councils to be used in conjunction with state, local, and other federal funds to implement and maintain a coordinated, community-based infrastructure that promotes trans-disciplinary, family-centered services for expectant parents, newborns, infants, and toddlers and their families. The Ohio Department of Health, Bureau of Early Intervention Services is the lead agency administering the Help Me Grow program. Performance data on the Help Me Grow program were used in this CHNA. For more information about the Help Me Grow program, visit **www.ohiohelpmegrow.org.**

Northeastern Ohio Regional Trauma Network

The mission of the Northeastern Ohio Regional Trauma Network is to collaboratively develop a regional trauma system and improve trauma care for the communities served, through data evaluation, research, injury prevention, and education. The purpose of the network is to collect and analyze pre-hospital and hospital demographic and clinical data for peer review purposes, injury prevention initiatives, community-based education and research, submission of data to the State trauma registry, and performance improvement initiatives. County-level data that could be compared to peer counties, the state, and the nation were obtained through a special data request. For more information on the Northeastern Ohio Regional Trauma Network, visit **arha.technologynow.com/ProgramsServices/NortheasternOhioRegionalTraumaNetwork.aspx.**

Ohio Department of Education

The Ohio Department of Education oversees the state's public education system, which includes public school districts, joint vocational school districts, and charter schools. The department also monitors educational service centers, other regional education providers, early learning and childcare programs, and private schools. The Ohio Department of Education publishes annual "report cards" on schools and districts that contain information on the demographics and educational outcomes of students. For more information about the data available at the Ohio Department of Education, visit **education.ohio.gov/Topics/Data.**

Ohio Department of Health

The Ohio Department of Health is a cabinet-level agency that administers most state-level health programs, including coordination of activities for child and family health services, health care quality improvement, services for children with medical handicaps, nutrition services, licensure and regulation of long-term care facilities, environmental health, prevention and control of injuries and diseases, and others. County-level data that could be compared to national statistics were collected in a variety of areas and used in this CHNA. For more information about the data available at the Ohio Department of Health, visit **www.odh.ohio.gov/healthstats/datastats.aspx.**

Ohio Hospital Association

Established in 1915, the Ohio Hospital Association (OHA) is the nation's first state-level hospital association. OHA collaborates with member hospitals and health systems to meet the health care needs of their communities and create a vision for the future of Ohio's health care environment. OHA, in coordination with member hospitals, has developed new web-based software called *Insight* that allows hospitals to run customized and standard reports for marketing, physician recruiting, business development, and benchmarking purposes. Several health indicators were drawn from OHA's Insight system, with their permission. For more information about OHA Insight, visit**www.ohanet.org/insight/.**

Community Leader Interviews

In addition to examining the county-level epidemiologic data, interviews were conducted with 47 community leaders from March through June 2016. These interviews provided insight on what they thought were the significant health needs of children in their communities, the

factors that affect those health needs, other existing community health needs assessments, possible collaboration opportunities, and what the hospitals can do to address the significant health needs identified in the CHNA. These community leaders represent the broad interests of the communities served by the hospital facility, including the medically underserved, low-income persons, minority groups, those with chronic disease needs, and leaders from local public health agencies and departments who have special knowledge and expertise in public health.

Leaders from the following community organizations were consulted during this CHNA:

- Alta Care Group CEO
- Children's Rehabilitation Center Interim Director
- Coleman Behavioral Health Supervisor
- Columbiana County Department of Job and Family Services Director
- Columbiana County Family and Children First Council Director
- Columbiana County Health Department Commissioner
- Columbiana County Mental Health and Recovery Services Board Executive Director
- Columbiana County WIC Program Supervisor
- Community Foundation of the Mahoning Valley President
- Compass Family and Community Services Executive Director
- Coordinated Action for School Health (CASH) Coalition Coordinator
- East Liverpool City Hospital CNO
- Health and Nutrition, Alta Head Start Manager
- Mahoning County Board of Developmental Disabilities Superintendent
- Mahoning County Children Services Executive Director
- Mahoning County Educational Service Center Superintendent
- Mahoning County Health Commissioner
- Mahoning County Juvenile Court Judge
- Mahoning Family and Children First Council Coordinator
- Mercy Medical Center Manager of Community Health Information
- Mercy Medical Center WIC Program Manager
- Neighborhood Ministries Executive Director
- Ohio Organizing Collaborative Director of Operations
- Ohio Senator Capri Cafaro
- Ohio State Representative John Boccieri
- Ohio State Representative Timothy E. Ginter
- Organizacion Civica y Cultural Hispana Americana, Inc. Executive Director and Program Manager
- Potential Development Director
- St. Joseph's Health Center President
- The Counseling Center Director of Youth & Community Support
- The Counseling Center DNP
- Trumbull County Children Services Executive Director
- Trumbull County Health Department Commissioner
- Trumbull County Mental Health and Recovery Board Director
- Trumbull Family and Children First Council Director
- United Way of Northern Columbiana County Executive Director
- United Way of Trumbull County President
- United Way of Youngstown President
- U.S. Senator Rob Portman Legislative Aide
- U.S. Senator Sherrod Brown Legislative Aide
- Youngstown Better Business Bureau President
- Youngstown City Health District Health Commissioner
- Youngstown City Schools Acting Superintendent
- Youngstown Neighborhood Development Center Manager
- Youngstown Office of Minority Health Director
- Youngstown/Warren Regional Chamber Executive Director

Community Resident Focus Groups

In addition to the input from community leaders, focus groups were conducted with community residents over the period from March through May 2016 to get their input on the significant health needs of children in their communities, the factors that affect those needs, the solutions they thought would solve those needs, and what the hospitals and other community groups could do to address those needs. Due to the observed information gap in the epidemiologic data on the health of children, child substance abuse issues, and child mental health issues, several questions were asked to probe more deeply on these issues. In addition, a questionnaire was distributed to focus group participants to gather demographic information and basic perceptions of community health. The discussion guide, questionnaire, and protocol were reviewed and approved by the Kent State University Institutional Review Board.

Recruitment

Community residents were recruited to participate in the focus groups in several ways. First, Local Health Departments were asked if there were any community events or meetings that could be used for holding a focus group (such as car seat giveaways); then, KSU looked to conduct focus groups during scheduled community meetings and events, such as resident advisory groups and Family and Children First Council advisory meetings. Finally, community leaders were asked for recommendations on potential focus group locations during their interviews. The sites where the community resident groups were held were selected based on proximity to population areas, ease of access (including free parking and bus lines), and the recommendations from local community leaders. Community residents who participated in the focus groups received a $50 Visa or Master Card as a "thank you" and to compensate them for their time and expense. For the three-county service area for the Akron Children's Hospital Beeghly campus, 90 people participated in the 9 focus groups. Of the 90 participants, 89 returned completed demographic surveys. The results are shown in the following tables.

Demographic Characteristics of Focus Group Participants

Community Resident Focus Groups

Focus groups were conducted with community residents from April through June 2016 to obtain their input on significant health needs of children in their communities, the factors that affect those needs, the solutions they thought would solve those needs, and what the hospitals and other community groups could do to address those needs. Due to the observed information gap in the epidemiologic data on the health of children, substance abuse issues and child mental health issues, several questions were asked to probe more deeply into these issues. In addition, a questionnaire was distributed to focus group participants to gather demographic information and basic perceptions of community health.

Each participant was asked to complete a demographic survey. In addition to the demographic and household characteristics participants were asked to provide, they were also asked what they thought were the top 3 health needs and solutions in their county. The community members were not asked to differentiate problems for children versus adults in the demographic questionnaire; they were just asked to name the top three health problems in the community. Their responses and characteristics follow.

Characteristics of Participants

Table 3 shows that 79% of respondents were female. The average age of participants was 41 years and the average number of years participants had lived in their home county was 26. Sixty-one percent of participants were Caucasian, 33% were African-American, and 9% were Hispanic.

