2019

Community Health Needs Assessment EXECUTIVE SUMMARY



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

www.akronchildrens.org



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Introduction

Akron Children's Hospital is committed to our mission of improving the health of children through outstanding quality patient care, education, advocacy, community service and research. As an independent, community-governed organization, we focus our resources on identifying and developing targeted strategies to meet the specific needs of the children who live in the neighborhoods and



counties surrounding our Akron and Boardman hospital campuses.

In 2019, we embarked on our fourth community health needs assessment (CHNA) cycle to examine the issues affecting the health of children within our service area, gauge the impact of recent efforts and identify gaps in care. Based on a careful analysis of these data, we will evaluate and refine existing strategies while finding new avenues to address the unmet needs of children within the communities we serve. The resulting implementation strategy will serve as the roadmap we'll follow to ensure we remain focused, collaborative and outcomes driven.

Akron Children's is dedicated to providing a continuum of care to our most vulnerable patient populations. We collaborate with many organizations to ensure equitable, timely access to health care, and are continually exploring innovative ways to support families with services that help alleviate the social determinants of health that can negatively impact outcomes for children. In fact, this assessment placed a deliberate emphasis on the socioeconomic and environmental drivers of health rather than strictly clinical domains.

We are grateful to the community residents and leaders who shared valuable insights as part of our 2019 assessment process, as well as our partners who contribute to CHNA planning and implementation on an ongoing basis. By working to improve the environment of care and the conditions surrounding health in northern Ohio, we can all work together to give our children their best chance to grow, thrive and reach their full potential.

Sincerely,

Grace Wakulchik
President and CEO

Akron Children's Hospital

Our Community

Overview of Akron Children's Hospital

Akron Children's Hospital has been caring for children since 1890, and our pediatric specialties are ranked among the nation's best by U.S. News and World Report. With two hospital campuses in Akron and Boardman, four regional health centers and more than 50 primary and specialty care locations throughout Ohio, we make it easier for today's busy families to find the high-quality care they need close to home.

Akron Children's serves patients from birth through adulthood, including infants, children, teens, burn victims of all ages and adults with congenital, genetic and maternal/fetal conditions. In 2018, our health care system provided more than 1.1 million patient encounters. In addition to providing care in our own hospitals, we operate six neonatal and two pediatric inpatient units in the hospitals of our regional health care partners. Through our Children's Home Care Group, our nurses provide thousands of in-home visits, and our School Health nurses manage more than a half million clinic visits for students in more than 300 schools.

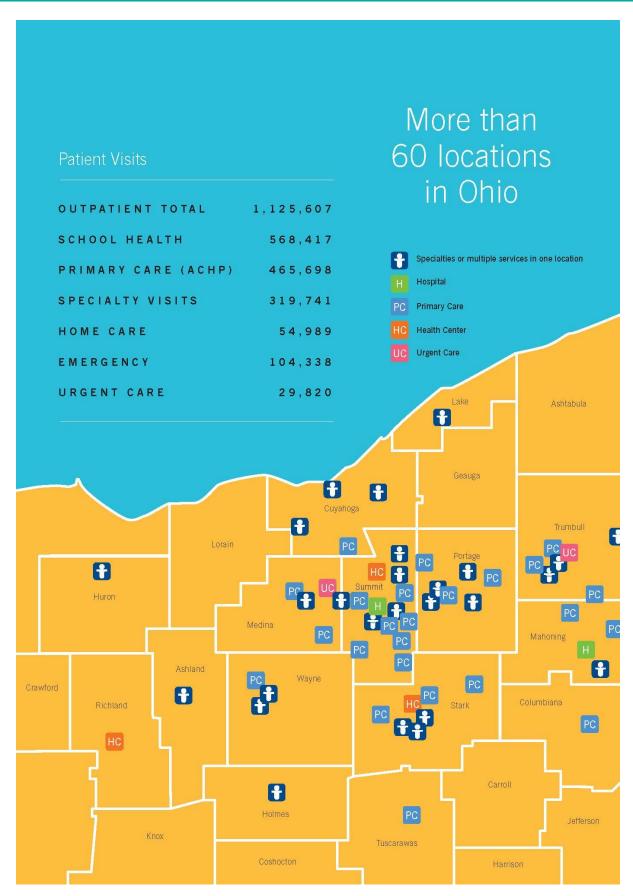
Our Akron campus hospital houses 297 hospital beds for general, specialty, neonatal and pediatric intensive care. Our Beeghly campus hospital in Boardman has 43 general and special care nursery beds. We also partner with adult health systems to operate 25 NICU and 27 pediatric inpatient care beds at Aultman Hospital in Canton, 17 NICU beds at Cleveland Clinic Akron General, 21 NICU beds at Summa Akron City Hospital, and 25 NICU beds at St. Elizabeth Boardman Hospital. At St. Joseph Warren Hospital, we manage 5 pediatric inpatient and 6 special care nursery beds, as well as 5 special care nursery beds at Wooster Community Hospital. Our total bed count is 471 registered and leased beds.

In 2018, Akron Children's treated 256,701 individual patients from all 88 Ohio counties, plus patients from across the country and around the world. We had 9,846 inpatient admissions, 104,338 emergency room visits, 29,820 urgent care visits, 465,698 primary care visits, 319,741 specialty care visits and performed 18,011 inpatient and outpatient surgeries.

We are committed to providing the highest quality care and have been recognized with the Gold Seal of Approval from The Joint Commission for Hospital, Behavioral Health and Home Care. We received redesignation as a Magnet hospital for nursing excellence, and we have been recognized as a Most Innovative Children's Hospital by *Parents* Magazine.

Our primary care network, which includes 30 pediatrician offices throughout our service area, was awarded Patient-Centered Medical Home (PCMH) certification by the National Committee for Quality Assurance. PCMH status signifies that our pediatric offices provide improved access to care, enhanced communications between care teams and patient families, and a broader scope of services including programs to address the social determinants of health.

With more than 6,000 employees and a medical staff numbering more than 1,000 providers, Akron Children's has been part of the fabric of our community for more than 128 years. The cornerstone of our strategic plan is our commitment to remaining an independent, integrated pediatric health care delivery system solely focused on caring for children and advancing pediatric medicine.

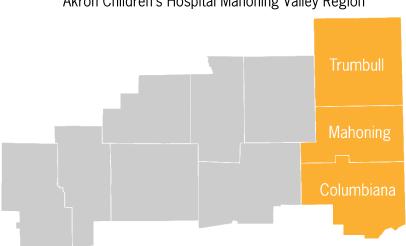


Description of Community Served

While Akron Children's services are not exclusively limited to children, this needs assessment focused on our pediatric and adolescent population aged birth to 18, who make up the majority of patient encounters. Our footprint extends from our two hospital campuses in Akron and Boardman to more than 50 primary and subspecialty locations.

The Mahoning Valley portion of our assessment focused on a three-county region of northern Ohio including Columbiana, Mahoning, and Trumbull counties. This region is comprised of urban municipalities, middle-class to affluent suburbs, former industrial towns and closely-knit rural communities.

Akron Children's Hospital serves a large geographic region and a diverse patient population through outpatient, school health, primary care, specialty visits, home care, emergency, and urgent care visits. In 2018, Akron Children's Hospital had more than 1.1 million outpatient visits.



Akron Children's Hospital Mahoning Valley Region

The Mahoning Valley region served by Akron Children's Hospital includes children of all ages (birth – age 18) who live in the three-county area shown above. The total population of this region is nearly 540,000 people, including 118,748 children ages 18 and under.

