2019-2021 Community Health Needs Assessment

NATIONWIDE CHILDREN'S®

When your child needs a hospital, everything matters.

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Introduction

Nationwide Children's Hospital is pleased to have participated in the development and adoption of the Franklin County *HealthMap2019* as its Community Health Needs Assessment. Nationwide Children's had several representatives actively participate in the needs assessment with other members of the Central Ohio Hospital Council and community partners.

Our Mission

Nationwide Children's Hospital is committed to providing the highest quality of care to all children and their families regardless of ability to pay.

Our Vision

Best outcomes in everything we do, together delivering the best health care for children

Our Values

As one team we:

Do the right thing

We always act with integrity and honesty
We are inclusive and respectful of everyone

Create a safe day every day

We make safety our personal commitment
We communicate clearly and completely
We routinely seek input from others and always support our colleagues

Promote health and well-being

We balance work and life demands
We generate compassion, optimism and energy in one another
We advance our health, and the health of our community

Are agile and innovative

We embrace and manage change
We foster a streamlined and entrepreneurial environment
We generate and share new knowledge and ideas

Get results

We're accountable (we do what we say we'll do)
We're determined (we get the desired result)
We're committed to constant improvement
We leverage our diverse strengths

Nationwide Children's Hospital is located at 700 Children's Drive, Columbus, OH 43215. The main hospital is based in Franklin County. In developing its Community Health Needs Assessment, Nationwide Children's has defined the community it serves as the residents of Franklin County. Nearly 48% of the hospital's inpatient discharges and 44% of inpatient gross charges are from residents of Franklin County. More than 46.3% of the Medicaid Managed Care patients served are from Franklin County. In addition, of the 73 clinical off-site facilities that Nationwide Children's operates, 59 are in Franklin County.

Community input for this report was obtained through a series of meetings with community representatives on the Franklin County Community Health Needs Assessment Steering Committee, led by the Central Ohio Hospital Council. Individuals representing the broad interests of the community served by our organization participated on the steering committee. Refer to pages 3 through 5 of the Franklin County *HealthMap**2019*** for names of those who participated.

As required by the 501 (r), members of the Nationwide Children's Hospital Neighborhood Advisory Committee, consisting of Franklin County residents, were consulted and provided input. They helped determine and subsequently prioritize health needs, as well as identify resources and agencies to assist in addressing specific needs in the Community Health Needs Assessment. A staff member of Columbus Public Health, a local health community entity, also reviewed and provided feedback regarding the identified and prioritized health needs to ensure proper representation of these concerns.

Executive Summary

To address the needs of its community, Nationwide Children's Hospital has collaborated with dozens of community partners and agencies to create a roadmap to better health for all children in Franklin County. Although Nationwide Children's has already made significant progress toward providing high-quality, accessible and appropriate care for the children in its service area, it will continue to address the needs identified by community representatives and the Franklin County *HealthMap**2019*** through the methods discussed in the accompanying Implementation Strategy.

The Franklin County *HealthMap**2019*** identifies three priorities related to pediatric health: Income and Poverty, Maternal and Infant Health, and Mental Health and Addiction. Within the process of determining the priorities, detailed in the Franklin County *HealthMap**2019***, primary care (p. 37) and oral health care (dentistry, pp. 37, 39, 40) and asthma (pp. 39, 40), diabetes (pp. 77, 78, 82) and obesity (p. 44) were highlighted as significant needs within Franklin County. Because these needs are particularly relevant to pediatric health care, Nationwide Children's Community Health Needs Assessment steering committee added the two additional priorities of Access to Care and Chronic Conditions to address these needs. General strategies for addressing the five priorities are as follows:

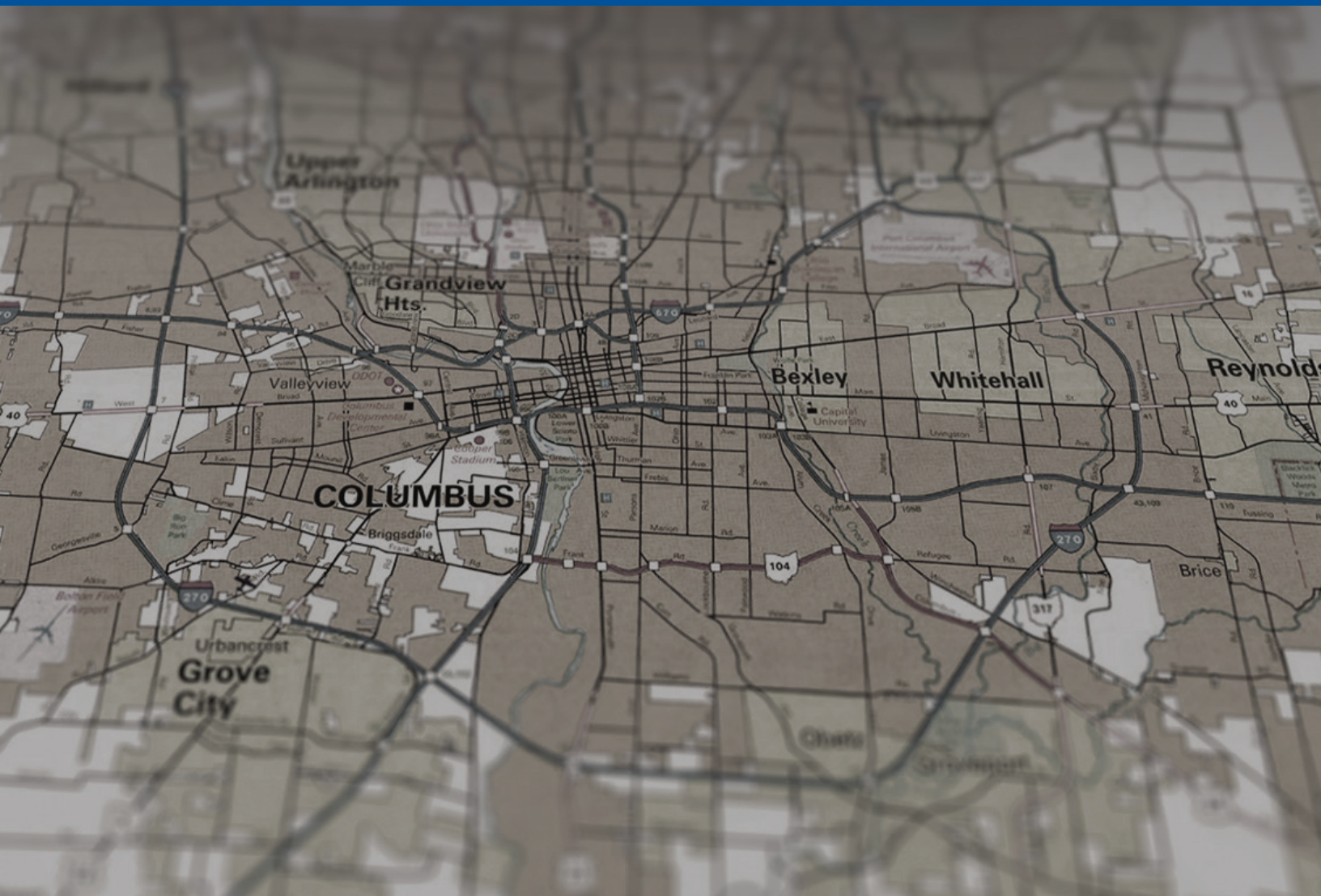
- **Access to Care:** Nationwide Children's will expand its presence in the communities it serves, work to advance patient-centered medical home models, and improve coordination of care to ensure community members have access to high-quality primary, dental, specialized, urgent and emergency care in appropriate settings.
- **Chronic Conditions:** Nationwide Children's will continue to reduce asthma and diabetes incidence and complications by optimizing treatment given through primary care visits, school-based programs and, when necessary, through hospitalizations.
- **Income and Poverty:** Nationwide Children's and partners will continue efforts to lift families and children out of poverty by providing affordable housing, job training and antipoverty programs, and to perform research needed to understand and effectively address food insecurity.
- **Maternal and Infant Health:** By participating in the endeavors of Ohio Better Birth Outcomes and providing care for infants in need through the Ohio Fetal Medicine Collaborative, Nationwide Children's will aim to increase the availability of birth control, prenatal care and immunizations to reduce prematurity and to prevent infant morbidity and mortality.
- **Mental Health and Addiction:** Nationwide Children's will maintain and expand inpatient, outpatient and community-based efforts to innovatively prevent, treat and minimize the impact of behavioral health problems in its target population by providing care in the most appropriate setting

This Community Health Needs Assessment includes the Nationwide Children's Hospital's Community Impact Report. The report describes Nationwide Children's efforts addressing the priority pediatric health care needs in the community identified in the Franklin County HealthMap2016 and impacts of the efforts.

Franklin County

HealthMap 2019

Navigating Our Way to a Healthier Community Together



Orientation to Franklin County HealthMap2019

Overview of Franklin County HealthMap2019

The Franklin County Community Health Needs Assessment Steering Committee is pleased to provide residents of central Ohio with a comprehensive overview of our community's health status and needs via the *Franklin County HealthMap2019*.

Franklin County HealthMap2019 is the result of a broad collaborative effort, coordinated by the Central Ohio Hospital Council (COHC), intended to help hospitals and other organizations better understand the health needs and priorities of Franklin County residents. As part of its mission, COHC serves as the forum for community hospitals to collaborate with each other and with other community stakeholders to improve the quality, value, and accessibility of health care in the central Ohio region.

Characterizing and understanding the prevalence of acute and chronic health conditions, access to care barriers, and other health issues can help direct community resources to where they will have the biggest impact. To that end, central Ohio's hospitals will begin using the data reported in *Franklin County HealthMap2019*, in collaboration with other organizations, to inform the development and implementation of strategic plans to meet the community's health needs. Consistent with federal requirements, *Franklin County HealthMap2019* will be updated in three years.

The Franklin County Community Health Needs Assessment Steering Committee hopes *Franklin County HealthMap2019* serves as a guide to target and prioritize limited resources, a vehicle for strengthening community relationships, and a source of information that contributes to keeping people healthy.

About the Franklin County HealthMap2019's Process

The Franklin County Community Health Needs Assessment Steering Committee, whose members are listed on page 5, worked on January 23, 2018 to identify the health indicators that are included in *Franklin County HealthMap2019*. To do this, the Steering Committee reviewed indicators that were included in the *Franklin County HealthMap2016* and, in small group discussions, decided whether to include them in the updated report.