Table 3. Demographic Characteristics of Community Resident Focus Group Participants (n=89)

Characteristic	Number	Percent
County of Residence		
Columbiana County	19	21.3%
Mahoning County	55	61.8%
Trumbull County	15	16.9%
Number of Years Lived in County (average and SD)	25.5	17.1 (SD)
Gender and Age		
Female	70	78.7%
Male	19	21.3%
Age (average and SD)	40.6	13.6 (SD)
Racial Background		
African American or Black)	29	32.6%
Asian American	0	0.0%
Caucasian or White	54	60.7%
Native Hawaiian or Other Pacific Islander	0	0.0%
American Indian or Alaska Native	1	1.1%
Other/Missing	5	5.6%
Ethnic Background		
Hispanic	8	9.0%
Not Hispanic	74	83.1%
Missing	7	7.9%

Table 4 shows that participants had diverse household characteristics. Eight percent of participants lived alone, 18% lived with one other person, 17% lived with two other people, 25% lived with three other people, and 33% lived with four or more other people. Twenty-three percent had no children in the home, 19% had one child, 34% had two children, and 25% had three or more children in the home.

Table 4. Household Characteristics of Community Resident Focus Group Participants (n=89)

Characteristic	Number	Percent
Number of People in Home		
One	7	7.9%
Two	16	18.0%
Three	15	16.9%
Four	22	24.7%
Five or More	29	32.6%
Missing	0	0.0%

Characteristic	Number	Percent
Number of Children in the Home		
None	20	22.5%
One	17	19.1%
Two	30	33.7%
Three or More	22	24.7%
Missing	0	0.0%

Table 5 shows that participants had a range of income and health insurance status. Twenty-two percent reported a monthly household income between $0 and $999, 11% between $1,000 and $1,999, 12% between $2,000 and $2,999, 9% between $3,000 and $3,999, 6% between $4,000 and $4,999, and 22% reported monthly household income exceeding $5,000 per month. In addition, 2% reported they had no health insurance, 39% had private health insurance, 3% had health insurance as a veteran or member of the military, 15% had Medicare, and 30% had Medicaid.

Table 5. Income and Insurance Status of Community Resident Focus Group Participants (n=89)

	Number	Percent
Total Household Monthly Income		
0-$999	20	22.4%
$1,000 - $1,999	10	11.2%
$2,000 - $2,999	11	12.4%
$3,000 - $3,999	8	9.0%
$4,000 - $4,999	5	5.6%
$5,000 and Higher	20	22.4%
Missing	15	16.9%
Primary Type of Health Insurance		
Uninsured	2	2.2%
Private Health Insurance	35	39.3%
Veterans/Military	3	3.4%
Medicare	13	14.6%
Medicaid	27	30.3%
Other	9	10.1%
Missing	0	0.0%

Table 6 shows that participants had diverse health care utilization experiences. Twenty-eight percent stated that someone in their home did not receive health care due to the cost and that 51% had someone in their home with a chronic disease or condition. Two percent of respondents don't go to the doctor at all, 8% go the doctor once per year, 16% go twice per year, 15% go three times per year, 16% go four times per year, 18% go five to nine times per year, and 18% go ten or more times per year. Ten percent of respondents rated their current health as excellent and 75% of respondents rated their own health as excellent, very good, or good; 24% of respondents rated their health as fair or poor.

Table 6. Healthcare Status and Utilization of Community Resident Focus Group Participants (n=89)

	Number	Percent
Had Someone in Home Who Did Not Receive Health Care Due to Cost	**25**	**28.1%**
Has Someone in Home With a Chronic Disease	**45**	**50.6%**
Times Per Year Participant Visits a Doctor		
None	2	2.2%
One	7	7.9%
Two	14	15.7%
Three	13	14.6%
Four	14	15.7%
Five to Nine	16	18.0%
Ten or More	16	18.0%
Missing	7	7.9%
Participant's Description of Current Health		
Excellent	9	10.1%
Very Good	22	24.7%
Good	36	40.4%
Fair	17	19.1%
Poor	4	4.5%
Missing	1	1.1%

Respondents were asked to report the top three health problems facing their community. Results were diverse, as noted in Table 7. Substance abuse (13.1%) was the most commonly cited health problem, followed by mental health (12.7%) and diabetes (10%).

Table 7. Top Community Health Problems as a Percentage of All Problems Identified (n=89)

	Number	Percent
Chronic Diseases		
Asthma	9	3.4%
Cancers	17	6.4%
Cardiovascular	23	8.6%
Diabetes	26	9.7%
Other Respiratory	2	0.7%
Overweight & Obesity	25	9.4%
Other Disease	16	6.0%
Environmental Factors	6	2.2%
Healthcare Access/Cost and Quality	18	6.7%
Lifestyle Factors	6	2.2%
Mental Health	34	12.7%
Substance Abuse	35	13.1%
Other/Don't Know/No Response	14	5.2%
Missing	36	13.5%

Respondents were also asked to report the top three ways to solve the health problems in their community (Table 8). Responses fell broadly into four categories: making services more affordable, accessible, or of higher quality; taking individual lifestyles changes; policies or legal solutions; and provision of programs or services.

Responses coded as "affordability, accessibility, and quality" were both general in nature (affordable insurance, access to healthcare, better healthcare) and included more specific suggestions (transportation, location of community clinics, access to specialists, more coordination of services, reduce the cost of healthy food).

Table 8. Top Solutions to Community Health Problems (n=89)

	Number	Percent
Affordability/Accessibility/Quality	37	41.6%
Taking Individual Action/Lifestyle Changes	45	50.6%
Policies/Legal	14	15.7%
Programs and Services	82	92.1%
Other/Don't Know	7	7.9%
Missing	82	92.1%

"Taking individual lifestyle changes" were solutions that could be taken on by individual community members, such as exercise, eating a healthy diet, safe sex, and smoking cessation. Policies and legal solutions were those that require macro-level intervention, including stopping prescribing pain killers, policies that limit smoking, stricter drug laws, regulating school lunches, and different ways of manufacturing food. Responses coded as "provision of programs or services" ranged from general suggestions such as prevention and education to more specific proposed solutions such as counseling, bringing physical activity back to schools, offering needle exchange programs, and proactive drug prevention by law enforcement.

Respondents identified provision of programs or services (92%) and individual lifestyle changes (51%) as the most desirable solutions for health problems facing the community, followed by making services more affordable, accessible, or of higher quality (42%), and policies or legal solutions (16%).

Method Used to Identify Significant Health Needs

As previously mentioned, epidemiologic data from a variety of sources were collected. To prioritize these health indicators, the data from Trumbull, Mahoning, and Columbiana Counties were compared to two peer counties in Ohio that were demographically similar, the state and U.S. averages, and the Healthy People 2020 target, if available. The selection of two peer counties in Ohio for each county was determined by the U.S. Department of Health and Human Services for their community health indicators.

The use of these comparisons helped the Hospital's Committee compare the vast amount of data to key benchmarks and identify the significant health needs based on the epidemiologic data.

The list of significant health needs resulting from the epidemiologic analysis was then supplemented with additional health needs identified by community leaders and community residents. An analysis was conducted on the notes and transcripts of community leader interviews and community resident focus groups to identify and quantify themes that consistently emerged. The health areas listed below were the health needs identified for children by community leaders and residents:

Community Leaders

- Access to specialists
- Child abuse/neglect
- Infant mortality
- Injuries
- Mental/behavioral health
- Nutrition/obesity/physical activity
- Sex trafficking
- Sexually transmitted diseases
- Substance abuse
- Trauma

Community Residents

- Access to care
- Cost of health care
- Diabetes
- Mental/behavioral health
- Obesity
- Substance Abuse

Community Resources

There are a wide variety of resources in the community that can help address the prioritized health needs identified in this CHNA.