Population	and	Age	Groups

	Columbiana	Mahoning	Trumbull	Ohio
Total Population	104,584	231,857	203,341	11,609,756
Children (Age 0-18)	23,217	50,362	45,169	2,793,288
Infants (0-12 months)	1,091	2,250	1,989	135,123
Age 1-6	7,045	14,585	13,143	848,434
Age 7-12	7,387	16,117	14,663	886,147
Age 13-18	7,694	17,410	15,374	923,584

Data Source: U.S. Census Bureau, American Community Survey, 2017 5-Year Estimates

The counties in the Mahoning Valley region have proportionally fewer children of color than the state average, although Mahoning County is an exception, with a greater share of the population who is black.

Race and Ethnicity of Children (Age 0-19)

	Columbiana	Mahoning	Trumbull	Ohio
White	92.8%	71.3%	83.5%	81.9%
Black or African American	2.2%	19.9%	10.2%	12.3%
Asian	0.3%	1.1%	0.4%	2.0%
Other	4.7%	7.6%	6.0%	1.1%
Hispanic (of any race)	2.3%	8.4%	3.1%	3.6%

Data Source: U.S. Census Bureau, American Community Survey, 2017 5-Year Estimates

Many people in the region face economic challenges. In the Mahoning Valley region as a whole, 30,485 children live in poverty, a rate of 27.8 percent. Around a quarter of children live below poverty in each county in the region. The lack of financial resources that families have influences many aspects of health and well-being. The median household income and labor force participation rate in counties in the region are all below the state average. For all ages, more than half of renters in Mahoning County live in unaffordable housing, paying more than 30 percent of their income in housing costs.

Economic Indicators

	Columbiana	Mahoning	Trumbull	Ohio
Living below poverty, all ages	15.4%	17.6%	17.2%	14.9%
Children (age 0-18) living below poverty	24.7%	27.8%	29.5%	21.3%
Labor force participation of the population 16 years and older	53.0%	59.8%	55.4%	63.2%
Median household income	\$45,498	\$43,251	\$45,380	\$52,407
Median rent	\$643	\$649	\$649	N/A
Renters living in unaffordable housing	45.5%	50.7%	48.3%	46.7%
Population over age 25 with a high school diploma or higher	88.1%	90.5%	89.0%	89.8%
Population over age 25 with bachelor's degree or higher	15.5%	23.2%	18.7%	27.2%

Data Source: U.S. Census Bureau, American Community Survey, 2017 5-Year Estimates

Assessment & Prioritization

Assessment Methods

Akron Children's Hospital engaged The Center for Community Solutions (Community Solutions) to conduct the assessment and assist with the identification of significant health needs and priorities. In order to understand community health needs, this CHNA process brought together data and information on children's health in the region from a variety of sources. We examined more than 180 indicators from dozens of sources, such as the U.S. Census Bureau, Ohio Department of Health, Ohio Hospital Association, Ohio Medicaid Assessment Survey, County Health Rankings, and National Survey of Children's Health. These are detailed in the Appendix. Our emphasis in analyzing secondary sources was on data related to children, and as such, information available at the county level was strongly preferred. Our examination went beyond health outcomes to include data on social determinants of health, Adverse Childhood Experiences, and other factors that influence health.

Throughout the assessment our exclusive focus was on the health of children and we sought to consider social determinants of health, root causes and confounding factors, and examine disparities between races, incomes, and between urban and suburban communities.

Community participatory research played a key role in this assessment. We conducted interviews with community leaders and heard from parents and caregivers during facilitated focus group discussions. Through these activities, a significant amount of new primary data about children's health in the region was collected.

At least one facilitated discussion with parents and caregivers was held in each county. Other focus groups targeted special populations, including low-income mothers who had recently given birth, refugees and immigrants, and kinship caregivers.

A target number of key informant interviews was set for each county based on the share of the region's children who lived in that county. At least three community leaders from each county were interviewed. Outreach targeted public health commissioners, United Ways and other philanthropic funders, Community Action agencies, elected officials, mental health agencies, administrators of other hospitals, nonprofit executives, and other community leaders.

Qualitative and quantitative data was grouped into issue areas. Each was evaluated based on four factors to determine if the issue represented a significant health need.

- Health needs were deemed to be "worse than the benchmark" if a majority of the counties in the region were worse than the state average.
- Health needs were considered to be **"identified by the community"** if they were brought up during discussions with parents and caregivers and/or community leaders.
- **"Cross cutting"** health needs related to other health factors, conditions, or outcomes; or increase or decrease risk for other negative health outcomes.
- **"Leading edge"** health needs were emerging or growing or areas where interventions by Akron Children's Hospital can get ahead of the issue, or something where more attention would result in significant improvements.

Our Prioritization Process

Collect & **Analyze** Data

Examined Quantitative and Qualitative Data



180+ Indicators



62 Community from 20+ Sources Leader Interviews



16 Focus Groups with 166 Parents & Caregivers

Identify Significant Health Needs

4 Factors Used to Evaluate Issue Areas



Worse Than the Benchmark



Cross Cutting



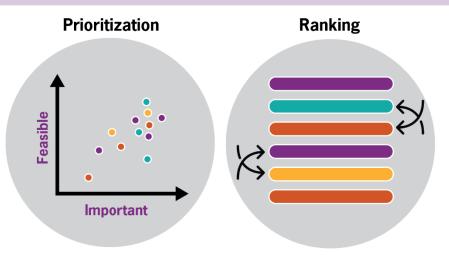
Identified by the Community



Leading Edge

Select Priority Issues

Ad Hoc Committee Undertook Multi-Step Process



During the first examination, health issues were moved forward for further consideration if they met at least one of the first two factors. In this way, the substantial primary data collected from the community was placed on an equal footing with more traditional secondary quantitative data. Throughout this process, data for the Greater Akron Region and the Mahoning Valley Region were examined separately. A small group from each of the two hospital campuses met to evaluate health issues based on the final two factors. Through this discussion, significant health needs were identified.

Prioritization Process

Priority issues were selected from the list of significant health needs by an ad hoc committee of approximately 30 people from Akron Children's Hospital. A multi-step process was employed to evaluate each significant health need and identify priorities. First, ad hoc members ranked the significant health needs after reviewing primary and secondary data on each. They were asked to consider several questions:

- What are the most significant health needs facing children in the region?
- How does the scope, scale, and urgency of this need compare to other health needs?
- What needs are the most realistic for Akron Children's Hospital to address?
- Which health needs does the hospital have the resources (staff, funds, programs, interventions, partnerships, etc.) to support an effort to improve?

During an in-person meeting facilitated by Community Solutions, data were reviewed for each significant health need. Feedback on the importance of each issue and the feasibility for Akron Children's Hospital to impact the issue was gathered in real time using an online polling tool. Needs that were deemed either not important or not feasible were eliminated from further consideration.

Using a dot voting process, ad hoc committee members voted for priority issues. Each member received five dots for each region and two black dots which indicated issues that they did not believe should be priorities. They were asked the question "In your opinion, what should be the priorities of Akron Children's Hospital for the next three years?"

Rankings from the dot voting and the initial online survey were compared. In this case, they were well-aligned and a robust discussion was facilitated by Community Solutions to narrow the list to the three priority issues described in detail in this report. During the discussion, the significant health needs of mental health and Adverse Childhood Experiences/trauma were combined into a single priority issue.