Starting in February 2018, indicators identified by the Steering Committee for inclusion in the *Franklin County HealthMap2019* were collected and entered into a database. The Central Ohio Hospital Council contracted with the Center for Public Health Practice, within The Ohio State University College of Public Health, and Illuminology, a central Ohio-based research firm, to locate data and create a summary report of these health status indicators.

In early October, in preparation for its upcoming work session, the Steering Committee was sent a draft copy of the *Franklin County HealthMap2019*, along with a request for comments on and edits to the report. On Oct. 11, 2018, the Steering Committee worked to identify potential health issues for the *Franklin County HealthMap2019*. The Committee was divided into small groups, with each group being asked to identify discrete health issues within a specific report section as well as a brief description of why the discrete health issue was chosen.

At the Oct. 11 session, the Steering Committee also identified and prioritized the significant health needs for the *Franklin County HealthMap2019.* Through a "Gallery Walk" exercise, the Steering Committee viewed the issues identified by the small groups. After the group had a full understanding of the health issues identified, committee members voted, via "dot stickers," on the discrete health issues that they thought were significant health needs for Franklin County residents. Members were asked to consider the following criteria when voting on the significant health needs and prioritizing the significant health needs:

- **Seriousness**: Degree to which the health issue leads to death, disability, and impairs one's quality of life.
- **Severity of the Consequences of Inaction**: Risks associated with exacerbation of health issue if not addressed at the earliest opportunity.
- **Size**: Number of persons affected.

- **Equity**: Degree to which different groups in the county are affected by the health issue.
- **Feasibility**: Ability of an organization or individuals to reasonably combat the health issue given available resources, including the amount of control, knowledge, and influence the organization(s) have on the issue.
- **Change**: Degree to which the health issue has become more or less prevalent over time, or how it compares to state/national indicators.

From these exercises, the Steering Committee was able to complete its charge to identify and prioritize the significant health needs of Franklin County. The prioritized list, as well as the individual health issues that correspond to the health needs, are listed on pages 9 and 10.

In November 2018, the Steering Committee was asked to provide "Potential Partners/Other Resources," including existing healthcare facilities, community organizations and programs or other resources, which can help address and improve the health area. Inclusion of partners and resources in the *Franklin County HealthMap2019* is consistent with hospital requirements for conducting a needs assessment.

In December 2018, the Central Ohio Hospital Council conducted a review of the *Franklin County HealthMap2019* to ensure that it was compliant with Internal Revenue Service regulations for conducting community health needs assessments. COHC contracted with Bricker & Eckler LLP/INCompliance Consulting for guidance.

About the Data in the Franklin County HealthMap2019

Data for these health indicators came from national sources (e.g., U.S. Census, Centers for Disease Control and Prevention's Behavior Risk Factor Surveillance System), state sources (e.g., Ohio Department of Health's Data Warehouse, Ohio Hospital Association, Ohio Medicaid Assessment Survey), and local sources (e.g., Central Ohio Trauma System, Columbus Public Health). Rates and/or percentages were calculated when necessary. In some instances, comparable state and/or national data were unavailable at the time of report preparation and, accordingly, are not included in this report. All data sources are identified in a reference list following each section of the report.

In some cases, new indicators were identified for 2019 that were not included in the previous report (2016). For example, new indicators include the number of people living below the federal poverty level, data on fruit and vegetable consumption, rates of drug overdose deaths, percentage of people who use illicit drugs, and cases of elder abuse. In these instances, the most recent data are listed under 2019, and previous data are listed under the 2016 heading, even though they will not be found in the *HealthMap2016*. This was done for ease of reading. No information gaps that may impact the ability to assess the health needs of the community were identified while conducting the 2019 health needs assessment for Franklin County.

To ensure community stakeholders are able to use this report to make well-informed decisions, only the most recent data available at the time of report preparation are presented. To be considered for inclusion in *Franklin County HealthMap2019*, indicator data must have been collected or published by 2014. Lastly, although the COHC-member hospitals have service areas that extend across central Ohio, for the purposes of this report, the local geographic focus area is Franklin County.

COHC would like to thank Amber Yors with the Ohio Hospital Association, Roxanna Giambri from Central Ohio Trauma System, and Justina Moore from the Ohio Department of Health for providing a substantial amount of data for sections in *Franklin County HealthMap2019*. COHC would also like to acknowledge Leslie Carson and Mackenzie Aughe, MPH students, for compiling and updating the electronic repository of data sources used in this report.

How to Read This Report

Franklin County HealthMap2019 is organized into multiple, distinct sections. Each section begins with a sentence that briefly describes the section, and is then followed by a "call-out box" that highlights and summarizes the key findings of the data compilation and analysis, from the researchers' perspectives. For some indicators, the related U.S. Department of Health and Human Services *Healthy People 2020* goals are included with Franklin County's status indicated as "met" or "not met."

Each section includes several tables, designed to allow the reader to easily compare the most recent Franklin County data to historical Franklin County data, as well as state and national data. Most tables include the column headers Franklin County, Ohio, and the United States. Within the Franklin County header, there are three columns, labeled HM2013, HM2016 and HM2019. HM2019 references the most recent data presented in *HealthMap2019.* HM2016 references *HealthMap2016* or relevant historical data, and HM2013 references *HealthMap2013* or relevant historical data. Throughout this report, the phrase "not available" is used within the tables when data was not presented previously or is not accessible.

In each table, the HM2019 column also includes an upward-facing triangle (▲) if HM2019 figures represent an increase of 10% or greater over those observed in HM2016. A downward-facing triangle (▼) indicates that HM2019 figures are at least 10% lower than HM2016. Use caution when interpreting these indicators next to small numbers, which only need relatively small changes to be flagged as a 10% difference.

The Community Health Needs Assessment Steering Committee

Work on *Franklin County HealthMap2019* was overseen by a Steering Committee consisting of the following individuals and their respective organizations. Consistent with federal requirements for conducting health needs assessments, entities which represent specific populations within the community are highlighted. All other entities listed represent all populations within the community.

Central Ohio Area Agency on Aging (representing the senior community)
- Lynn Dobb

Central Ohio Hospital Council
- Jeff Klingler

Central Ohio Trauma System
- Jodi Keller

The Ohio State University College of Public Health, Center for Public Health Practice
- Joanne Pearsol
- Andy Wapner

Columbus Public Health (special knowledge of and expertise in public health)
- Kathy Cowen
- Melissa Sever

Franklin County Public Health (special knowledge of and expertise in public health)
- Theresa Seagraves

Mount Carmel Health System
- Candice Coleman
- Sister Barbara Hahl
- Jackie Hilton

Nationwide Children's Hospital

- Carla Fountaine
- Libbey Hoang

Ohio Department of Health, Disability and Health Program (representing the disabled community)

- David Ellsworth

OhioHealth

- Shannon Ginther

The Ohio State University Wexner Medical Center

- Wanda Dillard
- Deborah Frazier
- Beth Necamp
- Chasity Washington

PrimaryOne Health (representing low-income, medically underserved and homeless populations)

- John Tolbert

United Way of Central Ohio (representing low-income, medically underserved, and minority populations)

- Lisa Courtice

Input from all required sources was obtained for this report. No written comments on the *HealthMap2016* were received by the Central Ohio Hospital Council.

COHC contracted with various parties to assist with conducting the *Franklin County HealthMap2019*. Representatives of those organizations, along with their qualifications and addresses, are provided below.

Bricker & Eckler LLP/INCompliance Consulting— located at 100 South Third Street, Columbus, Ohio 43215. Bricker & Eckler LLP, provided overall guidance in ensuring that the conduct of the CHNA was compliant with the Internal Revenue Service regulations. Jim Flynn is a managing partner with Bricker & Eckler LLP and has 28 years of practice experience related to health planning matters, certificate of need, non-profit and tax-exempt health care providers, and federal and state regulatory issues. Christine Kenney has over 39 years of experience in health care planning and policy development, federal and state regulations, certificate of need, and assessment of community need.

Center for Public Health Practice – located within the College of Public Health at The Ohio State University, 1841 Neil Avenue, Columbus, OH 43210. The Center, represented by Andrew Wapner, DO, MPH, Joanne Pearsol, MA, MCHES, Leslie Carson, MPH candidate, and Mackenzie Aughe, MPH candidate, provided data collection support and edits to the final CHNA report. The Center was also represented on the CHNA Steering Committee. Center staff combine for over 40 years of experience in local, state, and academic public health and routinely provide health needs assessment services.

Illuminology – located at 5258 Bethel Reed Park, Columbus, OH 43220. Illuminology, represented by Orie V. Kristel, Ph.D., led the process for locating health status indicator data and creating the summary report. Dr. Kristel is CEO of Illuminology and has over 20 years of experience related to research design, analysis, and reporting, with a focus on community health assessments.

Franklin County Zip Codes

Below is a map of Franklin County with each zip code displayed. Throughout this report, key data available by zip code are presented visually in a map like this.

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Prioritized Health Needs of Franklin County Residents

This section lists the Prioritized Health Needs of Franklin County.

The significant health needs facing Franklin County residents, as identified by the Steering Committee, are mental health and addiction, income and poverty issues, and maternal and infant health. These health needs are interrelated, and in many cases are likely co-occurring. For example, pregnant women who struggle to access quality housing or food may be at greater risk for their children to develop health problems.

For each of these prioritized health needs, additional information such as ethnicity, age, and zip code-level data are incorporated into the report when available. These sections are set apart, and labeled "A Closer Look."

Mental health and addiction needs are the top priority for Franklin County. Mental health needs account for a significant number of emergency department admissions, and more mental health providers are needed. Deaths from drug overdoses, especially from opiates, are increasing at alarming rates.

Priority #1: Mental Health and Addiction	
Key health needs	**See pages**
Mental health	• 66-70
• Providers	• 37-38
• ED visits	• 80
Drug overdose deaths	• 46-51
• Opioid overdoses	• 52-53
• Narcan administrations	• 47, 54

The all-encompassing concern of poverty facing many Franklin County residents is the second highest priority health need. Struggling to pay for housing and food can be linked to a number of health issues. As one example of this problem, the percent of households spending a significant percentage (i.e., at least 30%) of their income on housing has increased over time in Franklin County.

Priority #2: Income / Poverty	
Key health needs	**See pages**
Income / Poverty	• 17-21
Housing	• 21-23
Food access	• 24-26

The third highest priority for Franklin County is maternal and infant health, specifically the health of pregnant women before delivery along with the need to prevent preterm births. While infant mortality was not selected here as a priority health need, it is closely related to pre-pregnancy health and preterm births, so additional data are included.