Columbiana County

- Columbiana County Career and Technical Center (CCCTC)
- Columbiana County Community Action Agency (Head Start)
- Columbiana County Department of Job and Family Services
- Columbiana County Educational Service Center
- Columbiana County Family and Children First Council
- Columbiana County Health Department
- Columbiana County Help Me Grow
- Columbiana County Juvenile Court
- Columbiana County Mental Health and Recovery Services Board
- Columbiana County Board of Development Disabilities
- Columbiana County WIC
- Coordinated Action for School Health (CASH) Coalition
- Counseling Center
- Easter Seals, Mahoning, Trumbull, and Columbiana Counties
- East Liverpool City Hospital
- Hannah Mullins School of Practical Nursing
- Salem Community Center
- Salem Community Hospital
- Salem YMCA
- United Way of Northern Columbiana County

Mahoning County

- Access Health Mahoning Valley
- Alta Care, Inc.
- Alta Care Head Start
- Beatitude House
- Central YMCA, Youngstown
- Comprehensive Psych
- Davis Family YMCA, Boardman
- Easter Seals of Mahoning, Trumbull and Columbiana Counties
- Help Hotline Crisis Center, Inc.
- HMHP, St. Elizabeth Health Center
- Jewish Community Center of Youngstown
- Mahoning County Board of Developmental Disabilities
- Mahoning County Board of Health
- Mahoning County Children's Services
- Mahoning County Educational Service Center
- Mahoning County Juvenile Justice Center
- Mahoning County Mental Health Board
- Mahoning County WIC Mahoning Youngstown Community Action Partnership
- Neighborhood Ministries
- OCCHA, Inc.
- One Health Ohio
- Pediatric Associates of Youngstown
- Pioneering Healthier Communities, Youngstown
- Potential Development
- Rich Center for Autism
- Second Harvest Food Bank of the Mahoning Valley
- Sojourner House
- United Methodist Community Center
- United Way of Youngstown and the Mahoning Valley
- Valley Care Health System, Northside Medical Center
- Valley Counseling
- Youngstown City Health Department
- Youngstown City Schools
- Youngstown Hearing and Speech
- Youngstown Neighborhood Development Center
- Youngstown Office of Minority Health
- Youngstown State University
- Youngstown/Warren Chamber of Commerce

Trumbull County

- Access Health Mahoning Valley
- Belmont Pines
- Child and Family Solutions
- Children's Rehabilitation Center of Warren, Ohio
- Churchill Counseling
- Coleman Professional Services
- Comprehensive Psych Services
- Easter Seals of Mahoning, Trumbull and Columbiana Counties
- HMHP, St. Joseph Health Center
- Homes for Kids
- Kent State University
- Mayor Ralph A. Infante Wellness Center
- Niles City Health Department
- Ohio Organizing Collaborative
- One Health Ohio
- Potential Development
- PsyCare
- TCAP Head Start
- Trumbull County Mental Health and Recovery Board
- Trumbull County Career and Technical Center (TCCTC)
- Trumbull County Children's Services
- Trumbull County Educational Service Center
- Trumbull County Family and Children First Council
- Trumbull County Health Department
- Trumbull County Juvenile Justice Center
- United Methodist Community Center
- United Way of Trumbull County (see website for list of partner agencies)
- Valley Care, Hillside Rehabilitation Hospital
- Valley Care, Trumbull Memorial Hospital
- Warren City Health Department
- Warren City Schools
- WIC, Trumbull County

State and National Organizations

- American Association of Pediatrics, Ohio Chapter
- American Diabetes Association
- American Lung Association
- Children's Hospital Association

Other Community Health Needs Assessments

Lastly, community health needs assessments that were previously conducted in the region were reviewed and helped to inform this CHNA. Some of these CHNAs were known to the Steering Committee, some were found using Internet searches, and some were sent to us by community leaders.

CHNAs that were reviewed during the preparation of this assessment included:

- St. Elizabeth Health Center Youngstown
- ST. Elizabeth Health Center, Boardman
- Tri-County Community Health Assessment & Planning Initiative
- East Liverpool City Hospital and Salem Community Hospital CHNA
- St. Joseph Warren Hospital

To Request Copies and for More Information

In addition to being publicly available on our website, a limited number of reports have been printed. If you would like a copy of this report or if you have any questions about it, please contact:

Heather Wuensch
Akron Children's Hospital
One Perkins Square
Akron, OH 44308
Phone: (330) 543-8130
Email: hwuensch@chmca.org

Lisa Taafe
Akron Children's Hospital Mahoning Valley
6505 Market Street
Boardman, OH 44512
Phone: 330-746-8700
Email: Ltaafe@chmca.org

The report is available at www.akronchildrens.org/cms/community-needs-assessment/.

Summary of Results

Based on the epidemiologic data and input from community leaders and residents, the significant health needs for children are summarized below for the Akron Children's Hospital Mahoning Valley service area.

Table 9. Significant Health Needs By County for Children

Indicator	Columbiana	Mahoning	Trumbull
Access to Health Care			
Dental	X	X	X
Health insurance and cost	X	X	X
Mental health services	X	X	X
Child lifestyle factors			
Food insecurity	X	X	X
Overweight and obesity	X	X	X
Chronic Disease			
Asthma	X	X	X
Type 1 and Type 2 Diabetes		X	
Environment			
Child trafficking	X		X
Crime and violence		X	X
Lead poisoning		X	X
Neglect and abuse	X	X	X
Pollution	X		
Maternal and Infant Health			
Infant death		X	X
Low birth weight	X	X	X
Teen pregnancy	X	X	
Mental Health			
Autism	X	X	X
Suicide	X	X	X
Trauma			X
Injuries	X		X
Substance abuse	X	X	X

Acknowledgements

The Kent State University College of Public Health (KSU-CPH) was hired to conduct this Community Health Needs Assessment under the direction of a Mahoning Valley CHNA Advisory Committee.

Akron Children's Hospital Mahoning Valley Advisory Committee Members

Bernett L. Williams, MPA
Vice President of External Affairs

Sharon Hrina, MSN, RN, NE-BC
Vice President Akron Children's Hospital
Mahoning Valley

Michael Wellendorf, MPA
Government Relations Liaison

Heather Wuensch
Director of Community Benefit, Advocacy, and Outreach

Lisa Taafe, MSN, PNP
Clinical Administrative Director
Akron Children's Hospital Mahoning Valley

Alexandria Lesak, MPH
External Affairs Specialist

KSU-CPH Contributors to this report

Peter J. Leahy, PhD
Professor of Health Policy and Management

Ken Slenkovich, MA
Assistant Dean

Willie H. Oglesby, PhD, MSPH, FACHE
Associate Professor of Health Policy & Management

Tegan Beechey, MPA
Doctoral Research Assistant
PhD Candidate

Lynn Falletta, PhD
Post-Doctoral Associate

Matthew Nichols, MPH
Doctoral Research Assistant

Hilla Sang, MBA
Doctoral Research Assistant

Carissa Smock, MPH
Doctoral Research Assistant & Instructor
PhD Candidate

Akron Children's Hospital Community Health Needs Assessment

Implementation Team Impact Narratives

May 2016

Akron Children's Hospital

Implementation Strategy: Asthma

Global Aim: In the next 3 years, we aim to substantially reduce the burden of asthma for our patients, their families, and our community.

Specific Aim: Between 1/1/14 and 1/1/17, we will reduce hospitalizations for asthma at Akron Children's Hospital by 10% per year (30% total), and reduce ER visits for asthma by 5% per year (15% total) by implementing guideline based care in the primary care setting, hospital setting, and school setting.

Overview of the efforts of the strategy

Our comprehensive plan to reduce the burden of asthma in our community included workgroups focused on improving care and education for asthmatic patients in the inpatient, primary care and school settings as well as on creating information technology tools for a more accurate picture of our work.