Priority Children's Health Issues

Mental Health & Trauma

The priority health issue of mental health and trauma encompasses a range of issues identified through the assessment. These issues include but are not limited to access to mental and behavioral health care, the impact of traumatic experiences in childhood, specific diagnoses of mental illness and racial disparities. Addressing mental health and trauma as a priority health issue will likely involve multiple implementation strategies across various departments and within the community.

The relationship between experiencing trauma in childhood and the resulting behavioral health conditions including mental health diagnoses is a well-recognized phenomenon with health outcomes that can persist throughout a lifetime. According to the Centers for Disease Control and Prevention, Adverse Childhood Experiences (ACEs) is the term used to describe all types of abuse, neglect and other potentially traumatic experiences that occur to people under the age of 18. Research studies conducted to identify the prevalence of ACEs often include three categories of experiences; abuse, neglect and household challenges. Abuse includes physical, sexual and emotional mistreatment while neglect typically refers to physical, educational and emotional neglect. Household challenges encompass a wider variety of experiences that result from conditions related to some of the social determinants of health including economic stability, food insecurity, discrimination, inadequate support systems and stress, as well as conditions related to parental behaviors such as substance abuse, divorce and incarceration.

Screening tools have been developed to identify children who have experienced or are currently experiencing adverse conditions. Some are already in use by some providers at Akron Children's Hospital, including screening of all children admitted to the trauma service after sustaining physical injury. These tools can be used in a clinical setting to assist professionals in determining the possible root cause for behavioral health symptoms. Once identified, interventions to build resiliency among children can be provided by implementing the necessary supports to mitigate ACEs and replace unhealthy conditions with a healthy, supportive environment. In partnership with scientists in the Department of Psychology at Kent State University, Akron Children's Hospital researchers have augmented understanding of neurobiological correlates of acute stress and post-traumatic stress disorder (PTSD) in injured children, and of the risk and resilience factors in children who have witnessed or experienced violence.

For some children, behavioral health conditions can be traced to traumatic experiences. However, not all children presenting with mental health symptoms have a history of trauma. Offering appropriate mental health referrals and interventions requires having knowledge of the child's history. Mental health treatments range from short-term outpatient treatment for a single diagnosis to complex, long-term inpatient stays with complex diagnoses. Crisis stabilization, wrap around services and ongoing community-based care are also important components of mental health treatment.

What are Adverse Childhood Experiences (ACEs)?

ACEs include all types of abuse, neglect and other potentially traumatic experiences that happen to people under the age of 18.



Who is Impacted?



More than **1-in-4 children** in the region have experienced 2 or more ACEs.

The percent of children who have experienced **2 or more ACEs** varies by county. All of the counties in the Mahoning Valley region fare worse than the state average.

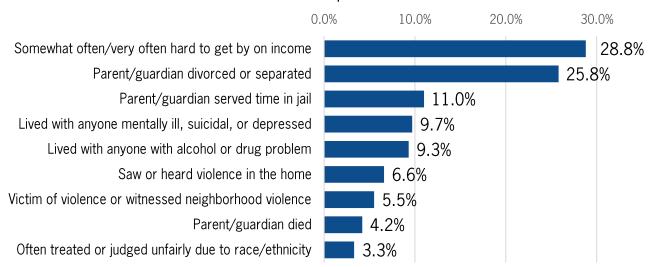


Worse than state average
Better than state average

Who is impacted?

More than a quarter of children served by Akron Children's Hospital have experienced two or more ACEs, according to estimates from the National Survey of Children's Health. Columbiana, Mahoning and Trumbull counties all had similar estimated rates of children who experienced two or more ACEs, which is around 28 percent, higher than the overall state. The two most common ACEs in the state have been experienced by at least one-quarter of Ohio's children. These include "somewhat often/very often hard to get by on income" followed closely by "parent/guardian divorced or separated." Three ACE's had rates of around 10 percent; "parent/guardian served jail time" (11 percent), "lived with anyone mentally ill, suicidal or depressed" (9.7 percent), lived with anyone with alcohol or drug problem (9.3 percent).

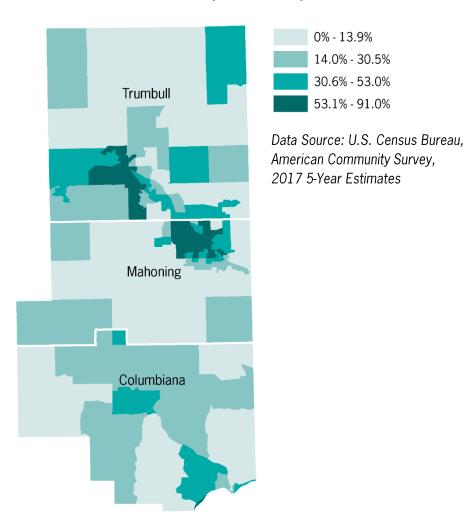
Percent of Children in Ohio Who Have Ever Experienced Individual Adverse Childhood Experiences



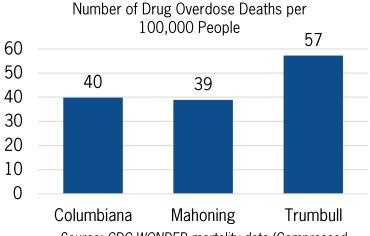
Data Source: Child and Adolescent Health Measurement Initiative. 2016-2017 National Survey of Children's Health (NSCH)

Child poverty rates are an indicator for the ACEs related to household challenges. Children living in high-poverty areas are more likely to have the adverse experience of not having enough income to meet their needs. Youngstown, with 58 percent of children living below poverty, has the highest rate of child poverty in the Mahoning Valley region. Warren (55.7 percent) also has a higher poverty rate for children than the county in which it is located.

Percent of Children (Under Age 18) Living Below the Poverty Threshold, by Census Tract



In 2017, Ohio had the second highest rate of drug overdose deaths related to opioids in the nation with 39.3 deaths per 100,000 residents. The geographic region served by Akron Children's Hospital has not been immune to this issue. As a result, many children who live within the region experience the adverse condition of living with someone who uses drugs and/or losing a parent or guardian to overdose. Trumbull County has a particularly high overdose rate with 57 deaths per 100,000 people.



Source: CDC WONDER mortality data (Compressed Mortality File) (2015-2017), accessed via County Health Rankings

The root of a lot of the trauma children are experiencing is drug and alcohol use by caregivers. Youth are being exposed to parental loss, neglect, foster care, and families unable to meet the needs of the children.

-Community Leader in Columbiana County

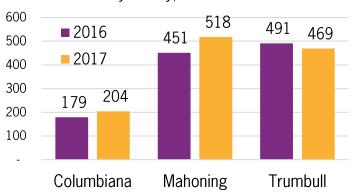
The link between ACEs and mental health diagnoses has been well documented in recent years. Children who experience adverse conditions do not necessarily develop mental health conditions; however, data suggest they are significantly more likely than those who have not had these experiences. Building resilience in the child can take many forms including familial, clinical and community support and interventions. Research in this area supports the practice of reducing risk factors such as living in poverty and a lack of social supports while increasing protective factors by restoring feelings of safety, predictability and control for children who have experienced trauma.

When children exhibit behaviors that are disruptive to their daily lives, relationships or educational pursuits, access to behavioral clinical services provide the child an opportunity to receive treatment, build resiliency and work to develop new behavioral patterns. While the length and intensity of behavioral service intervention will vary widely, access to every point along the continuum of mental health treatment is desired by the community.