Priority #3: Maternal and Infant Health	
Key health needs	**See pages**
Health before pregnancy	• 62-64
Preterm births	• 60-62
Infant mortality	• 58-60

For a list of potential partners and resources that could be utilized to address these three priorities, see pages 103-105.

For context, Ohio's 2017-2019 State Health Improvement Plan (SHIP) identified three priority health topics (or, general areas of focus) that communities should consider when planning to improve the population's health. These three health topics include mental health and addiction, chronic disease, and maternal and infant health, as shown below. For each of these priority health topics, the Ohio 2017-2019 SHIP also identified specific priority health outcomes; these are also listed in the table below. Overall, there is a good alignment between the health priorities identified by *HealthMap2019* and Ohio's 2017-2019 SHIP.

Health Priority Topics And Outcomes Identified By Ohio's 2017-2019 SHIP

Mental Health and Addiction	Chronic Disease	Maternal and Infant Health
Depression	Heart disease	Preterm births
Suicide	Diabetes	Low birth weight
Drug dependency / abuse	Child asthma	Infant mortality
Drug overdose deaths		

During the prioritization session, several other health indicators were considered important enough to make it to the final round of voting, though they did not receive as many votes and therefore were not considered significant health needs. In order of number of votes received, from most to least, these included:

- Sexually transmitted infections;
- Chronic respiratory disease;
- Youth suicide;
- Homicide;
- Access to mental health providers;
- Obesity; and
- Nutrition.

Community Profile

While the population of Franklin County has increased, the demographic profile of its residents and households has remained largely consistent.

Franklin County Residents

		Franklin County			
		HM2013	HM2016	HM2019	
Total Population[1]	Population of Franklin County	1,163,414	1,212,263	1,264,518	
Gender[1]	Male	48.7%	48.7%	48.8%	
	Female	51.3%	51.3%	51.2%	
Age[1]	Under 5 years	7.1%	7.2%	7.3%	
	5-19 years	19.9%	19.4%	19.0%	
	20-64 years	62.9%	62.8%	62.3%	
	65 years and over	9.9%	10.6%	11.3%	
Race[1]	White	70.1%	69.1%	67.6%	
	African American	21.4%	21.2%	22.2%	
	Asian	3.9%	4.2%	5.0%	▲
	American Indian / Alaska Native	0.2%	0.1%	N	
	Native Hawaiian / Other Pacific Islander	N	N	N	
	Some other race	1.5%	1.7%	1.2%	▼
	Two or more races	2.9%	3.6%	3.8%	
Ethnicity[1]	Hispanic or Latino (of any race)	4.8%	5.0%	5.3%	
Marital Status[2]	Never married	36.1%	39.4%	39.7%	
	Now married (except separated)	44.7%	42.4%	42.0%	
	Divorced or Separated	14.0%	13.4%	14.1%	
	Widowed	5.2%	4.8%	4.3%	▼
Veterans[2]	Civilian veterans	8.9%	6.9%	6.5%	
Disability Status[3]	Total with a disability	11.0%	12.1%	11.8%	
	Under 18 years with a disability	3.9%	4.7%	4.6%	
	18 to 64 with a disability	10.0%	10.7%	10.3%	
	65 years and over with a disability	35.4%	38.0%	35.8%	
Disability by Type[1]	Hearing Difficulty	2.6%	2.9%	3.1%	
	Vision Difficulty	1.9%	2.0%	1.8%	
	Cognitive Difficulty (age 5+)	5.7%	5.9%	5.4%	
	Ambulatory Difficulty (age 5+)	6.5%	6.4%	6.3%	
	Self-Care Difficulty (age 5+)	2.5%	2.5%	2.4%	
	Independent Living Difficulty (age 18+)	5.4%	5.5%	4.8%	▼

N=data cannot be displayed because the number of sample cases is too small

While there are more households in Franklin County, the characteristics of these households remain stable.

Franklin County Households

		Franklin County			
		HM2013	HM2016	HM2019	
Total[1]	Number of households	477,235	476,532	502,932	
Household Size[1]	Average household size	2.4	2.5	2.5	
	Average family size	3.1	3.2	3.2	
Household Type[1]	Family households	58.3%	57.7%	58.0%	
	Nonfamily households	41.7%	42.3%	42.0%	
No Vehicle[3]	Households without a vehicle	7.8%	8.3%	7.8%	
Grandparents as Caregivers[3]	Children living with a grandparent	5.2%	5.2%	6.1%	▲
	Children living with a grandparent who is responsible for them	3.0%	3.8%	3.6%	
Language Spoken at Home[2]	English only	89.4%	87.3%	86.8%	
	Speak a language other than English	10.6%	12.7%	13.2%	

References

[1] U.S. Census Bureau, American Community Survey 1-Year Estimates, 2016 (HM2019), 2013 (HM2016), 2010 (HM2013)

[2] U.S. Census Bureau, American Community Survey 1-Year Estimates, 2016 (HM2019), 2013 (HM2016); U.S. Census Bureau, American Community Survey 5-Year Estimates; 2005-2009 (HM2013)

[3] U.S. Census Bureau, American Community Survey 1-Year Estimates, 2016 (HM2019), 2013 (HM2016), 2009 (HM2013)

Social Determinants of Health

This section describes the socio-economic aspects of Franklin County residents that affect their health.

Health Care Access Indicators

This section describes indicators that describe the population's access to health care.

Key Findings – Social Determinants of Health (Health Care Access)

The percentage of Franklin County residents with insurance continues to increase, suggesting there may be increasing access to health care. However, this percentage is still below the *Healthy People 2020* goal of insuring 100% of adults under age 65.

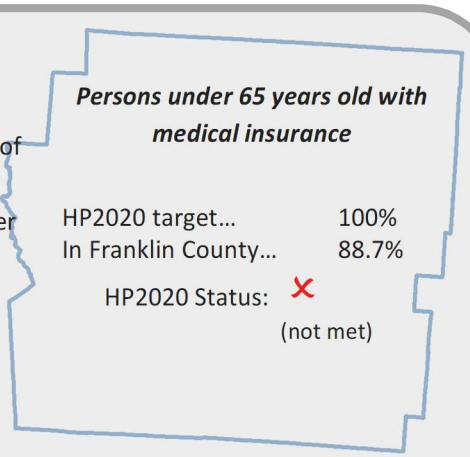
The percentage of Franklin County residents that have health insurance coverage has increased slightly since the previous *HealthMap* (86.9% to 89.8%).

Individuals With Health Insurance[1]

	Franklin County			Ohio	United States
	HM2013	HM2016	HM2019	HM2019	HM2019
Total with insurance	**85.4%**	**86.9%**	**89.8%**	**91.5%**	**88.3%**
Private health insurance	69.2%	67.5%	68.6%	69.4%	66.7%
Public health coverage	25.0%	27.8%	29.8%	34.6%	33.0%
Group VIII Medicaid coverage	Not available	Not available	5.6%	6.1%	4.8%
Under 18 years old	91.8%	94.0%	95.1%	95.4%	94.1%
18-64 years old	81.0%	82.4%	86.4%	88.1%	83.6%
65 years old+	Not available	99.0%	98.8%	99.5%	99.1%

Healthy People 2020 Goal

How does Franklin County match up with national objectives? As part of its *Healthy People 2020* initiative, the Department of Health and Human Services set a goal that 100% of Americans under age 65 would have health insurance by the year 2020. Currently, Franklin County does not meet this target, as 88.7% of people under 65 have medical insurance.



Among Franklin County residents with health insurance, the most common type of health care is employment based insurance. The percentage of residents with public health insurance as their only source of insurance has increased since the last *HealthMap.* Note that residents who have health insurance could have more than one type of insurance. For example, someone with "Direct-Purchase Insurance" may also have "VA Health Care." In the following table, the "Total" column provides data on those who have the specified type of coverage either as their single source of health care or in addition to another type of health care. The "Only Source of Insurance" column provides data on only those who have the specified type of coverage as their single source of health care.

Type of Health Insurance in Franklin County[2]

		Total			Only Source of Insurance			
		HM2013	HM2016	HM2019	HM2013	HM2016	HM2019	
Private Health Insurance Coverage	**Total with private health insurance**	**69.2%**	**67.5%**	**68.6%**	**Not available**	**57.5%**	**58.5%**	
	Employment-based health insurance	61.5%	58.9%	60.0%	53.4%	51.7%	52.7%	
	Direct-purchase health insurance	10.3%	10.2%	10.0%	4.6%	5.5%	5.4%	
	TRICARE/military health coverage	1.6%	1.3%	1.4%	0.4%	0.4%	0.4%	
Public Health Insurance Coverage	**Total with public health insurance**	**25.0%**	**27.8%**	**29.8%**	**Not available**	**17.7%**	**19.5%**	▲
	Medicaid/CHIP/state specific public coverage	15.3%	17.3%	18.9%	12.0%	14.1%	15.5%	
	Medicare coverage	11.2%	11.9%	12.2%	2.6%	3.3%	3.7%	▲
	VA health care	1.3%	1.7%	1.7%	0.2%	0.3%	0.3%	

In Franklin County, 82.5% of adults have one place they usually go when sick or need advice about their health.

Persons with Usual Source of Medical Care[3]

	Franklin County			Ohio
	HM2013	HM2016	HM2019	HM2019
Individual has one place they usually seek medical care	Not available	82.7%	82.5%	85.2%

Income/Poverty Indicators

This section describes income and poverty indicators that affect health.

Key Findings – Social Determinants of Health (Income/Poverty)

From *HealthMap2016* to *HealthMap2019*, median household income has increased slightly, however many other poverty indicators remain steady, such as the percentage of families and children living below the federal poverty line and reliance on food stamps.

In addition, the percent of households who spend at least 50% of their income on housing costs has increased since the last *HealthMap*.

In Franklin County, the median household income is $54,037, which is higher than the median in Ohio, but slightly lower than the national figure. There are higher percentages of both families and children living below 100% of the federal poverty level in Franklin County than in Ohio or the United States. These percentages have remained steady since the previous *HealthMap* (12.2% to 12.5% for families and 24.8% to 24.5% for children). Also, 53.6% of children enrolled in school in Franklin County are eligible for free or reduced lunches, a higher percentage than in Ohio overall.