Through these strategies, we have significantly reduced hospitalizations and ER visits for asthma, surpassing our initial goals outlined in our specific aim. In April 2016, the annualized hospitalization rate was 2.55% compare to 3.90% at the same time in 2015. This drop of 1.35% from the registry population of 26,000 represents a decrease of 340 admissions. Similarly, the ER rate dropped from 7.71% to 5.88% over the same period of time, representing a decrease of 424 ER visits. This has occurred during a time that overall ER utilization has markedly increased. The decline in hospitalizations and ER visits for asthma can be seen in Appendix A1.

Asthma was also identified as a priority within Akron Children's, which resulted in the formation of the Asthma Clinical Transformation Initiative (ACTI). Due to the success we have experienced with our framework, all of the strategies outlined below were also adopted as part of the ACTI.

Inpatient: Asthma Pathway

The Asthma Pathway group focused on three major objectives – developing and adopting an asthma pathway, improving processes with the care of asthma patients and standardizing asthma education. The asthma pathway was developed in 2014, with widespread adoption of the pathway by the end of the year. From there, the focus was to improve the percentage of hospitalized patients leaving with an acceptable asthma plan, commonly referred to as an Asthma Treatment Plan (ATP).

Through educational efforts and some improvements of the plan, the Pathway Group was able to increase the percentage of hospitalized patients leaving with an ATP from ~50% to 90-95%.

Considerable effort was also made to standardize asthma education. Videos were produced to help with educational efforts. Asthma education was encouraged for all hospitalized patients and rates of completion went up.

Information Technology (IT)

The Asthma IT group was charged with the development of the Asthma registry and to build within the EMR the support tools needed to provide asthma care in an efficient and guideline driven manner. By the end of 2014, the Asthma registry was complete and served

as the first rich and accurate source of data regarding the care of patients with asthma for individual providers, as well as practices and the system.

Throughout 2014, the IT team also contributed with the help of various EPIC team members to the building of documentation tools including an asthma HPI template, the Pediatric Asthma Score, the Asthma Control Test (ACT), and most importantly, a broadly available Asthma Treatment Plan (ATP). With the onset of the registry, the primary outcome measures became available and regular automated reports are available for review. Throughout 2015, the Asthma IT group was responsible for the building of a variety of Clarity reports to generate data on a daily, monthly, and yearly basis.

Primary Care: Easy Breathing (EZB) and Optimal Care

Our Easy Breathing (EZB) group has successfully instituted the EZB program throughout the ACHP network. The EZB program consists of a 90-minute education session where the elements of guideline based care are discussed, and the tools of EZB are shared as a way to move toward a higher rate of guideline based care to improve baseline outcome measures. With the onset of CHNA work in 2014, the EZB rollout was accelerated to provide training of all ACHP practices within 2 years. That schedule has been successfully adhered to with a current count of 23 practices trained and using the EZB tools. Other data regarding EZB are as follows:

- Practices Trained: 23
- Providers Trained: 121
- Patients Enrolled: 18702
- Asthma Patients Enrolled: 5365
- New Asthma Patients Identified: 1177
- Guideline Compliance: 96%

The EZB program has also been successful at improving the processes of asthma care. Of the 26,000 children with asthma in the registry, 75% have an ACHP PCP and 20% have been enrolled in EZB. Of those enrolled in EZB, 74% have an ATP, and 60% have an ACT on record. Of those not enrolled in EZB, 27% have an ATP, and 20% have an ACT. With the asthma registry, we have found that children in EZB are 2.7 times more likely to have an ATP, and 3 times more likely to have an ACT.

Optimal Care has been another prime measure used to track care within the primary care practices. Optimal Care is a bundle which includes a flu vaccine, an updated ATP, and performance of an ACT within the last year. The measure is based on a July to June year reflecting the time that the annual flu vaccine shifts to the new year's vaccine. In 2014-5, there were only 2 practices within our system which achieved a threshold of 20% of all patients having received the Optimal Care bundle. In the 2015-6 year, there are now 8 practices above 20%, one of which has exceeded 30%. There was considerable improvement among all practices as demonstrated in Appendices A2 and A3.

School Health

Asthma was and remains the most common reason for calling an ambulance to school. Care of children with asthma in schools consists first of identifying them, then providing for plans of care, and then being able to execute those plans when the need arises. The school efforts have been data challenged from the beginning due to a lack of an electronic database for tracking within the individual schools and within the systems at large. Our school health system is broadly distributed throughout our region. The most significant success of the group has been the standard acceptance of our EMR based ATP. In addition, read access to EPIC has improved availability of the ATP to front line Health Aids.

Treatment of asthma symptoms remains a fundamental priority in schools. Beyond that, School Health has recently qualified for a $15,000 grant from ODH to improve care coordination. They aim to do this in cooperation with Home Care by identifying patients for home visits designed to provide education, trigger identification and abatement, and patient assessment.

Implementation Strategy: Behavioral Health

Global Aim: To improve access and quality of evidence based behavioral health services for children and adolescents in our community *in order to prevent the need for more costly and disruptive inpatient hospitalization*.

Overview of the efforts of the strategy

We have improved access and quality of services as evidenced by the three objectives delineated below. During this 3 year time period, innovations in care on the inpatient unit which included parental involvement as advocates resulted in a significant decrease in recidivism to the inpatient unit.

However, Akron Children's Hospital experienced a dramatic increase in the number of diversions and transfers for children and adolescents requiring inpatient hospitalization as depicted in Appendix B1 and B2. This resulted in a senior leadership decision to add another 10 inpatient hospital beds for a total of 24 beds. We were successful in obtaining $400,000 from the State of Ohio Capital budget funds to support this expansion.

We strongly believe that the efforts of the three objectives will ultimately result in identifying and treating most children on an outpatient basis with evidence based treatment, by expanding the geographic footprint of behavioral health services in our region, making it easier for families to access care, and providing our pediatricians with partners in the office setting.

Objective #1: Improve access and quality of care by providing an integrated evidence based treatment program, Center for Anxiety and Mood Management (CAMM), through a team based approach.

We moved our outpatient treatment services to a more evidence based approach, and provided training, consultation and supervision to current therapists in Cognitive Behavioral Therapy, Trauma Focused Cognitive Behavior Therapy, and other treatment models. We focused on treatment for anxiety and depression, and have moved this model to our pediatric practices in order to provide integrated care.

<u>Accomplishments:</u>

- Intensive 3-day CBT training February 4-6, 2015: Beck Institute, Torrey Creed, Ph.D.
- Trained therapists in suicide assessment on March 31, 2015: Shawn Shea, M.D., Experiential Training in the Chronological Assessment of Suicide Events (included PIRC and Intensive Services)

Objective # 2: Partner with regional community mental health agencies to expand access to child psychiatric services.

Initially, our aim was to partner with regional community mental health agencies to expand access to child psychiatric services. We established collaborative models with two community mental health agencies in two separate counties in the hopes they could provide services to our pediatric offices in their locations. This was successful with one agency, and unsuccessful in the second. We identified the challenges in working with mental health agencies to move toward Telemental health, and therefore changed directions to working directly with our own primary care practices in a collaborative care (hub) model. We have actually signed a formal affiliation agreement with the Child Guidance and Family Solutions (CG&FS) to partner with them for the provision of mental health and possibly Telemental health services in our pediatric practices.

Accomplishments:

- Developing a RN Case Manager position to work with a psychiatrist consultant
- Taken steps to create the medical resources for telepsychiatry
- Mental Health therapists located in the below ACHPs: Green, Kent, Warren, Boardman and Wooster (see Appendix B3)
- Telepsychiatry located in the Green ACHP with plans to expand to additional ACHP sites

Objective #3: Expand Division services to the Akron Children's Hospital Mahoning Valley.