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¹ Several studies have shown the relationship between behavioral health and ACEs including Horn, Sarah R., et al. "Childhood adversity, mental health, and oxidative stress: a pilot study." *PLoS One*, April 2019; Center for Youth Wellness, https://centerforyouthwellness.org/health-impacts/; and Schickendanz, Adam et al. "Parents' Adverse Childhood Experiences and Their Children's Behavioral Health Problems." *Pediatrics*, August 2018.

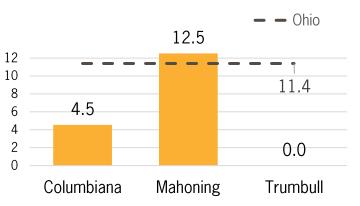
Reported Cases of Mental Health Diagnoses (Excluding Suicidal Ideations and Attempts), by County, 2016-2017



Data Source: Ohio Hospital Association Data, Compiled by Akron Children's Hospital.

Note: Age Group 0-18, Inpatient and Emergency Department, only includes Ohio Hospital Association member hospitals.

Practicing Child and Adolescent Psychiatrists per 100,000 children under age 18



Source: American Academy of Child & Adolescent Psychiatry, Workforce Maps by State

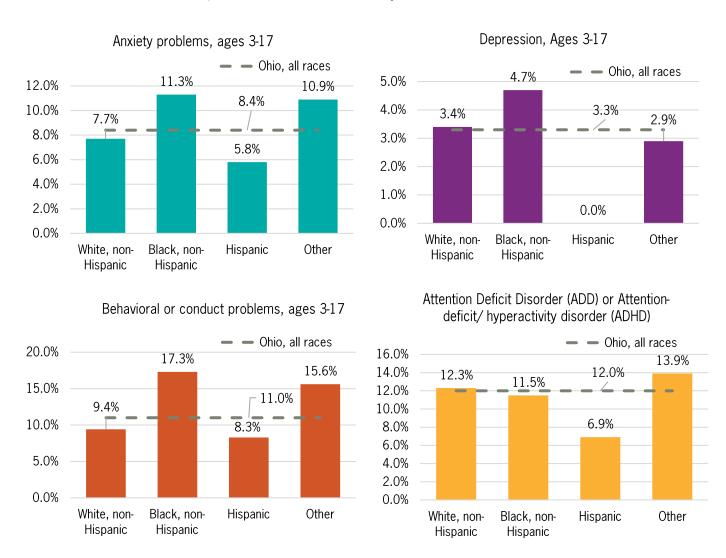
Within the Mahoning Valley region, Mahoning County has the highest number of reported cases of mental health diagnoses and has the highest rate of practicing child and adolescent psychiatrists with 12.5 per 100,000 children. Trumbull County is second in terms of mental health diagnoses, which appears to be decreasing; however, this county has no practicing child and adolescent psychiatrists. Youth in these areas must travel outside of their community to access needed care. A lack of practicing clinicians may also result in a higher rate of undiagnosed community members.

Intentional self-harm or suicide was the third most common leading cause of death for youth ages one to 19 in the Mahoning Valley Region. Data from Ohio Hospital Association indicate an increased need for behavioral health services. Between 2016 and 2017, inpatient and emergency department visits for suicidal ideation and attempts rose in Columbiana and Trumbull counties.

Racial disparities exist throughout health care including in youth mental health. In children aged three to 17, black, non-Hispanic youth experience anxiety problems at a higher rate than their white and Hispanic counterparts. While 8.3 percent of children experience anxiety problems across the state, 11.3 percent of black children experience these problems. Although the disparity is not as pronounced, black children also have higher rates of depression compared to the overall youth population.

Black children in Ohio are identified as having behavioral or conduct problems at a higher rate than the general youth population; with 17.3 percent of black children identified as having these problems compared to 11 percent of the general population. In contrast, white children have a higher rate of Attention Deficit Hyperactive Disorder (ADHD) as compared to their black and Hispanic counterparts. Data on these two measures, which use behavioral outputs as part of diagnosis criteria, could indicate a difference in the way behavior of black and white children are categorized by clinicians. These could be seen as more oppositional in nature (black children) or unable to control their impulses (white children).

Specific Health Conditions, by Race, 2016-2017



Data Source: Child and Adolescent Health Measurement Initiative, 2016-2017 National Survey of Children's Health

What did we learn from the community through the assessment?

Many community leaders noted that opioid use has increased dramatically in the adult population, and addiction impacts children's health. The entire family is affected when a parent or caregiver has a substance use disorder (SUD). Many expressed concern that children who have experienced trauma will continue to face issues long after the current overdose crisis subsides.

Individuals in the community struggle to think about their own mental health and sometimes appear to be uncomfortable addressing their children's mental health needs. Initiatives in the Mahoning Valley to educate parents about their children's mental health have faced challenges and some attribute this to a lingering stigma around the issue.

Numerous key informants from all counties noted that there are not enough mental health service providers to meet the demand from both children and families. Workforce development in the behavioral health field was identified as a need in the Mahoning Valley. This includes social workers, therapists and child psychiatrists.

 Parents and Caregivers see ACEs happening in real time, and are concerned about the impact on children's health.

- Stigma remains among many residents around their own and their children's mental health.
- Younger children are exhibiting behavioral health symptoms including suicidality.

Suicide and suicidal ideation is on the rise and increasingly seen in younger children. Some parents and caregivers expressed particular concern about the impact of social media and online bullying on children's mental health.

Infant Mortality & Birth Outcomes

Across Ohio, more than seven babies died before their first birthday per 1,000 live births, well above the Healthy People 2020 goal set by the Centers for Disease Control and Prevention. The infant mortality rates in Mahoning and Trumbull counties were even higher.

According to the Centers for Disease Control and Prevention, the top five causes of death for infants in 2016 were birth defects, preterm birth and low birth weight, maternal complications, sudden infant death syndrome and injuries. Birth defects, preterm birth and low birth weight are considered birth outcomes. In 2017, twice as many babies in Ohio died in the neonatal period (first 27 days of

Number of Infant Deaths per 1,000 Live

Data Source: CDC WONDER mortality data

Mahoning

Trumbull

Columbiana

life) as in the post-neonatal period. Many of these babies are born too early, too small, or with other life-threatening health complications.

Preterm births occur before 37 weeks gestation. Babies born before 32 weeks gestation are considered very premature. The earlier a baby is born, the higher the risk of death and health complications including breathing issues, intestinal disorders, feeding difficulties, and bleeding in the brain.

Infants who weigh less than 5.5 pounds at birth are considered to have low birthweight. Babies born below this threshold are more likely to experience respiratory disease syndrome, bleeding in the brain, heart problems, intestinal disorders, and retinopathy.

Compared to the overall population, black women who are pregnant are more likely than non-Hispanic white women to recieve prenatal care late in their pregnancies, or not at all. Recent studies have found problems with communication between providers and pregnant black women and evidence that implicit racial bias of medical professionals may be contributing to poor prenatal care for women of color.² This can lead to medical complications during birth, a factor influencing infant mortality.

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² Hall, William J. et al. "Implicit Racial/Ethnic Bias among Health Care Professionals and Its Influence on Health Care Outcomes: A Systematic Review." *American Journal of Public Health*, December 2015; Dahlem, Chin Hwa et al. "African American Women and Prenatal Care: Perceptions of Patient-Provider Interaction." *Western Journal of Nursing Research*, May 2014; Alhusen, Jeanne L. et al, "Racial Discrimination and Adverse Birth Outcomes: An Integrative Review", *Journal of Midwifery and Women's Health*, November 2016; Altman, Molly R. et al, "Information and Power" Women of Color's Experiences Interacting with Health Care Providers in Pregnancy and Birth." *Social Science & Medicine*, October 2019.