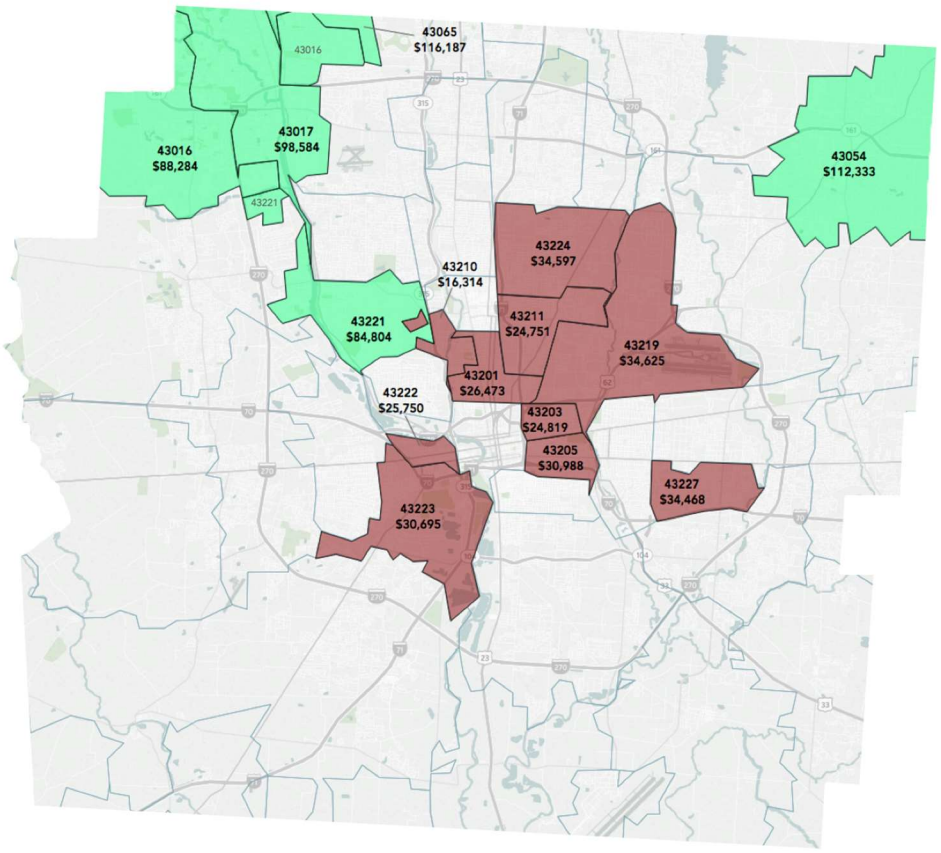
Income and Poverty

		Franklin County			Ohio	United States
		HM2013	HM2016	HM2019	HM2019	HM2019
Household Income[4]	Per capita income	$27,002	$28,283	$30,098	$27,800	$29,829
	Median household income	$49,041	$50,877	$54,037	$50,674	$55,322
	Mean household income	$65,006	$69,197	$73,666	$68,341	$77,866
Total People Below Federal Poverty Level (FPL)		154,772	209,500	205,186	1,732,839	46,932,225
Poverty Status of Families[5]	Below 100% FPL	12.0%	12.2%	12.5%	11.2%	11.0%
	100% - 199% FPL	13.7%	15.0%	15.0%	15.2%	16.0%
	At or above 200% FPL	74.3%	72.8%	72.5%	73.6%	73.0%
Poverty Status of Those Under 18 Years Old[5]	Below 100% FPL	21.2%	24.8%	24.5%	23.1%	21.2%
	100% - 199% FPL	19.6%	20.0%	21.3%	21.3%	22.1%
	At or above 200% FPL	58.6%	55.2%	54.3%	55.7%	56.7%
Children Eligible for Free or Reduced Lunch[6]		Not available	54.2%	53.6%	46.5%	Not available

FPL=Federal Poverty Level

A Closer Look, Priority #2: Median Household Income

The ten Franklin County zip codes with the lowest median household income in Franklin County are shaded in red in the map below; the five zip codes with the highest median household income are shaded in green. The median household income is lowest in 43210, 43211, and 43203.*

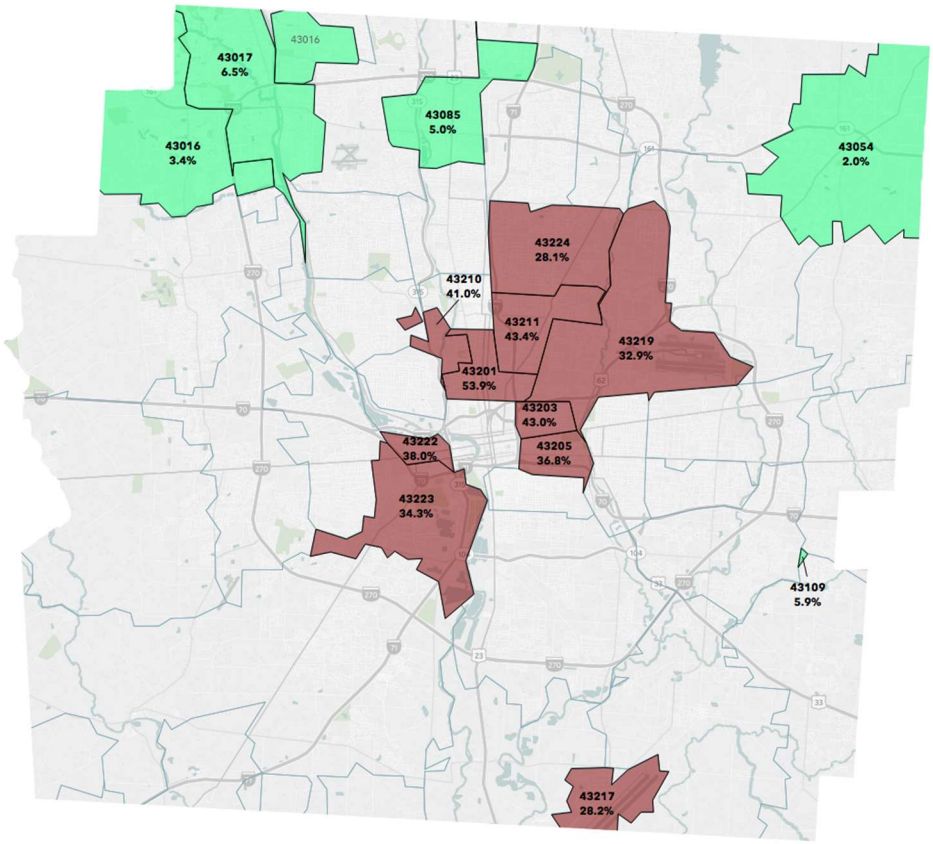


In addition, considering only households with children, the zip codes with the lowest median income are 43201, 43205, 43203, 43211, and 43222.+

*"A Closer Look" References: *U.S. Census Bureau, American Community Survey 1-Year Estimates, 2016;*
+U.S. Census Bureau, American Community Survey 5-year Estimates

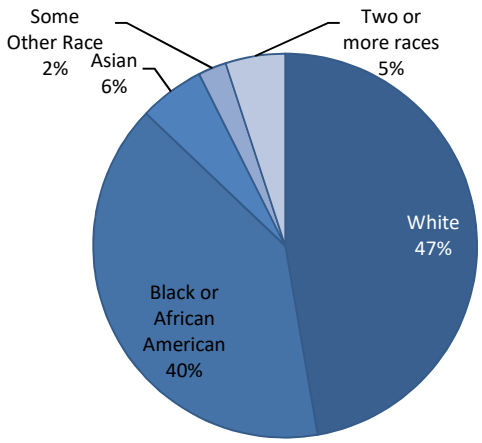
A Closer Look, Priority #2: Living Below the Federal Poverty Level

In Franklin County, over 200,000 people, or about 17% of the population, live below the Federal Poverty Level (FPL). The ten zip codes with the highest percentage of the population living below the FPL are shaded in red in the map below. Over 40% of those living in 43201, 43211, and 43203 have a household income below the FPL. The zip codes with the smallest percentage of people living below the FPL are shaded in green.*

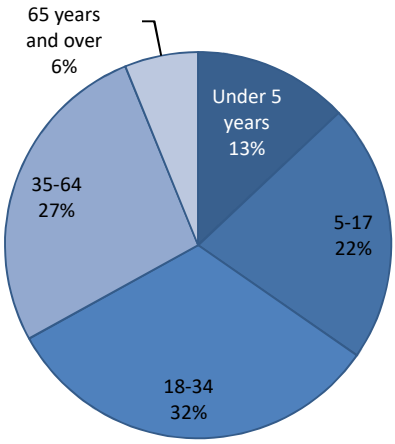


The ethnicity, age, and gender breakdowns of the population living below the FPL in Franklin

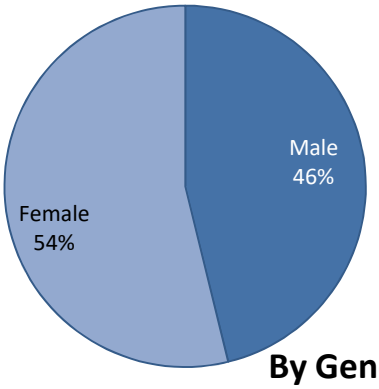
County are shown in the figures below.[+]



By Ethnicity



By Age



By Gender

"A Closer Look" References: [*]U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016;
[+]U.S. Census Bureau, American Community Survey 1-Year Estimates, 2016

Homelessness, and/or the struggle to maintain housing, can also affect health. A "Point in Time Count" (PIT) estimates the total number of homeless people who are and are not using a shelter on a single night of the year. Homeless persons were considered part of a family if they belonged to a group consisting of at least one adult and at least one child under age 18.

In Franklin County, the percentage of homeless people using an emergency shelter who are part of a family has decreased since the last *HealthMap.* Over three-fourths of families using emergency shelters in Franklin County are African American.

A higher percentage of Franklin County households have housing costs of at least 50% of their income when compared to the last *HealthMap*.