Although initially it was challenging to staff an outpatient child psychiatry practice in the Mahoning Valley, we began by hiring a full time Clinical Nurse Specialist with prescriptive privileges and then we were successful in attracting a child psychiatrist to that practice. As you can see from the graph in Appendix B4, once the child psychiatrist was added our volume increased substantially. Our next step is to begin with limited psychotherapy services in that office, and to expand a PIRC presence in the Emergency Department. We initially attempted to partner with a local mental health agency for the PIRC presence in the ED in Mahoning Valley, but they were unable to provide the level of service we required.

Accomplishments:

- Hired child psychiatrist
- Hired mental health therapist for Mahoning Valley PIRC

Implementation Strategy: Diabetes

Global Aim: To reduce the disease burden and economic impact of Type 2 Diabetes Mellitus (T2DM) on children and families in our community by the prevention, the early detection, and the reversal of T2DM.

Overview of the efforts of the strategy

Our project has a very broad scope; what originally began as a focus on T2DM quickly became more than that. We realized that in order to tackle T2DM, we could not ignore one of the leading causes: obesity. This has proven to be a challenging task for our team as we began to unravel the childhood obesity epidemic. As you will see in our accomplishments, we have only scratched the surface of addressing this issue and are excited to continue working closely with our community partners in the next few years.

First and foremost, this project allowed us to capture the magnitude of the obesity crisis in our service area. By developing data collection tools we were able to show the prevalence of childhood overweight and obesity within our pediatric ACHP practices at 28% and within the entire ACH catchment area at 32% (36,860 individual patients). Second, we were able to evaluate the current program offerings, as well as obtain feedback from providers, on how to best address this epidemic. Lastly, we began improving the services offered to patients with T2DM, in an attempt to begin reversing the disease.

Objective #1: Improve identification and early detection of children, adolescents and young adults at risk for or having pre-diabetes/diabetes

- Prevention, Intervention and Referral Pathway for Weight Management and T2DM
    - Creation of clinical pathway to guide primary care physicians in identifying and screening patients at risk; distributed to every referring provider in 29 counties
    - Resulted in referrals being directed to the correct departments, physicians obtaining correct screening labwork, and identification of new patients with T2DM
- Creation of tools for the electronic medical record to alert primary care physicians to at-risk patients and easily screen and refer
    - Tools included best practice advisories and clinical decision support
- Collaboration with Community Outreach Education and Support Center in Boardman, OH to screen children and adolescents at area health fairs and refer those at-risk for services

Objective #2: Improve access to high quality education and programming for children, adolescents and young adults at risk for or having pre-diabetes/diabetes

- "Examining Provider Perceptions of Overweight/Obesity and Type 2 Diabetes Risk in Pediatric Primary Care" – survey completed in collaboration with Kent State University to explore the current knowledge base, resources available, and comfort level of PCP's in addressing obesity in their practice setting
    - Distributed to 119 providers with 66% response rate
    - Preliminary results indicated a majority of providers do not have the time or resources to properly address weight management in their patient population
    - Data analyzation continues and results will be used to guide the development of future programming and interventions
- New Philadelphia ACHP Pilot Program
    - Pilot used to trial a healthy habits program in the medical home where patients are asked to come to weekly visits
    - 32 patients had an intake appointment for the program; of those, 21 (66%) returned to begin the program and 18 (56%) have attended three or more appointments
    - All 18 patients who attended three or more appointments stabilized or dropped their BMI
- CATCH Program
    - Akron Children's Hospital participates in a collaborative to offer this program to area after-school programs
    - Over 2000 school-age children in 70 locations participate and receive nutrition and physical activity education
- Healthy Weight Clinic at Akron Children's Hospital
    - Merged existing weight management programs into one comprehensive clinic offering intensive tertiary-level care to patients at highest risk
    - 27% no-show rate for intake appointment; due to variability in labeling missed vs. cancelled appointments exact numbers are not available for program appointments, however general tracking shows most clinics are only 50-75% full
    - This data was used to make changes to the program, including offering nutrition-only appointments, shortening the length of appointments, and screening families prior to scheduling to explain the program and assess for motivation and readiness to make changes

Objective 3: Improve health indicators and co-morbidities in patients with Type 2 Diabetes with the ultimate goal of disease reversal

- Diabetes Disease Registry – created to better track patients and to use as a tool to reach out to families and connect them with needed services
    - We currently have 64 patients with T2DM; with an average of 60% of them seen in a given quarter (standard of care is quarterly appointments)
    - 15 patients have been identified, screened, and newly diagnosed with T2DM in the last two years
- Education Improvements – utilizing a multi-disciplinary team approach at diagnosis and follow-up visits to better educate and engage with families
- "Psychosocial Risks: Examining Diabetes (T2DM) in Children and Teens (PREDICT)" – three year study in collaboration with Kent State University
    - Grant funding acquired in end of 2015, measures have been identified and IRB proposal will be submitted this month

Implementation Strategy: Infant Mortality

Global Aim: Reduce Mahoning County infant mortality rate by 20% from 10.8/1000 in 2012 to 8.6/1000 in 2016.

Overview of the efforts of the strategy

Our team originally composed of members from Akron Children's Hospital Mahoning Valley (ACH MV), Akron Children's Hospital (ACH) and St. Elizabeth Boardman Hospital (SEBH) identified three specific areas to reduce infant mortality: safe sleep, breastfeeding and progesterone. During the 1st year, we formed an additional collaboration with the newly formed Mahoning Youngstown Birth Outcome Equity Team, now known as MY Baby's 1st, Mahoning Youngstown Infant Mortality Coalition. This group includes Youngstown City Health Department, Mahoning County Board of Health, Youngstown State University, March of Dimes, Mercy Health, Resource Mothers, Mahoning County Educational Service Center, Mahoning County Continuum of Care, Planned Parenthood, Mahoning County WIC and Safe Kids Coalition. Our hospital team participated actively with MY Baby's 1st which provided a footprint for additional agencies and clients receiving our message.

The Mahoning County infant mortality rate in 2013 improved to 9.1/1000 compared with the Ohio rate of 7.33/1000. Data for 2014 is encouraging and Mahoning County will not be assigned a rate because there were less than 20 infant deaths. The Ohio infant mortality rate dropped to 6.8/1000 in 2014. As seen in Appendix C1, the Ohio prematurity rate in 2013 was 10.3%, compared to national average of 9.6%. Mahoning County rate in 2013 was 14.1%. March of Dimes' goal is to reach 8.1% by 2020. We will continue to track the effect of our efforts on the prematurity rate.

In June 2014, published data for Ohio reflected an increase in infant mortality when birth spacing was less than 12 months. Birth spacing, defined as the time between the birth of a baby and conception of the next baby, was associated with improved birth outcomes when the interval was greater than 18 months. Therefore, birth spacing education was added as objective 4 to the implementation strategy, with a community and hospital education platform.

For our objectives we had multiple outreach activities, lectures, media (print and television), scientific poster presentations and an academic publication. In November 2015, Akron Children's Hospital Mahoning Valley in collaboration with March of Dimes and MY Baby's 1st Coalition presented an Infant Mortality Community CME Lecture and dinner which reached 100 healthcare providers.

The collaboration with MY Baby's 1st has led to our message being shared with all these organizations in Mahoning County. We are unable to measure the extent of our message.

MY Baby's 1st Coalition has submitted a proposal to Ohio Medicaid for funding to enhance our team's infant mortality reduction initiatives. Funding has been requested to reduce infant mortality and eliminate racial birth outcome inequities.

We believe that our efforts have resulted in an increase in knowledge for our health care professionals, increase in knowledge for our patients and increase awareness of our community partners and patients.