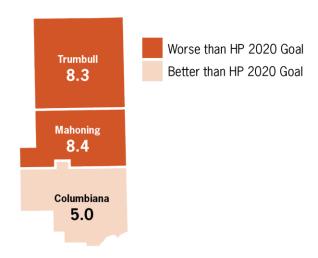
Infant Mortality & Birth Outcomes

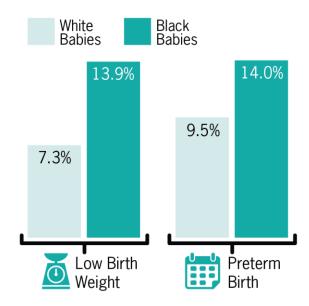
In Ohio, more than **7 babies per 1,000 live births** die before their first birthday, making Ohio's infant mortality rate the **8th highest in the country**.



Who is Impacted?

Infant mortality rates vary widely by county, and 2 counties have rates worse than the Healthy People 2020 Goal of 6.0.





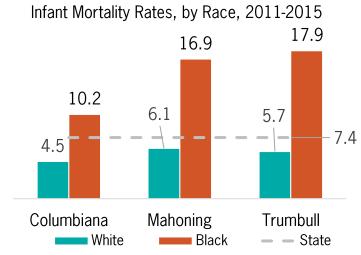
Poor birth outcomes, such as weighing less than 5.5 pounds or being born before 32 weeks gestation, are risk factors for infant mortality. In Ohio, black babies are at greater risk for these poor outcomes than white babies.

Who is impacted?

The infant mortality rate in Mahoning and Trumbull counties is above the state average and well above the Healthy People 2020 goal. Each county in the region has at least one birth outcome that is worse than the state benchmark. Fewer pregnant women in Columbiana County receive prenatal care in the first trimester. At 13.4 percent, Mahoning County's rate of preterm births is worse than the Ohio average of 12.2 percent. In Ohio, 8.6 percent of babies are considered to be low birth weight, which is better than the rate in both Trumbull (8.7 percent) and Mahoning (10.4 percent).

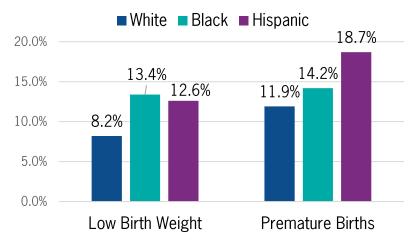
There are racial disparities in infant mortality, and those in birth outcomes are especially evident in Mahoning County. Babies born to black mothers in Mahoning County were more than 1.5 times more likely to have low birthweight in 2016 than white babies. For Hispanic populations, premature birth rates are even worse. According to data from the Ohio Department of Medicaid, more than 26 percent of infant deaths were prematurity related.

Since infant mortality disproportionally impacts black babies, communities where more people of color live tend to have higher infant mortality rates. The infant mortality rates for black babies in Mahoning and Trumbull counties are more than triple the Healthy People 2020 goal of 6.0.



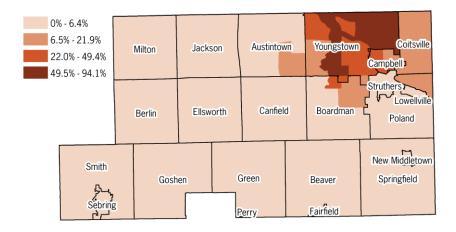
Data Source: Ohio Department of Health

Percentage of Low Birthweight and Premature Births in Mahoning County, by Race & Ethnicity, 2016

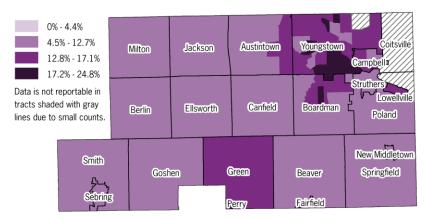


Data Source: City of Youngstown

Percent of Population that is African American in Mahoning County, by Census Tract



Percent of Infants Born Prematurely in Mahoning County, by Census Tract, 2010-2016



Data Source: U.S. Census Bureau, American Community Survey, 2017 5-Year Estimates

What did we learn from the community through the assessment?

Initiatives seeking to reduce infant mortality in the region are considered successful, and many community leaders pointed to recent reductions in infant deaths. Successful initiatives have involved health systems, boards of health, and other groups working together and also having a funding source through grants.

Community leaders recognized that there is more work to be done. There is a concern that the initiatives are not engaging mothers as effectively as they could. The lack of access to birthing hospitals, pregnancy centers and prenatal care through OB-GYN practices was identified as a barrier to improving birth outcomes. Even so, raising awareness through effective grassroots community messaging could help address issues related to infant mortality. Securing consistent funding sources has been a challenge for many of the specific programs designed to impact infant mortality. Sustained efforts are needed.

Parents and caregivers expressed concern about postpartum depression (PPD) and the need for better screening tools and more frequent screenings. While encouraged by medical professionals and social workers to share if they are having PPD symptoms, several new mothers were concerned that they risk losing their child if they identify themselves as at risk.

- Strong collaboration and goodwill across sectors sets groundwork for success.
- Lack of birthing hospitals are presents a barrier to prenatal care.
- Centering pregnancy programs have been successful.
- Effective grassroots messaging in communities can expand reach.
- Some pregnant women do not value or understand need for prenatal care.

Asthma & Respiratory Care

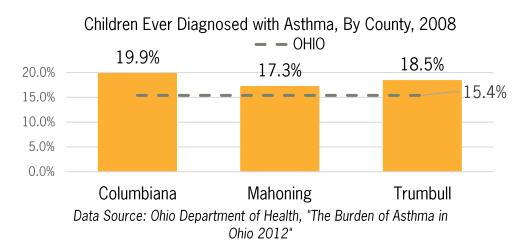
Asthma and respiratory distress are among the most common reasons for visits to the hospital emergency department or to urgent care. Children experiencing challenges breathing require immediate attention, which is sometimes followed by ongoing medical attention through their pediatrician or pediatric pulmonologist.

Symptoms of asthma vary greatly between mild difficulty breathing to life-threatening flare ups. Severity of the condition depends on many factors including access to medication, adherence to treatment plans, exposure to triggers and environmental conditions. Children with asthma can experience triggers within their own homes. Pet dander, mold, dust mites, cockroaches, cigarette smoke, aerosol sprays, and cleaning agents are common and avoidable triggers that can be found in children's living environments.

Respiratory diseases include asthma as well as cystic fibrosis, chronic obstructive pulmonary disease, pulmonary fibrosis, and pneumonia among others. Children with these conditions often require medical interventions to treat their symptoms in a way that allows them to participate in the daily activities of childhood. Some respiratory diseases, like pneumonia, require short-term treatments and have good prognosis, while other conditions, such as cystic fibrosis, are chronic conditions that worsen over time. Access to care for respiratory disease improves the quality of life for children with these conditions whether being treated for an isolated incident or consistently over the course of their lifetime.

Who is impacted?

Mahoning County is one of only 6 Ohio counties with significantly higher rates of child emergency department visits for patients with a primary diagnosis of asthma. This could indicate that a high number of children with asthma have not been able to properly manage their condition. High poverty, pollen and poor air quality in the region lead to higher rates of asthma.



Children in all three counties have higher rates of asthma than the state overall. Columbiana County has the highest rate of children ever diagnosed with asthma, at 19.9 percent. Trumbull is second, with 18.5 percent, and 17.3 percent of children living in Mahoning County have ever been diagnosed.