Housing and Homelessness

		Franklin County**				Ohio		United States	
		HM2013	HM2016	HM2019		HM2019		HM2019	
Point in Time (PIT) Count of Emergency Shelter Use[7*]	**Total persons***	**1,104**	**1,245**	**1,229**		**6,759**		**262,430**	▼
	Persons in families*	35.4%	36.3%	32.4%	▼	35.1%		46.3%	
Composition of Families Using Emergency Shelters[8]**	Black or African American	Not available	73.0%	76.0%		Not available		Not available	
	White	Not available	26.0%	22.0%	▼	Not available		Not available	
	Other / Missing	Not available	1.0%	2.0%	▲	Not available		Not available	
	Hispanic	Not available	3.0%	3.0%	□	Not available		Not available	
Households with Housing Costs ≥50% of Income[9]	Percent of households	15.6%	14.6%	17.2%	▲	16.1%	▲	20.5%	▲
Households with Housing Costs ≥30% of Income[10]	Percent of households	27.9%	26.3%	31.9%	▲	28.3%	▲	32.9%	▲

**Columbus, not Franklin County; US data include transitional housing*

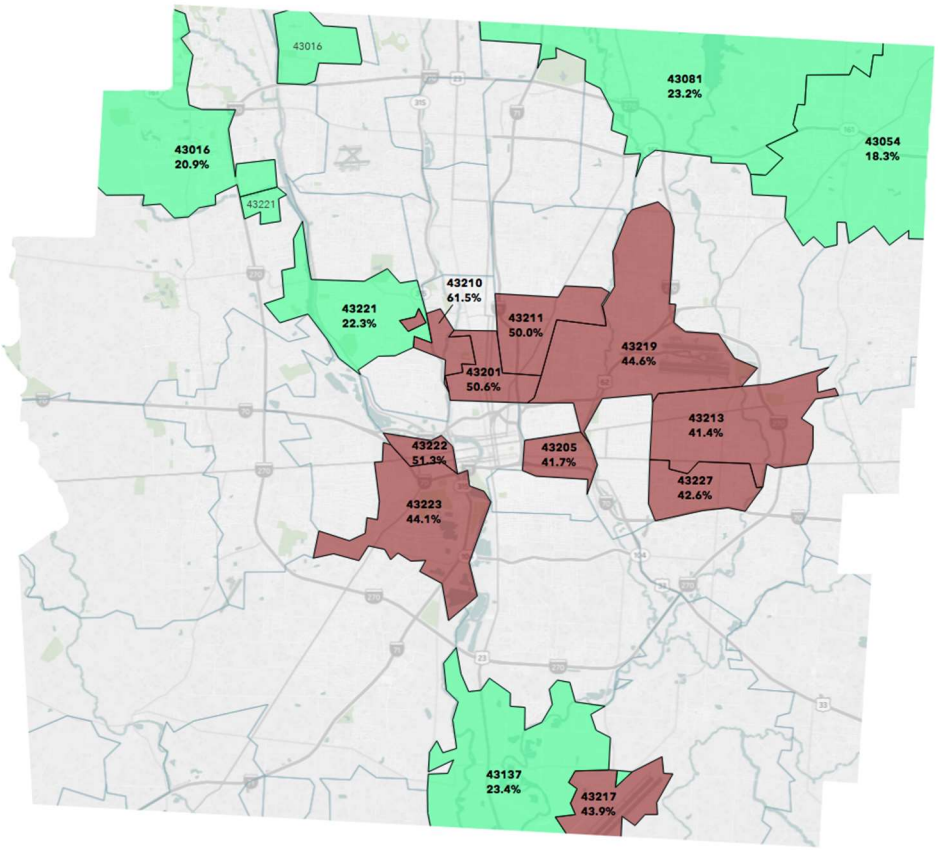
***Columbus, not Franklin County*

In Columbus, the eviction rate is 4.6 per 100 renter homes, similar to the eviction rates in Cleveland (4.6) and Cincinnati (4.7). In other Midwestern cities, the eviction rate varies from 1.1 in Chicago, to 5.2 in Detroit, and 7.3 in Indianapolis.[11]

The zip code with the highest number of households with housing costs at least 50% of their income in Franklin County is 43210, followed by 43222, 43201, 43211, and 43109.[12]

A Closer Look, Priority #2: Housing Costs ≥30% of Income

There are four zip codes in Franklin County where half of households spend a minimum of 30% of their income on housing. The ten zip codes with the highest percentage of households who spend this proportion of their income on housing costs are shaded in red in the map below; the five zip codes with the lowest percentage spending this on housing are shaded in green.



"A Closer Look" Reference: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016

The ability to access healthy, fresh food can also affect health. Food insecurity is defined by the United States Department of Agriculture as a lack of access to enough food for an active, healthy life and a limited availability of nutritionally adequate foods. In Franklin County, 17.4% of residents are food insecure.

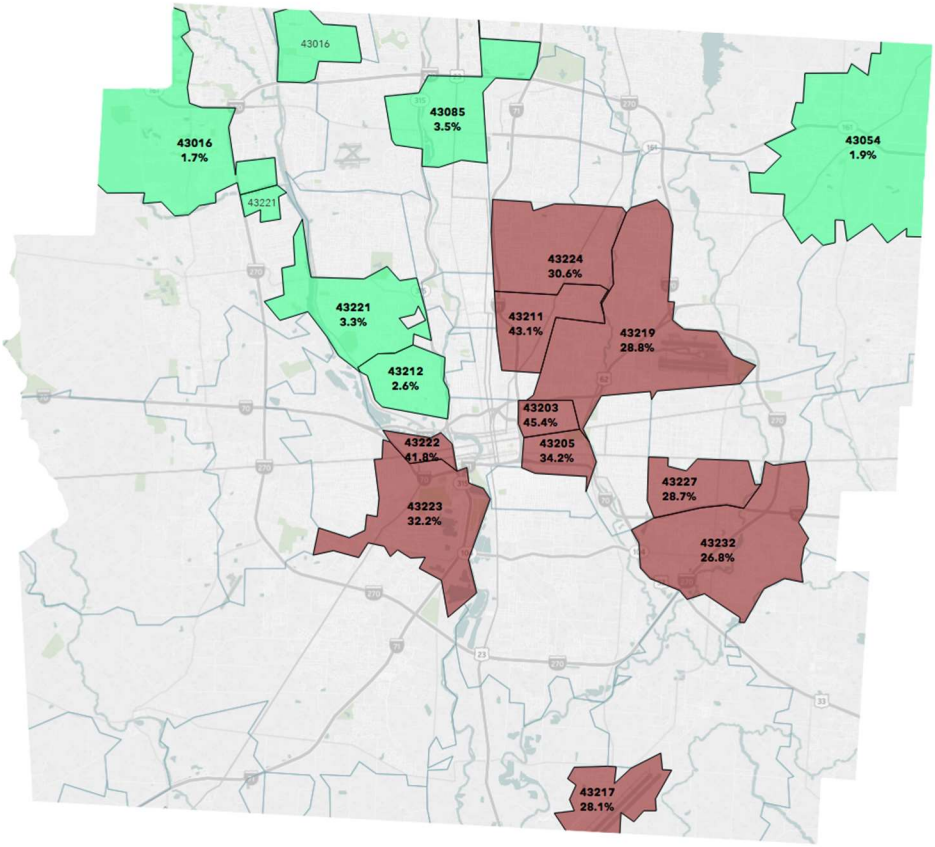
Over half of all the Franklin County households using food stamps have children under the age of 18 present.

Food Access

		Franklin County			Ohio	United States
		HM2013	HM2016	HM2019	HM2019	HM2019
Food Insecure Households[13]	**Total**	Not available	17.7%	17.4%	16.0%	13.4% ▼
	Children	Not available	22.3%	20.4%	21.9% ▼	17.9% ▼
Food Stamp Households[14]	**Total**	**12.4%**	**15.5%**	**14.6%**	**14.8%**	**13.0%**
	With one or more people 60 years and over	19.3%	22.4%	23.5%	26.6%	29.2%
	With children under 18 years	61.0%	51.7%	53.7%	49.5%	53.0%

A Closer Look, Priority #2: Food Stamp Households

In 43203, 43211, and 43222, over 40% of residents receive food stamps. The ten zip codes with the highest percentage of residents receiving food stamps in Franklin County are shaded in red in the map below; the five zip codes with the lowest percentage of residents receiving food stamps are shaded in green.*



As shown in the table below, 22% of households in Franklin County with children under 18 years old receive food stamp assistance, and 36% of households with a female householder only receive this assistance.[+]

Food Stamp Assistance, By Household Type

Household Type	% of HH type receiving SNAP
Married-couple family	7%
Nonfamily household	10%
With children under 18 years	22%
With no children under 18 years	9%
Male householder, no wife present	19%
Female householder, no husband present	36%

"A Closer Look" References: [*]U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016; [+]U.S. Census Bureau, American Community Survey 1-Year Estimates, 2016

Education Indicators

This section describes education indicators that are related to health.

Key Findings – Social Determinants of Health (Education)

On a positive note, Franklin County adults are more likely than Ohioans (overall) to have graduated from high school in four years and to have post-secondary degrees. However, Franklin County youth are still less likely than Ohio youth (overall) to be ready for kindergarten.

As shown in the table below, 38.4% of Franklin County adult residents have a Bachelor's degree or higher. This is higher than the state and national percentages (26.7% and 30.3%, respectively).

Educational Attainment[15]

	Franklin County			Ohio	United States
	HM2013	HM2016	HM2019	HM2019	HM2019
No high school	3.2%	3.2%	3.1%	3.0%	5.6%
Some high school (no degree)	7.9%	7.1%	6.6%	7.5%	7.4%
High school graduate	27.0%	25.7%	25.0%	33.8%	27.5%
Some college (no degree)	20.5%	21.0%	20.2%	20.6%	21.0%
Associate's degree	6.3%	6.7%	6.8%	8.4%	8.2%
Bachelor's degree	22.8%	23.4%	24.4%	16.7%	18.8%
Graduate/Professional degree	12.2%	13.0%	14.0%	10.0%	11.5%

Regarding high school graduation rates specifically, 9.7% of people in Franklin County aged 25 years and over have not graduated from high school. The groups with the highest percentage of members that have less than a high school diploma are those listing "Other" as their race (34.5%) and Hispanics (30.6%).

The four-year high school graduation rate is the percentage of ninth grade students that received a high school diploma four years later. As shown on the next page, Franklin County's four-year high school graduation rate is better than state and national figures.