Objective 1: Safe Sleep

In 2014, we used ODH printed materials as a vehicle to spread the message. In 2015, we developed hospital branded posters and other printed materials. Safe sleep kits and educational binders were distributed to 13 Mahoning and Trumbull County birth hospitals made possible by Akron Children's Hospital Mahoning Valley awarded grants totaling $43,500. By the end of the second year we met our goal: 100% of MV hospitals that discharge newborns received education on safe sleep and sleep sacks for their patients. Next steps include requesting grant dollars to develop additional safe sleep kits for 2016 to provide to community hospitals. The future focus will be on safe sleep education to day cares in identified hot spot census tracts.

Objective 2: Breastfeeding

We track mothers initiating breast feeding at 4 hospitals in our region. We did not meet our target of 80%. However, we started at an average of 69% and are now approaching 72%. We have identified racial disparities between white and black women initiating breastfeeding. We are implementing programs in the hospitals and are working with our community partners to address racial disparities.

Objective 3: Progesterone

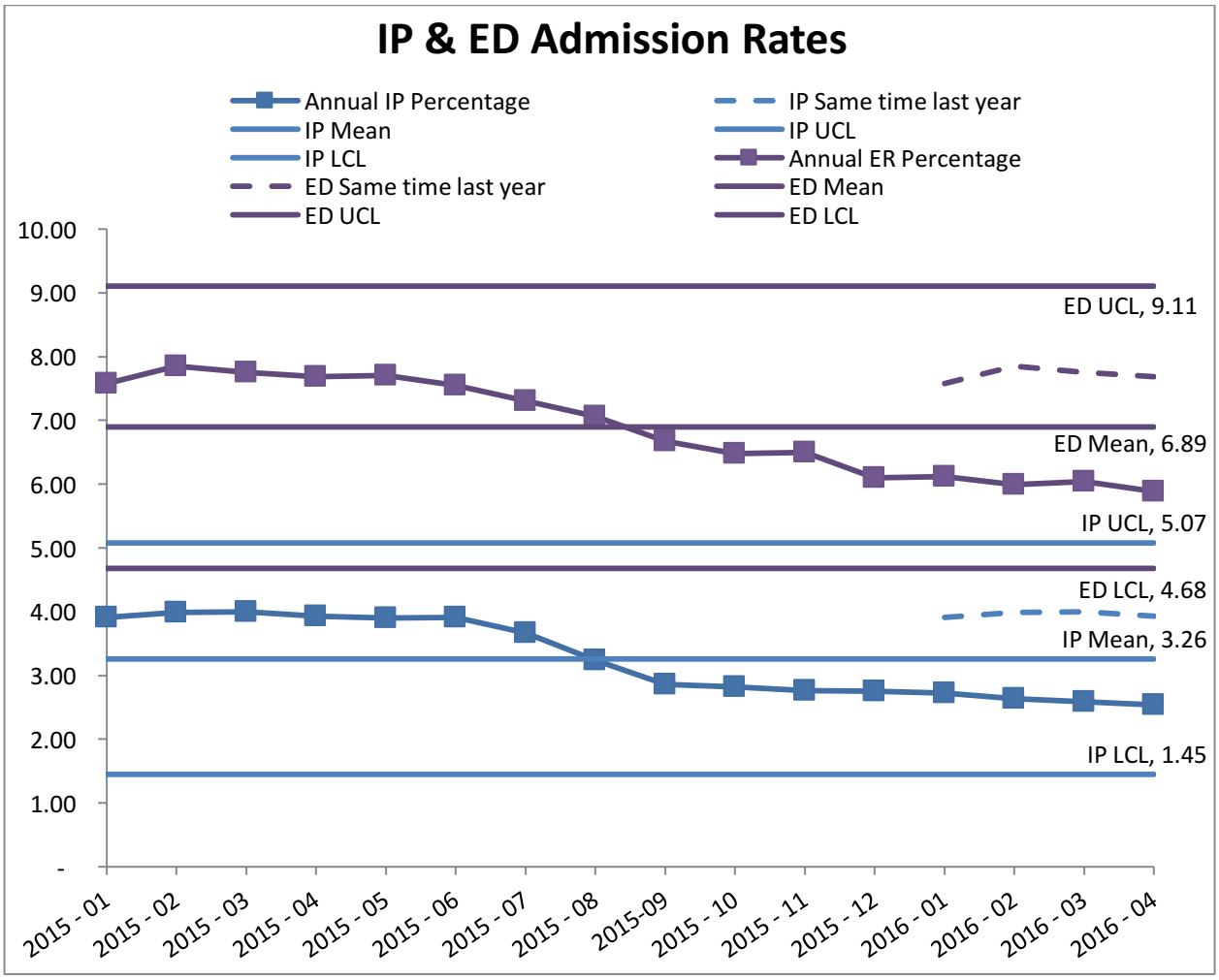
In 2014 we surveyed providers on their Progesterone knowledge to prevent premature birth recurrence and identified knowledge gaps. We had extensive education sessions and printed education materials. In order to evaluate the success of those efforts health care providers will be re-surveyed on their knowledge of Progesterone in May of 2016. We continue to council eligible NICU parents prior to discharge. The latest addition to the project is education to the late pre-term infants' mothers in the well nursery in collaboration with OPQC.

Objective 4: Birth Spacing

Birth spacing education has been very successful in the NICU and next steps include our partner birth hospital SEBH initiating birth spacing education with all discharges. In October 2015, in collaboration with My Baby's 1st, we surveyed providers and clients of their knowledge of birth spacing and long acting reversible contraceptives. We identified education and next steps needed.

Appendix

A1. Inpatient and Emergency Visit Rates at Akron Children's Hospital, January 2015- April 2016