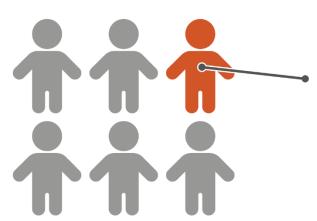
Asthma

Asthma symptoms vary greatly from mild difficulties breathing to life-threatening flare ups.

There are many common **triggers** for asthma, including:

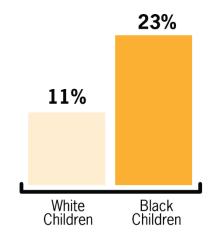


Who is Impacted?



More than **1-in-6 children** in the region have been diagnosed with **asthma**.

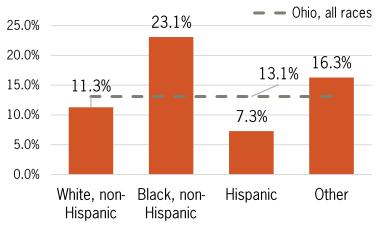
Racial disparities are present in asthma diagnoses. In Ohio, black children are more than twice as likely as white children to have asthma.



Like many health conditions, racial disparities are present in asthma, with 21 percent of black children in Ohio diagnosed compared to 11 percent of white children. Poverty and housing conditions likely play a role in the disparate rate of asthma among children of different races.

Respiratory diseases are a common childhood illness with some of the same environmental triggers as asthma. Poor air quality, pollen and mold can exacerbate both asthma and respiratory disease. Improving the environmental conditions of a community would likely have a positive impact on both asthma and respiratory disease.

Children Ever Diagnosed with Asthma, Ohio, by Race, 2016-2017



Data Source: Child and Adolescent Measurement Initiative, 2016-2017 National Survey of Children's Health.

What did we learn from the community through the assessment?

Akron Children's efforts around asthma are widely recognized as successful by community leaders. The approach of targeting high risk children and working to improve their health outcomes appears to have worked and has been supported by the community at large, including public housing agencies. When asked about the overall health of children in the community, many leaders identified poverty as the largest factor in health outcomes. They pointed to the correlation between poverty and those with chronic health conditions like asthma and respiratory diseases. Community members noted that these health conditions are closely

related to poor housing conditions and showed concern over the number of children known to be living in homes with mold, pests and family members who smoke.

Community leaders would like to see hospitals consider the substandard living of their patients as a barrier to good respiratory health. Lead and mold are particular areas of concern. Those who rent often do not have the ability to make changes to the physical structures to improve the condition of their homes and are worried that they may risk eviction if they report concerns to landlords. The medical community could be an important advocate to make changes in housing regulations and practices that could lead to improved conditions for children with asthma and respiratory disease.

- Community leaders recognize and appreciate efforts by Akron Children's to improve asthma outcomes in the region.
- Improving housing conditions in the community could be part of the approach to improve asthma and respiratory conditions.
- Akron Children's Hospital can play a role in advocating for housing policies that support good health.

Significant Health Needs

Significant health needs were identified utilizing a multi-step process that began with an examination of primary and secondary data about the health of children in the Mahoning Valley region. This process is described in greater detail in the methodology section. Every issue was evaluated on four criteria to determine if it was significant. The following questions were applied to each health need:

- Was it worse than the state benchmark?
- Did the community identify it as priority?
- Was the issue cross cutting and related to other health factors conditions or outcomes?
- Was the issue leading edge, meaning growing or emerging, or something that requires more attention?

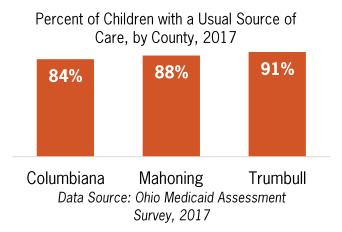
Health Need	Worse than Benchmark	Identified by the Community	Cross Cutting	Leading Edge
Access to Medical Providers			*	())
Affordable Housing & Eviction			*	
Child Obesity & Screen Time	\bigotimes		*	
Nutrition & Food Access	\bigotimes		*	
Oral Health	\bigotimes		*	
Transportation	\bigotimes		*	(3)
Youth Substance Use			*	

Priority Health Issues	Worse than Benchmark	Identified by the Community	Cross Cutting	Leading Edge
Mental Health & Trauma	\bigotimes		*	())
Infant Mortality & Birth Outcomes			*	())
Asthma & Respiratory Care	\bigotimes		*	())

Access to Medical Providers

What makes it a significant health need?

Insurance coverage, location of providers, and trust in caregivers are three components which allow people to access health care services. Children in all three counties in the Mahoning Valley region are less likely to have a usual source of medical care than the state average (94 percent). This indicates that more families in this region may encounter barriers to obtaining medical care that they are unable to overcome. During focus groups, parents and caregivers spoke of long travel times to reach providers and difficulty in finding specialty services in some parts of the region.



Why was this need not chosen as a priority health issue?

The data about access to medical care was mixed. While fewer children have a usual source of care, the number of pediatricians per 100,000 children under age 17 across the region is well above the state average. The biggest barrier to care identified by parents and caregivers and community leaders was transportation, which was examined as a separate significant health need.

Affordable Housing & Eviction

What makes it a significant health need?

Key informants identified housing as a barrier to health for children in their communities and conditions of homes including lead and mold are a concern among community leaders. Access to safe and affordable housing was identified as a problem by focus group participants in each of the counties within both regions. Issues discussed by both caregivers and community leaders were high rents for low quality housing, long or closed waiting lists for subsidized housing and very few landlords who accept vouchers. Housing is considered unaffordable when more than 30 percent of the household budget is spent on housing costs.



Data Source: U.S. Census Bureau, American Community Survey, 2017 5-Year Estimates

More than half of the renters in Mahoning County are living in unaffordable housing which can lead to housing instability. A lack of housing stability impacts the health of children as they experience stress related to the move, disruption of routine and possible reduced access to their established health care providers.

Why was this need not chosen as a priority health issue?

Housing is outside of the hospital's expertise and initiatives, although Akron Children's Hospital is supportive of efforts to improve quality, affordable housing. The ubiquity of housing challenges in the state indicates that this is an issue that should be addressed through policy initiatives to create systemic change. Housing conditions that contribute to asthma are considered to be part of that health priority.

Childhood Obesity & Screen Time

What makes it a significant health need?

Forty-four percent of children in Trumbull County and 35 percent of children in Columbiana County are considered obese, both of which are higher than the state rate of children with obesity. It has been well established that childhood obesity is a cross cutting health need can lead to a number of chronic health conditions, including diabetes. Obesity among children has a number of contributing factors including lack of physical activity. The increased use of screens among children through personal technology devices, in addition to television and video games, is emerging as an influencing factor in decreased physical activity. As access to portable technology devices, such as smart phones, continues to increase, it is likely that the amount of non-educational screen time will also increase. As more time is spent in sedentary screen-based activities, less time is spent engaging in active recreational pursuits.

12,612 children in the region have obesity.



Data Source: Child and Adolescent Health Measurement Initiative. 2016-2017 National Survey of Children's Health

Why was this need not chosen as a priority health issue?

Parents, caregivers, and community leaders rarely mentioned the health condition of obesity, but they did express concern about screen time and lack of physical activity. However, screen time, physical activity, and obesity are often driven by personal choices. Akron Children's Hospital has found it difficult to influence this area in past initiatives, and it is not viewed as a leading edge indicator where efforts by Akron Children's can improve the overall health conditions for children in the region.

Nutrition & Food Access

What makes it a significant health need?