High School Graduation

	Franklin County			Ohio	United States
	HM2013	HM2016	HM2019	HM2019	HM2019

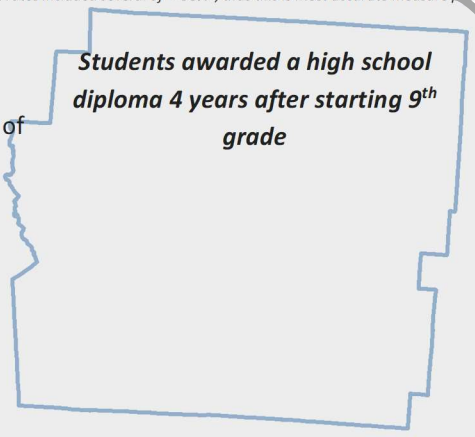
Adults with Less than a High School Diploma[2]	**Overall**	**11.1%**	**10.3%**	**9.7%**		**10.5%**	**13.0%**
	Male	11.0%	10.5%	9.9%		11.0%	13.7%
	Female	11.2%	10.1%	9.3%		10.0%	12.4%
	African American	Not available	Not available	14.2%		15.8%	15.7%
	American Indian & Alaskan native	Not available	Not available	16.5%		17.7%	20.7%
	Asian	Not available	Not available	12.9%		12.7%	13.7%
	Hispanic	Not available	Not available	30.6%		26.2%	34.3%
	Native Hawaiian & pacific islander	Not available	Not available	15.0%		16.6%	13.6%
	Other	Not available	Not available	34.5%		30.8%	39.8%
	Multiracial	Not available	Not available	9.9%		12.7%	13.3%
	White, non-Hispanic	Not available	Not available	7.0%		9.3%	8.0%
Four-Year High School Graduation Rate[16]	**Overall**	**Not available**	**88.6%**	**87.8%**		**83.6%**	**83.2%**
	Male	Not available	90.4%	>89.0%*		90.2%	Not available
	Female	Not available	92.3%	>91.8%*		92.3%	Not available
	African American, non-Hispanic	Not available	86.8%	76.2%	▼	84.3%	74.6%
	Asian or pacific islander	Not available	91.9%	81.1%	▼	88.4%	90.2%
	American Indian or Alaskan Native	Not available	Not available	Not available	□	66.7% ▲	71.6%
	Hispanic	Not available	79.8%	63.7%	▼	83.0%	77.8%
	Multiracial	Not available	88.8%	87.3%		86.0%	Not available
	White, non-Hispanic	Not available	92.8%	92.0%		92.0%	87.6%

Note: Gender and racial graduation rates for Franklin County & Ohio are an average of all individual school district gender and racial graduation rates

** Graduation rates included several of ">95%", thus this is most accurate measure possible*

Healthy People 2020 Goal

How does Franklin County match up with national objectives? As part of its *Healthy People 2020* initiative, the Department

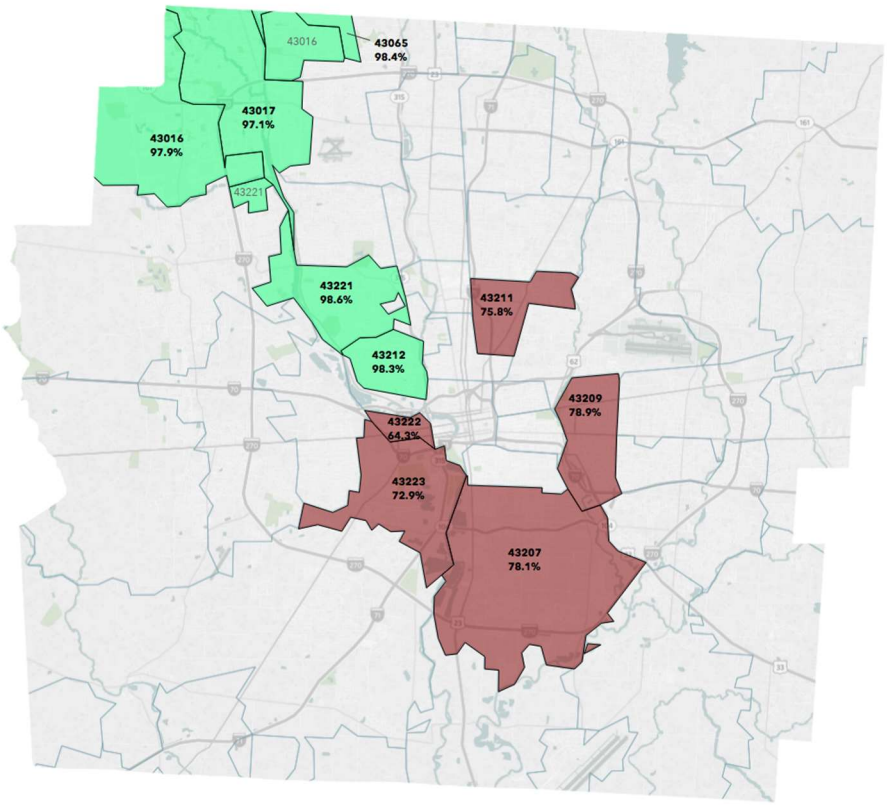


of Health and Human Services set a goal that 82.4% of Americans would graduate high school four years after
starting 9th grade by the year 2020. Currently, Franklin
County exceeds this target, as 87.8% of students graduate high school in four years.

HP2020 target…	82.4%
In Franklin County…	87.8%
HP2020 Status:	✓ (met)

The school districts with the lowest high school graduation rates in Franklin County are Columbus City, followed by Whitehall City, Groveport Madison Local, South-Western City and Westerville City.[17]
The school districts with the highest high school graduation rates in Franklin County are Dublin City and Upper Arlington City, followed by New Albany-Plain Local, Canal Winchester Local, and Grandview Heights City.[17]

The Franklin County zip codes with the lowest percentage of residents with at least a high school diploma are shaded in red in the map below. The zip codes shaded in green have the highest percentage of residents with at least a high school diploma.[12]



The state of Ohio uses the Kindergarten Readiness Assessment-Literacy to determine if students are ready for kindergarten. Students' scores can place them into one of three bands, with Band 1 - Poor, Band 2 - Average, and Band 3 - High. Those scoring in Bands 2 and 3 are considered ready for kindergarten.

As measured by the Ohio Department of Education, only 73.4% of Franklin County children score in Bands 2 and 3 of Ohio's Kindergarten Readiness Assessment-Literacy.

Educational Proficiency

	Franklin County			Ohio
	HM2013	HM2016	HM2019	HM2019
Students ready for kindergarten[18]	Not available	68.8%	73.4%	77.2%
3rd graders with reading proficiency[19]	Not available	94.8%	91.4%	93.9%

The school districts with the lowest rates of kindergarten readiness in Franklin County are Whitehall City, followed by Columbus City, Reynoldsburg City, South-Western City and Groveport Madison Local.[20]

The school districts with the lowest rates of 3rd grade reading proficiency in Franklin County are Groveport Madison Local, followed by Columbus City, South-Western City, Whitehall City, and Reynoldsburg City.[20]

Employment Indicators

This section describes employment indicators that are related to health.

Key Findings – Social Determinants of Health (Employment)

From *HealthMap2016* to *HealthMap2019*, Franklin County's unemployment rate has decreased. Other employment indicators (e.g., the percentage of adults employed in various occupations and industries in Franklin County) have largely remained stable over time.

As shown by the table below, the percentage of Franklin County residents in the civilian labor force who are unemployed has decreased since the last *HealthMap* (6.6% to 3.9%), following a statewide and national trend.

Employment Status

		Franklin County				Ohio		United States	
		HM2013	HM2016	HM2019		HM2019		HM2019	
Not in Labor Force[4]	**Total**	**30.6%**	**30.5%**	**30.3%**		**36.7%**		**36.5%**	
In Labor Force[4]	**Total**	**69.4%**	**69.5%**	**69.7%**		**63.3%**		**63.5%**	
	Civilian labor force	69.3%	69.4%	69.6%		63.2%		63.1%	
	Armed forces	0.10%	0.09%	0.1%	▲	0.1%		0.4%	
Employment Rate of Civilian Labor Force[21]	Employed	92.9%	93.4%	96.1%		95.0%		95.7%	
	Unemployed	7.1%	6.6%	3.9%	▼	5.0%	▼	4.3%	▼
Annual Average Unemployment Rate*[21]		Not available	4.9%	4.0%	▼	5.0%		4.4%	

**Annual averages of all monthly estimates; seasonally adjusted*

Over 40% of all Franklin County residents are employed in management, professional or related occupations.

Employment Occupations[15]

	Franklin County			Ohio	United States
	HM2013	HM2016	HM2019	HM2019	HM2019
Management, professional, and related occupations	39.8%	41.4%	42.1%	35.4%	37.0%
Sales and office	27.7%	24.0%	24.9%	23.7%	23.8%
Service	15.7%	17.7%	16.8%	17.5%	18.1%
Production, transportation, and material moving	10.5%	11.3%	11.1%	15.8%	12.2%
Natural resources, construction, and maintenance	6.3%	5.5%	5.1%	7.6%	8.9%

Other Indicators

This section describes other socio-economic indicators related to health.

Key Findings – Social Determinants of Health (Other)

Compared to Ohio and the U.S., Franklin County has a smaller percentage of family households, but a larger proportion of family households with children.

Both violent and property crime rates overall have decreased since the last *HealthMap*, but remain higher than the statewide rates.

A "family household" includes two or more people related by birth, marriage, or adoption who live in the same dwelling. In Franklin County, 58.6% are considered family households, a lower percentage than the statewide and national percentages. However, a higher percentage of Franklin County households are family households with children under 18 compared to Ohio and the U.S.

Household Type[22]

		Franklin County				Ohio	United States
		HM2013	HM2016	HM2019		HM2019	HM2019
Family Households	**Total**	**59.1%**	**57.7%**	**58.6%**		**63.9%**	**65.4%**
	Married couple	41.0%	39.6%	39.7%		46.5%	47.9%
	Male householder, no wife present	4.3%	4.1%	4.8%	▲	4.6%	4.9%
	Female householder, no husband present	13.7%	14.1%	14.2%		12.8%	12.6%
Family Households With Own Children Under 18 Present	**Total**	**49.2%**	**47.6%**	**47.7%**		**42.1%**	**42.2%**
	Married couple	44.3%	42.3%	43.0%		37.0%	38.9%
	Male householder, no wife present	50.0%	49.1%	50.8%		51.0%	46.8%
	Female householder, no husband present	63.8%	62.1%	59.6%		57.3%	52.9%
Nonfamily Households	**Total**	**40.9%**	**42.3%**	**41.4%**		**36.1%**	**34.6%**
	Householder living alone	32.0%	32.1%	32.1%		30.1%	28.0%
	65 years and over living alone	7.9%	8.6%	8.4%		11.4%	10.7%

Regarding crime and safety levels in Franklin County, the total rates of both violent crime and property crime that occur for every 1,000 residents has decreased since the last *HealthMap*. When examining different types of

violent crime, the rate of murder and aggravated assault has increased slightly, while the rate of robberies has decreased. Note that the rate of rape has increased since the last *HealthMap* in Franklin County, across Ohio and the U.S., however this may be due to the different definition of rape since then.