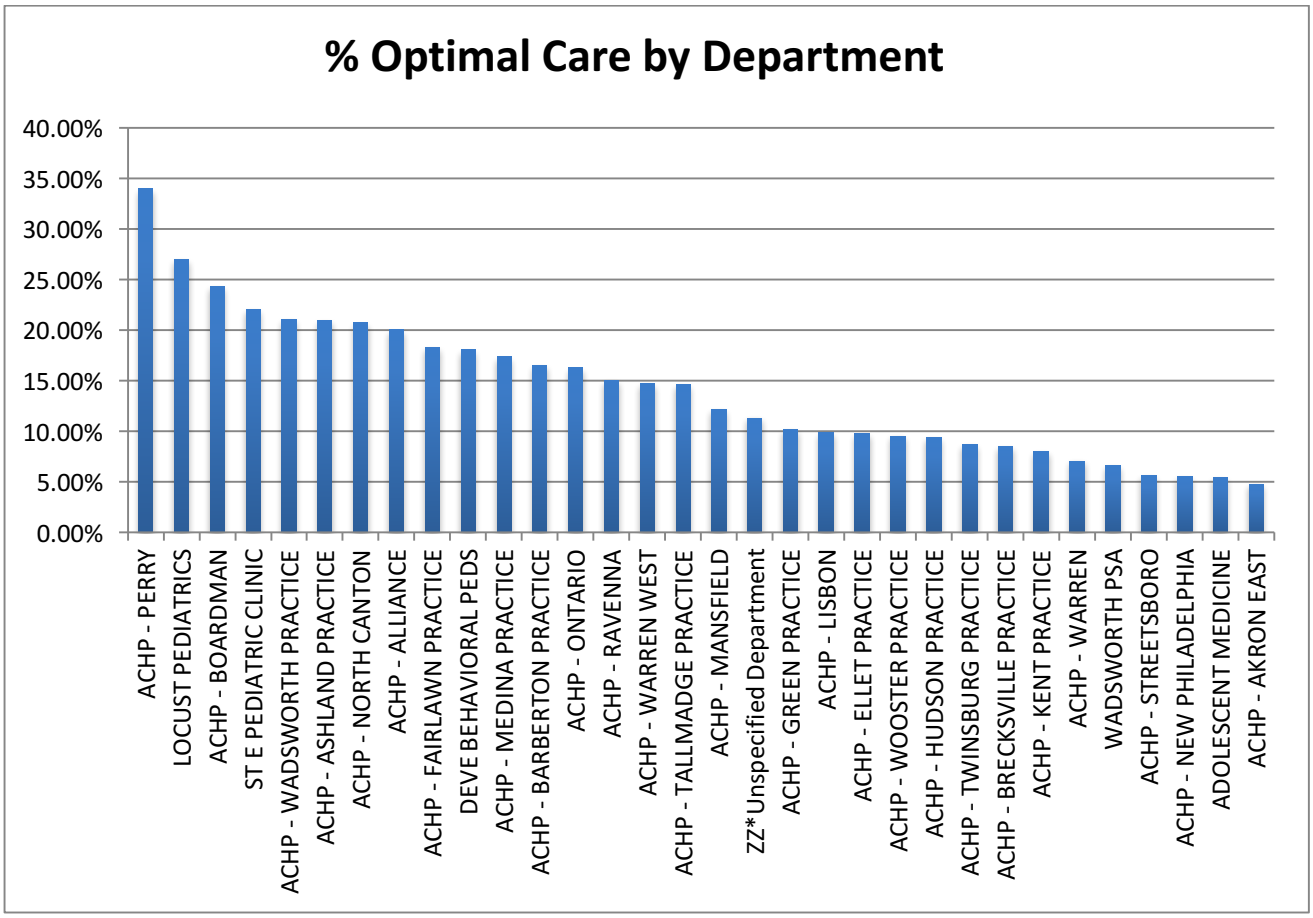


A2. Optimal Care in Akron Children's Hospital Pediatrics (ACHP) offices as of February 2016

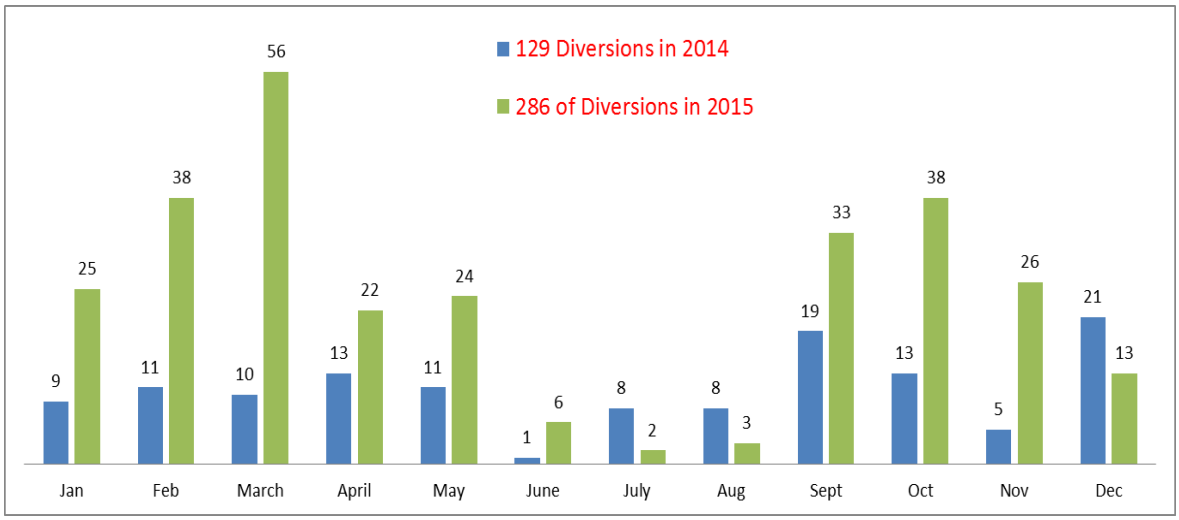
	2016 % Optimal Care	2015 % Optimal Care	Net Change	% Improvement
ACHP - ALLIANCE	17.15%	13.76%	3.39%	24.67%
ACHP - ASHLAND PRACTICE	18.97%	9.17%	9.80%	106.81%
ACHP - BARBERTON PRACTICE	15.43%	17.23%	-1.80%	-10.46%
ACHP - BOARDMAN	21.98%	19.96%	2.02%	10.13%
ACHP - BRECKSVILLE PRACTICE	7.32%	3.14%	4.17%	132.68%
ACHP - AKRON EAST	4.07%	2.67%	1.40%	52.44%
ADOLESCENT MEDICINE	5.23%	1.75%	3.48%	198.26%
LOCUST PEDIATRICS	20.94%	17.41%	3.53%	20.27%
ACHP - NEW PHILADELPHIA	3.81%	1.61%	2.21%	137.28%
ACHP - ELLET PRACTICE	8.81%	5.14%	3.67%	71.45%
ACHP - FAIRLAWN PRACTICE	17.77%	6.65%	11.12%	167.27%
ACHP - GREEN PRACTICE	9.36%	3.59%	5.77%	160.96%
ACHP - HUDSON PRACTICE	8.08%	3.74%	4.34%	116.18%
ACHP - KENT PRACTICE	7.35%	5.19%	2.15%	41.40%
ACHP - ONTARIO	16.16%			
ACHP - MEDINA PRACTICE	14.61%	7.88%	6.73%	85.32%
ACHP - NORTH CANTON	19.33%	15.40%	3.93%	25.52%
ACHP - PERRY	28.47%	7.39%	21.09%	285.49%
ACHP - RAVENNA	13.76%	7.46%	6.30%	84.42%
ST E PEDIATRIC CLINIC	19.35%	1.85%	17.50%	945.16%
ACHP - STREETSBORO	0.90%	2.42%	-1.51%	-62.53%
ACHP - TALLMADGE PRACTICE	14.68%	4.89%	9.80%	200.47%
ACHP - TWINSBURG PRACTICE	7.94%	1.27%	6.67%	527.22%
ACHP - WADSWORTH PRACTICE	18.49%	9.14%	9.35%	102.33%
ACHP - WARREN	6.10%	1.70%	4.40%	258.43%
ACHP - WARREN WEST	10.10%			
ACHP - WOOSTER PRACTICE	7.95%	0.93%	7.02%	756.60%
Total	11.78%			

Akron Children's Hospital

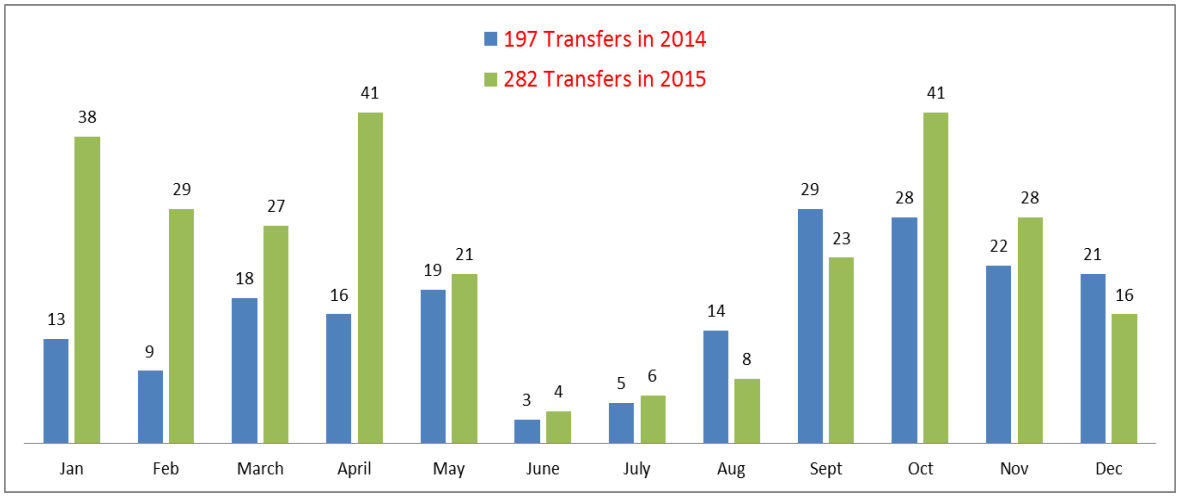
A3. Optimal Care by Department as of April 2016