Food insecurity among children is a serious concern raised by caregivers and community leaders across the Mahoning Valley region. Each county in the region has a higher rate of food insecurity than the state overall. There is wide consensus that lack of proper nutrition is a cross cutting health need. Community input indicates the need may be higher than the data suggest with 90 percent of those who attended focus groups indicating that people in the community struggle to afford food. Caregivers pointed out that it is not a lack of knowledge about nutrition or how to make healthy choices, but rather a lack of resources that prevent parents from providing healthier food options for children. Parents working multiple low-paying jobs often do not earn enough to provide healthy choices nor have enough time to seek out healthy foods. Additionally, transportation, lack of places to buy fresh fruits and vegetables, and abundance of fast food were mentioned as challenges that prevent families from providing healthy foods for their children.



Data Source: Feeding America, Map the Meal Gap

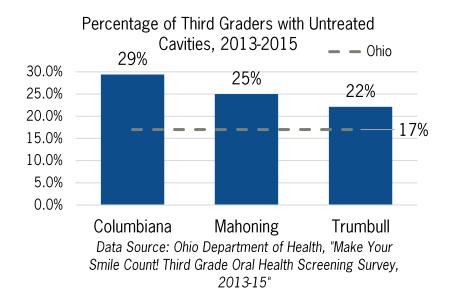
Why was this need not chosen as a priority health issue?

Although significant, this health need is not considered to be leading edge. Food insecurity has been a longstanding issue within the community and thus has seen a robust community response. A strong network of community partners led by the Mahoning Valley Second Harvest Food Bank have expertise in distributing food to those in need and have shown success in past endeavors to address the food insecurity needs of the children in the community.

Oral Health

What makes it a significant health need?

Oral health affects multiple areas of a child's health including nutrition. Children who receive consistent oral health care are less likely to have plaque, gum disease and cavities. Poor oral health can lead to chewing difficulties and impact a child's self-esteem. In the state of Ohio it is estimated 17 percent of third graders have cavities that are untreated. Within the region, all three counties are worse than the state benchmark. More than a quarter of third graders in Columbiana and Mahoning counties have untreated cavities.



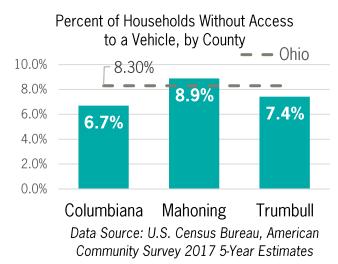
Why was this need not chosen as a priority health issue?

Akron Children's Hospital along with other community based and health organizations have dedicated considerable resources in recent years to increase access to dental care through mobile clinics, rural health clinics and offering pediatric dentistry services. Both caregivers and community leaders mentioned increased access to dental care as a recent successful health initiative. Efforts toward increasing oral health access are well underway, have seen success and will likely continue to progress. This issue was not determined to be leading edge in that it is not an emerging issue and has already gained the attention of the community.

Transportation

What makes it a significant health need?

Parents and caregivers in the community as well as community leaders consistently pointed to transportation as barrier to children's health. Inability to obtain transportation prevents families from attending medical appointments. This is particularly true in areas of the region where long travel times are required to meet medical needs. Lack of transportation also limits the healthy activities in which children are able to participate, including recreational activities. Many areas of the region have very limited public transportation options. While social service agencies attempt to fill the gaps, need is greater than the resources available.



More residents in Mahoning County have no access to a vehicle than other counties in the region and in the state overall, but the numbers are small.

Why was this need not chosen as a priority health issue?

Although transportation is a need within the Akron Children's service area, focus group participants did not identify this issue as one for a hospital system to address. While the groups recognized that lack of transportation can have negative impacts on health, it was almost always framed around access to services, rather than a health need itself. Akron Children's will continue to work with community—based and governmental organizations to improve access for their patients and their families. The ad hoc committee did not see it as feasible for the activities of Akron Children's to improve this health need.

Youth Substance Use

What makes it a significant health need?

A greater share of youth in the region are using tobacco than the state average. Surveys of students indicate a higher rate using or abusing drugs and alcohol than seeking treatment. Community leaders stated that casual acceptance of marijuana use increases the challenge of drug prevention education in schools. There is a growing concern among parents and caregivers about vaping.

Why was this need not chosen as a priority health issue?

Data on this issue was mixed. While more young people are using tobacco, use of alcohol and marijuana were below the state average in this region. Substance use by caregivers was considered by community leaders and focus group participations to be of much greater concern for children's health in the region than youth substance use. Vaping may be an emerging issue, but it was not one that the ad hoc committee believed could be significantly impacted by activities of Akron Children's Hospital.

Percent of Youth (Ages 12-17) Who Used Tobacco Products in the Past Month



Trumbull, Ashtabula Stark, Mahoning

Data Source: Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014-2016.

NOTE: Data are provided for certain sub-state regions which group several counties together.

Progress Since the Last Community Health Needs Assessment

Following the 2016 CHNA, hospital staff organized into implementation teams surrounding each selected priority. They were charged with developing their global aims, along with objectives, strategies and metrics to demonstrate success. All teams were encouraged to partner with community groups as relevant. A summary of the work that took place to advance each priority is included in the Appendix and highlighted, below.

Asthma

Akron Children's Hospital sought to reduce the burden of asthma for our patients, their families, and our community. Substantial progress has been made toward this global aim and the specific aims under the asthma priority.

For example, the EZ Breathing asthma screening and education program was deployed to all Akron Children's Hospital primary care practices. More than 84,000 patients were screened and 2,800 new asthma patients were diagnosed.

As a result of the Asthma Care Management Team (ACMT)'s efforts, only one patient seen by ACMT was readmitted within 30 days of discharge in 2018 and 70,000 patients underwent a new social determinants of health risk screening in 2018.

Asthma is a priority health issue for Akron Children's Hospital during the 2019 assessment process, and work will build on these early successes.

Specific Aims under the Asthma Priority for the period between January 1, 2017 and December 31, 2019 include:

- Reduce hospitalizations for the asthma registry population at Akron Children's Hospital and reduce emergency department (ED) visits for asthma.
- Improve the individual and bundled components of Optimal Care for the registry population including ATP (Asthma Treatment Plan), ACT (Asthma Control Test), flu vaccine, and the bundled measure.
- Meet or exceed all Healthcare
 Effectiveness Data and Information Set
 (HEDIS) measures related to asthma
 embedded in value based contracts for
 the system.

Behavioral Health

Under the behavioral health priority, Akron Children's Hospital sought to expand a collaborative model of behavioral health services in our hospital-based pediatric offices.

During the past three years, the number of primary care locations with behavioral health services provided by Akron Children's Hospital has increased from one to 10 and an additional 10 locations have services provided through contractual agreements with community agencies. There are two sites which have both Akron Children's and a community agency

The specific aim under the behavioral health priority was to collaborate with Division resources and/or local mental health agencies to integrate behavioral health services in Akron Children's Hospital Pediatrics (ACHP) offices by December 31, 2019.

co-located in the practice. Thanks in part to these efforts, the number of patient visits for behavioral health in ACHP offices increased more than 180 percent to nearly 3,400 visits.

In addition to identified objectives, the behavioral health implementation team collaborated with local agencies on a variety of community engagement efforts including partnering on crisis response and trauma-informed care efforts in several counties, and developing a speakers bureau which provided 124 community presentations on topics such as suicide, gun violence, and trauma informed care.

Diabetes

The aim of Akron Children's Hospital's diabetes priority was to improve health outcomes and quality of life for patients with Type 1 diabetes by teaching them and their families how to self-manage and ultimately, live with the disease.