Crime and Safety[23]

		Franklin County				Ohio		United States	
		HM2013	HM2016	HM2019		HM2019		HM2019	
Violent crime	**Total**	**5.1**	**4.5**	**3.8**	▼	**2.8**		**3.9**	
	Murder*	0.08	0.07	0.08	▲	0.05	▲	0.05	
	Rape**	0.6	0.5	0.8	▲	0.4	▲	0.4	▲
	Robbery	3.2	2.7	1.8	▼	1.0	▼	1.0	
	Aggravated assault	1.3	1.0	1.2	▲	1.3		2.5	□
Property crime	**Total**	Not available	47.2	34.4	▼	25.4		24.5	▼

Rate per 1,000 population

**US data include nonnegligent manslaughter*

***FC&OH: Defined as "forcible rape" for HM13, HM16, & "rape" in HM2019; US: "legacy definition" in HM13 & HM16, "revised definition" in HM19*

References

[1] U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016 (HM2019), 2010-2014 (HM2016), 2005-2009 (HM2013)

[2] U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016 (HM2019); U.S. Census Bureau, American Community Survey 1-Year Estimates, 2013 (HM2016), 2009 (HM2013)

[3] Ohio Colleges of Medicine Government Resource Center, Ohio Medicaid Assessment Survey, 2015 (HM2019), 2012 (HM2016)

[4] U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016 (HM2019), 2009-2013 (HM2016), 2005-2009 (HM2013)

[5] U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016 (HM2019); U.S. Census Bureau, American Community Survey 1-Year Estimates, 2013 (HM2016); U.S. Census Bureau, American Community Survey 3-Year Estimates, 2007-2009 (HM2013); Percentages for those less than 18 years below 100% FPL from American Community Survey 5-Year Estimates, 2005-2009 (HM2013)

[6] Ohio Department of Education, Data for Free and Reduced Price Meal Eligibility, FY2018 (HM2019), FY2016 (HM2016)

[7] Community Shelter Board (Franklin County), 2017 (HM2019), 2014 (HM2016), 2010 (HM2013); U.S. Department of Housing and Urban Development (Ohio and United States), 10/1/16-9/30/17 (HM2019), 2013 (HM2016), 2010 (HM2013)

[8] Community Shelter Board (Franklin County), FY2018 (HM2019), FY2014 (HM2016)

[9] U.S. Census Bureau, American Community Survey 1-Year Estimates, 2016 (HM2019), 2013 (HM2016), 2009 (HM2013)

[10] U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016 (HM2019), 2009-2013 (HM2016), 2006-2010 (HM2013)

[11] Princeton University Eviction Lab, Top Evicting Areas, 2016 (HM2019)

[12] U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016 (HM2019)

[13] Feeding America, “Map the Meal Gap,” 2015 (HM2019), 2012 (HM2016)

[14] U.S. Census Bureau, American Community Survey 5-Year Estimates, 2010-2014 (HM2019); U.S. Census Bureau, American Community Survey 1-Year Estimates, 2013 (HM2016), 2009 (HM2013)

[15] U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016 (HM2019), 2005-2009 (HM2013); U.S. Census Bureau, American Community Survey 1-Year Estimates, 2013 (HM2016)

[16] Ohio Department of Education (Franklin County and Ohio), 2016 (HM2019), 2012-2013 (HM2016); U.S. Department of Education (United States), 2014-2015 (HM2019), 2011-2012 (HM2016)

[17] Ohio Department of Education, Class of 2016 (HM2019)

[18] Ohio Department of Education (Franklin County), 2016-2017 (HM2019), (Ohio) 2015-2016 (HM2019), 2013-2014 (HM2016)

[19] Ohio Department of Education, 2016-2017 (HM2019), 2013-2014 (HM2016)

[20] Ohio Department of Education, 2016-2017 (HM2019)

[21] Ohio Department of Jobs and Family Services, Ohio Labor Market Information, Civilian Labor Force estimates, 2017 (HM2019); U.S. Census Bureau, American Community Survey 1-Year Estimates, 2013 (HM2016); U.S. Census Bureau, American Community Survey 5-Year Estimates, 2005-2009 (HM2013)

[22] U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016 (HM2019), 2006-2010 (HM2013); U.S. Census Bureau, American Community Survey 1-Year Estimates, 2013 (HM2016)

[23] Office of Criminal Justice Services, Crime by County Statistics (Franklin County and Ohio), 2016 (HM2019), 2012 (HM2016), 2009 (HM2013); FBI Criminal Justice Information Services Division (United States), 2016 (HM2019), 2012 (HM2016), 2009 (HM2013)

Health Resource Availability

This section describes the availability of health care providers and other health care resources for Franklin County residents.

Key Findings – Health Resource Availability

Franklin County residents now have greater access to certain types of health care providers (advance practice nurses, physician assistants,) and more Franklin County residents are visiting emergency departments. Fewer emergency department visits result in inpatient stays.

Access to needed dental care has improved for adults Franklin County and Ohio.

Regarding primary care providers, there are an increasing number of advanced practice nurses and physician assistants. The ratio of Franklin County residents per licensed advanced practice nurse is 703:1, meaning there is one licensed advanced practice nurse available for every 703 residents. This ratio has decreased from the previous *HealthMap* (846:1). Similarly, the ratio of residents to physician assistants has decreased since the last *HealthMap* (5,181:1 to 3,321:1)

Regarding mental health providers, the ratio of Franklin County residents per provider is lower than the statewide ratio for social workers and psychologists.

The ratio of Franklin County residents per physician (both MDs and DOs) has not changed much since the last *HealthMap* (239:1 to 234:1); neither has the ratio of residents per licensed optometrist (3,640:1 to 3,639:1).

Licensed Practitioners (Ratio of total population : practitioner)

		Franklin County				Ohio	
		HM2013	HM2016	HM2019		HM2019	
Primary Care Providers	Advanced practice nurses[1,2]	1,176:1	846:1	703:1	▼	692:1	▼
	Physician assistants[1]	Not available	5,181:1	3,321:1	▼	3,260:1	▼
Mental Health Providers	Social workers[1]	Not available	333:1	339:1		442:1	
	Chemical counselors[3,4]	Not available	1,341:1	1,137:1	▼	1,041:1	▼
	Psychologists[3,5]	Not available	2,305:1	2,379:1		3,716:1	
Dentists	Dentists[6]	1,256:1	1,259:1	1,337:1		1,704:1	
Physicians (Includes Primary Care and Specialists)	MDs & DOs[1,7]	264:1	239:1	234:1		240:1	
Optometrists/ Opticians	Optometrists[8]	3,827:1	3,640:1	3,639:1		5,245:1	
	Opticians[3,9]	Not available	4,376:1	4,785:1		3,825:1	

Next, the *HealthMap* turns to a review of emergency department (ED) utilization. The ED data presented in this report are from the four major health systems in Central Ohio, including OhioHealth (10 EDs), Mount Carmel (5 EDs), Ohio State University Wexner Medical Center (2 EDs), and Nationwide Children's Hospital (1 ED). These data do not include visits to private, freestanding EDs.

The total number of ED visits per 1,000 people in Franklin County has increased slightly since the last *HealthMap* (583.2 to 608.8), and remains higher than the number of visits statewide. When breaking down ED visits by treated and released and admitted, the rate of visits where patients were treated and released increased since the last *HealthMap,* while the rate of visits where patients were admitted decreased.

When patients are seen in the ED, they are assigned a "severity" rating between 1 and 5, with 1 being the least severe and 5 being the most severe. Level 1 health issues are "self-limited or minor," Level 2 issues are of "low to moderate severity," Level 3 issues are of "moderate severity," Level 4 issues are of "high severity, and require urgent evaluation by the physician but do not pose an immediate threat to life or physiologic function" and Level 5 issues "are of high severity and pose an immediate significant threat to life or physiologic function."
Regarding emergency department patients who were treated and then released, the majority of patients were classified as severity level 3. These severity classifications have changed since the last *HealthMap,* so comparisons cannot be made.

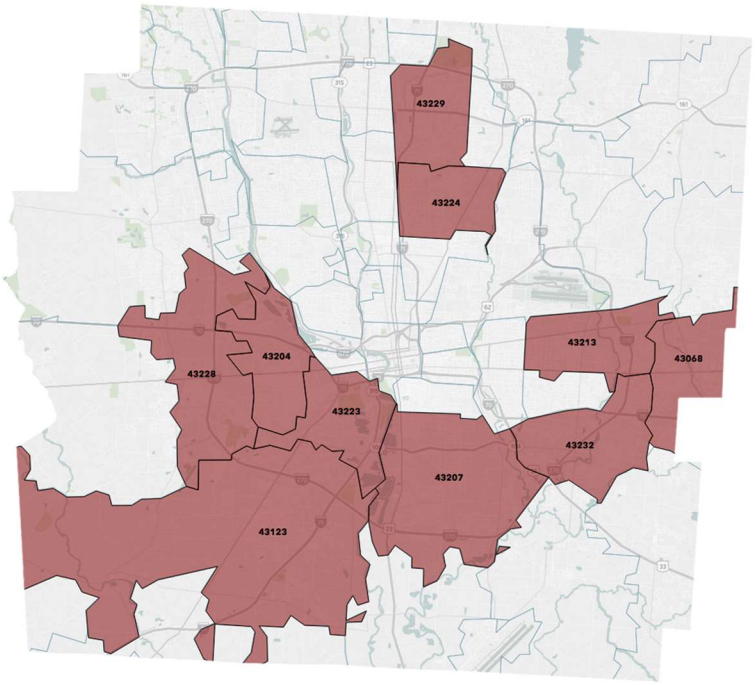
Individuals age 18 and younger were more likely than those 19-64 or 65 years and older to be treated and released; individuals age 65 and older were most likely to be admitted.