B1. Behavioral Health Diversions, 2014-2015



B2. Behavioral Health Transfers, 2014-2015



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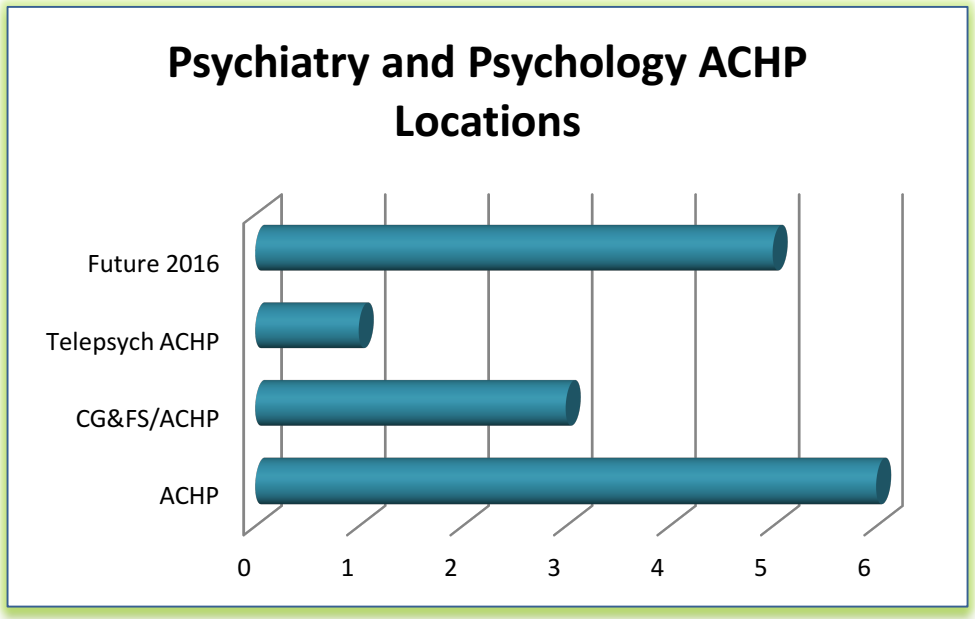
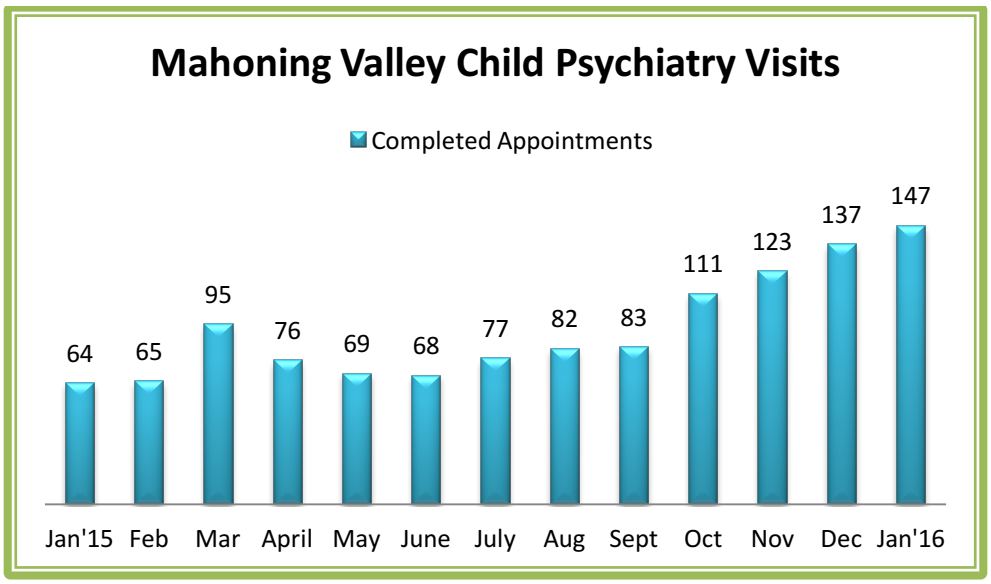
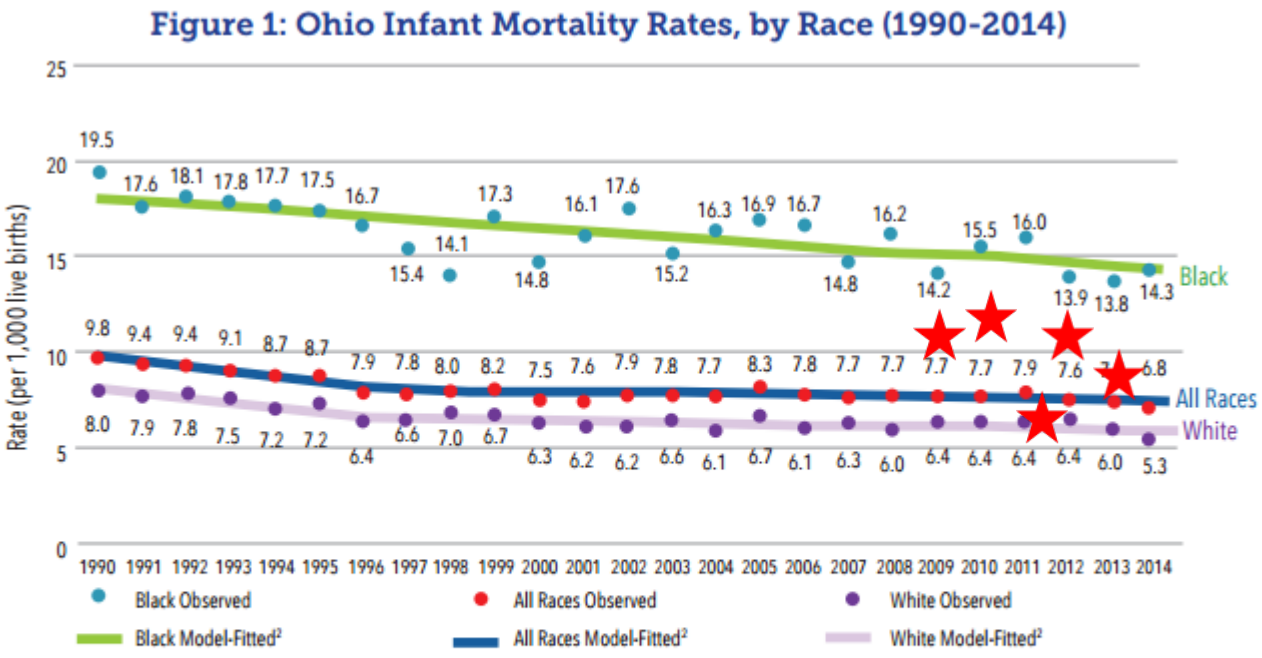
B3. Psychiatry and Psychology Akron Children's Hospital Pediatrics (ACHP) locations



B4. Mahoning Valley Child Psychiatry Visits, January 2015-January 2016



C1. Ohio Infant Mortality Rates by Race, 1990-2014



Source: Vital Statistics birth and mortality files, Ohio Department of Health

² "Model-Fitted" Definition – Joinpoint software models were used to test whether an apparent change in trend was statistically significant using a Monte Carlo permutation method. The same methods were used to assess all races, Black, and White infant mortality trends. In all cases, the best fitting line for the observed data is presented

<u>Mahoning County overall</u>
2009 10.86/1000
2010 11.58/1000
2011 6.94/1000
2012 10.8/1000
2013 9.1/1000
2014 No rate

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