The team sought to improve diabetes education at the time of initial diagnosis and standardized onboarding and annual registered nurse education specific to Type 1 diabetes care. With the input of the Diabetes Parent Advisory Council, a readiness assessment and transition pathway was also developed, which included standardized education modules for patients and caregivers.

In 2018, 90 percent of the 215 students served by Akron Children's Hospital Endocrinology had diabetes management plans in place on the first day of school.

Infant Mortality

Reducing infant mortality in Mahoning County by 20 percent was a priority of Akron Children's Hospital.

Since Akron Children's Hospital is not a birthing hospital, efforts to reduce infant mortality centered on reducing sleep related deaths, educating mothers and health professionals, and collaborating with area birthing hospitals. Akron Children's Hospital secured grant funding to provide community education and more than

Another specific aim under the infant mortality priority was to reduce premature birth rate for Mahoning County.

2,500 safe sleep kits for newborns. Mahoning County showed a 50 percent decrease in sleep related deaths between 2016 and 2018.

Education of NICU mothers reached 98 percent of those expected to be eligible for progesterone in their next pregnancy, and more than 550 healthcare professionals were taught about birth spacing programs. Akron Children's Hospital also supported local Tobacco 21 ordinances and promoted smoking cessation, in order to reduce prematurity and low birth weight.

Injury Reduction

The aim of Akron Children's Hospital's injury reduction priority was to reduce preventable injuries and their impact on our communities.

Akron Children's consolidated injury data sources to a common data management program and increased education and awareness of pediatric injuries. In addition, the Timely Recognition of Abusive Injuries (TRAIN) Collaborative protocol was integrated into the emergency department and primary care practices, leading to a 50 percent increase in identification of sentinel injuries among infants under seven months old.

Next Steps & Implementation Plan

During the next few months, Akron Children's Hospital will take a number of steps to develop an implementation plan aligned with priority health issues.

- Internal implementation teams will be created. They will be asked to identify global and specific aims for the improvement of each priority health issue over the next three years, develop work plans and implement changes and/or strengthen partnerships.
- The CHNA steering committee will be reconfigured to reflect the hospital's changing priorities. Communication strategies will be put in place to regularly update the steering committee and other community partners on progress and to encourage feedback which will improve Akron Children's work.
- Evaluation plans with measureable targets will be established to monitor the status of implementation strategies and their impact.

Hospital and Community Assets

Knowing that meaningful change comes from collaboration, we will make every effort to build on the partnerships we currently have in place, and align with community initiatives to push forward on our chosen priorities.

Child Health F	Priority: Mental Health & Trauma
Akron Children's Hospital Resources	Community Resources*
 Lois and John Orr Family Behavioral Health Center Parent Partners Program Akron Children's Hospital Pediatrics (ACHP) primary care practices Regional Health Centers Mahoning Valley Child Advocacy Center Social Services School Health Services Adolescent Medicine 	 Government Agencies, Nonprofits and Businesses Local health departments Departments of Job and Family Services Mental Health and Recovery boards/agencies Law enforcement and juvenile justice agencies Community mental health service providers Community pediatric primary care and specialty practices Schools and school districts Educational Service Centers Family and Children First Councils Help hotlines and crisis centers Free clinics and Federally Qualified Health Centers Recreation and youth engagement programs/centers, such as Boys and Girls Clubs, and YMCAs Nonprofits providing wrap-around services Agencies serving cultural groups, such as Organización Cívica y Cultural Hispana Americana (OCCHA), Inc. Faith communities Existing Collaboratives and/or Initiatives Related to Mental Health & Trauma Mahoning County Juvenile Trauma Informed Council Taft Promise Neighborhood

Child Health Priority: Infant Mortality			
Akron Children's Hospital Resources	Community Resources*		
 NICU and Special Care Nurseries Maternal Fetal Medicine Children's Home Care Group Cribs for Kids/Safe Sleep programs Population Health Adolescent Medicine 	 Government Agencies, Nonprofits and Businesses Local health departments Women, Infant and Children (WIC) offices Departments of Job and Family Services Community Action agencies Local birthing hospitals and centers Community health workers and navigators Centering programs and doula services Obstetrics and gynecology practices Child care centers Free clinics and Federally Qualified Health Centers Nonprofits providing wrap-around services Agencies serving cultural groups, such as Organización Cívica y Cultural Hispana Americana (OCCHA), Inc. Faith communities 		
	 Existing Collaboratives and/or Initiatives Related to Infant Mortality Mahoning-Youngstown MY Baby's First Infant Mortality Coalition Mahoning Valley Pathways Community HUB Nurse Family Partnership 		

Child Health Priority: Asthma and Respiratory Care			
Akron Children's Hospital Resources	Community Resources*		
 ACHP primary care practices Pulmonary Medicine Allergy and Immunology IS/Epic Systems Quality Services Chronic Care Education and Support School Health Services Population Health 	 Government Agencies, Nonprofits and Businesses Metropolitan Housing Authorities Community Legal Aid Services Other landlord-tenant advocacy groups Local schools and school districts Community health workers and navigators Community pediatric primary care and specialty practices Local nonprofits and businesses providing pest, mold, and lead abatement and air quality purification services 		
	Existing Collaboratives and/or Initiatives Related to Asthma and Respiratory Care Taft Promise Neighborhood Mahoning Valley Pathways Community HUB Statewide Asthma Collaborative		

^{*}Please note that organizational structures and names of community based agencies vary by county. Local nonprofit agencies such as United Ways maintain comprehensive online databases and listings for accessing information about individual service providers and other available resources. We recommend consulting these resources to identify available assets by community location and/or population served.

In addition, a variety of state and national resources are available to support these efforts. The Children's Hospital Association, American Academy of Pediatrics, and American Lung Association are valuable sources of information on evidence-based and best practices, as well as important advocates to aid in advancing these and other priorities impacting child health and well-being.

Conclusion

Akron Children's Hospital's 2019 Community Health Needs Assessment examined the myriad factors that contribute to children's health in the 3-county Mahoning Valley region in Northeast Ohio. We sought to move beyond prevalence of conditions to consider other factors that contribute to child well-being. Our work built on the previous assessment, but brought in the emerging understanding of the influence of social determinants of health and Adverse Childhood Experiences on wellness over the course of a lifetime. Through interviews with community leaders and focus groups with parents and caregivers, we gathered a substantial amount of information which highlighted specific challenges and bright spots of promise for children in the region that are not captured in secondary data sources.

The priorities selected by Akron Children's Hospital – mental health and trauma, infant mortality and asthma and respiratory care – also build on work undertaken and lessons learned over the course of the previous three years. They reflect Akron Children's ongoing commitment to improving the health of children through outstanding quality patient care, education, advocacy, community service and research.

We wish to thank all those who provided input during the assessment process, including the many hospital administrators and providers who participated on the ad hoc committee. This report would not have been possible without the dozens of parents and caregivers who attended focus groups and shared their experience and the community leaders, listed in the appendix, who offered their expertise as part of the key informant interviews.

This report was approved by Akron Children's Hospital Board of Directors on October 24, 2019. Akron Children's and The Center for Community Solutions are responsible for the content and accuracy of this report. The following team members contributed to this report:

Akron Children's Hospital: Lauren Trohman, Bernett L. Williams, Heather Wuensch.

The Center for Community Solutions: Joe Ahern, Emily Campbell, Emily Davis, Emily Muttillo, Kate Warren.

To request copies and for more information

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