Emergency Department Visits

		Franklin County				Ohio
		HM2013	HM2016	HM2019		HM2019
ED Visits[10]	Total	Not available	583.2	608.8		594.8
ED Visits by Age: Treated and Released[10]	**Total**	**Not available**	**486.4**	**546.3**	▲	**526.7**
	Age 0-18	Not available	663.3	709.7		572.1
	Age 19-64	Not available	455.1	508.9	▲	531.4
	Age 65+	Not available	284.5	427.7	▲	448.8
ED Visits by Age: Admitted[10]	**Total**	**Not available**	**97.1**	**62.4**	▼	**68.1**
	Age 0-18	Not available	28.1	18.6	▼	15.5
	Age 19-64	Not available	86.9	53.0	▼	52.2
	Age 65+	Not available	314.6	202.2	▼	196.8
ED Visits by Severity: Treated and Released[11]	Level 1	Not available	Not available	10.0		Not available
	Level 2	Not available	Not available	52.8		Not available
	Level 3	Not available	Not available	161.3		Not available
	Level 4	Not available	Not available	142.7		Not available
	Level 5	Not available	Not available	94.1		Not available

Rate per 1,000 population

The Franklin County zip codes with the highest number of emergency department visits are shaded in red in the map below.[11]



Highest Number of Emergency Department Visits

Zip Codes	Rate per 1,000
43228	40,990
43207	39,725
43232	39,014
43229	36,363
43204	36,351
43223	34,897
43224	34,123
43068	33,827
43123	31,034
43213	28,261

In Franklin and the surrounding counties, fewer adults age 19-64 could not access needed dental care compared to the last *HealthMap* (11.4% compared to 15.8%). While the percent of children who could not access needed dental care remained about the same in Franklin County, the percent of children with this problem in Ohio overall had decreased (from 5.4% to 4.1%).

Could Not Secure Dental Care[12]

		Franklin County			Ohio
		HM2013	HM2016	HM2019	HM2019
Needed Dental Care, Could Not Secure In Past 12 Months	Children age 3-18	Not available	4.7%	5.0%	4.1% ▼
	Adults age 19-64	Not available	15.8%	11.4% ▼	14.2% ▼
	Adults age 65+	Not available	1.5%	1.3% ▼	6.9%

In Franklin County, 69.4% of adults have visited a dentist or dental clinic in the past year, similar to the past *HealthMap*. Among those 65 years and older, 17.3% have had all of their natural teeth extracted.

Oral Health Indicators[13]

	Franklin County			Ohio	
	HM2013	HM2016	HM2019	HM2019	
Visited the dentist or dental clinic within the past year for any reason	Not available	71.6%	69.4%	67.9%	
Have had any permanent teeth extracted	Not available	60.1%	61.7%	45.4%	
Age 65+ who have had all of their natural teeth extracted	Not available	16.4%	17.3%	17.1%	▼

References

[1] Ohio Department of Administrative Services, 2016 (HM2019), 2014 (HM2016)

[2] Ohio Board of Nursing, 2011 (HM2013)

[3] Ohio Department of Administrative Services, 2016 (HM2019)

[4] Ohio Chemical Dependency Professionals Board, 2014 (HM2016)

[5] Ohio Board of Psychology, 2014 (HM2016)

[6] Ohio State Dental Board, 2016 (HM2019), 2014 (HM2016), 2011 (HM2013)

[7] State Medical Board of Ohio, 2011 (HM2013)

[8] Ohio State Board of Optometry, 2018 (HM2019), 2014 (HM2016), 2011 (HM2013)

[9] Ohio Optical Dispenser's Board, 2014 (HM2016)

[10] Ohio Hospital Association, 2017 (HM2019), 2013 (HM2016)

[11] Ohio Hospital Association, 2017 (HM2019)

[12] Ohio Colleges of Medicine Government Resource Center, Ohio Medicaid Assessment Survey, 2015 (HM2019), 2012 (HM2016)

[13] Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Survey Data, 2016 (HM2019), 2012 (HM2016), 2010 (HM2013)

Health Behaviors

This section describes some behaviors of Franklin County adults that affect their health.

Key Findings – Health Behaviors

In Franklin County, death rates from unintentional drug overdoses are increasing, but remain lower than Ohio overall. Overdose death rates from opiates, heroin, fentanyl, and cocaine have increased in Franklin County since the last *HealthMap.*

Tobacco and alcohol use has decreased since the last *HealthMap*, though the rate of alcohol related deaths has increased.

Regarding cigarette smoking, the percentage of Franklin County adults who are current smokers (21.9%) is lower than the percentage from the last *HealthMap* (24.5%).

Turning to alcohol use, the percentage of Franklin County adults who are heavy drinkers (i.e., more than two drinks per day for men; more than one drink per day for women) decreased to 6.2%. The percentage of Franklin County adults who identify themselves as binge drinkers (i.e., five or more drinks on one occasion in the past month for men; four or more drinks on one occasion in the past month for women) remained steady and similar to the statewide percentage.

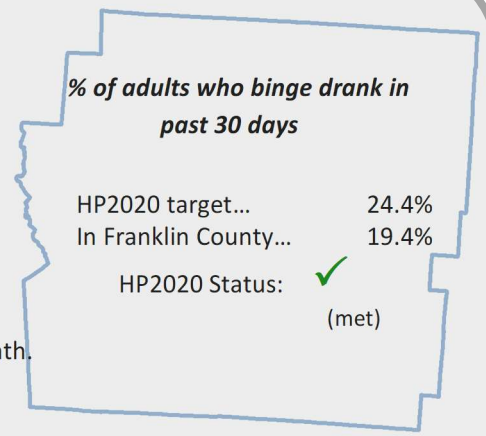
Cigarette and Alcohol Use

		Franklin County				Ohio		United States
		HM2013	HM2016	HM2019		HM2019		HM2019
Cigarette Use[1]	Current smokers	18.3%	24.5%	21.9%	▼	22.5%		17.1%
Drinking[1]	Heavy drinkers	4.4%	7.7%	6.2%	▼	6.4%	▲	6.5%
	Binge drinkers	15.2%	20.5%	19.4%		17.9%		16.9%
Drinking & Driving[2]	Crashes* (alcohol-related	Not available	100.8	104.2		105.4		Not available
	Injuries* (alcohol-related)	56.2	52.3	57.4		62.0		Not available
	Deaths* (alcohol-related)	2.4	1.9	2.3	▲	2.8		3.2

**Rate per 100,000 population*

Healthy People 2020 Goal

How does Franklin County match up with national objectives? As part of its *Healthy People 2020* initiative, the Department of Health and Human Services set a goal that the percent of adults who binge drink in the previous month would decrease to 24.4% by the year 2020. Currently, Franklin County achieves this target, as data suggest only 19.4% of adults binge drank in the previous month.



The percentage of Franklin County adults who report participating in a physical activity in the past month is similar to the last *Healthmap*, while the percentage of Franklin County residents who meet aerobic and strength guidelines has increased (from 21.4% to 26.5%). According to the Centers for Disease Control and Prevention, adults who meet these guidelines engage in at least 1.25 hours of vigorous-intensity exercise or 2.5 hours of moderate-intensity exercise weekly and muscle strengthening exercises at least twice a week.

Regarding nutrition, an increasing number of Franklin County adults are eating fruit less than once a day, and 24.3% eat vegetables less than once a day. These percentages are similar to statewide rates and slightly higher than national rates.

Other Health Behaviors

		Franklin County			Ohio	United States
		HM2013	HM2016	HM2019	HM2019	HM2019
Seat Belt Use[3]	Always or nearly always wears a seat belt*	Not available	90.7%	91.2%	91.4%	94.3%
Physical Activity	Met aerobic and muscle strengthening exercise guidelines[4]	Not available	21.4%	26.5% ▲	19.7%	20.3%
	Participated in physical activities in the past month[1]	72.4%	73.1%	77.9%	74.1%	76.9%
Nutrition[5]	Adults who have consumed fruits and vegetables 5+ times per day	23.8%	23.8%	Not available	Not available	Not available
	Adults who consumed fruit less than one time per day	Not available	40.9%	45.2% ▲	42.9%	39.7%
	Adults who consumed vegetables less than one time per day	Not available	26.1%	24.3%	24.8%	22.1%

**Franklin County data are Columbus MSA*

The percentages of Franklin County residents who are overweight and obese have remained relatively constant from the previous *HealthMap,* and are similar to the statewide percentages. Turning to Franklin County youth, 31.1% are overweight or obese, similar to the last *HealthMap.*

Weight Status

		Franklin County			Ohio	United States
		HM2013	HM2016	HM2019	HM2019	HM2019
Adult Body Mass Index[1]	Underweight	Not available	2.0%	2.2% □	1.8% □	1.8%
	Healthy	36.1%	34.0%	34.9%	31.9%	32.9%
	Overweight	32.5%	32.2%	33.4%	34.8%	35.3%
	Obese	31.4%	31.8%	29.5%	31.5%	29.9%
Youth Body Mass Index[6]	Overweight or obese*	Not available	29.3%	31.1%	32.9% ▲	31.2%

**Franklin County prevalence for age 11-18; Ohio and United States for age 10-17*

Regarding drug use, the rate of unintentional drug/medication mortality has increased (from 16.0 to 24.1 per 100,000) since the last *HealthMap*. This means that out of 100,000 Franklin County residents, 24 of them die each year due to drugs or medication. This is lower than the rate in the state of Ohio (36.8), but higher than the national rate (19.7).

The recent increase in overdose deaths in Franklin County from opiates, prescription opiates, heroin, and fentanyl has mirrored the statewide patterns. In 2017, the opioid overdose antidote drug Narcan was administered 5,506 times in Franklin County.

Drug Overdose Deaths

		Franklin County				Ohio		United States	
		HM2013	HM2016	HM2019		HM2019		HM2019	
Unintentional Drug / Medication Mortality[7]		15.7	16.0	24.1	▲	36.8	▲	19.7	▲
Drug Overdose Deaths[8]	Opiates	12.0	12.1	20.6	▲	32.0	▲	Not available	
	Opioid Pain Relievers*	Not available	Not available	Not available		Not available		7.0	▲
	Prescription Opiates	9.0	5.8	15.0	▲	26.6	▲	Not available	
	Heroin	3.2	7.1	9.2	▲	13.2	▲	4.0	▲
	Fentanyl and Analogues	0.9	xx	8.8	□	21.7	▲	3.0	▲
	Methadone	1.9	1.4	1.0	▼	0.8	▼	Not available	
	Other Opiates	6.1	4.1	6.1	▲	6.6	▲	Not available	
	Benzodiazepines	4.8	1.4	2.6	▲	5.0	▲	2.7	▲
	Cocaine	4.5	4.9	9.9	▲	10.0	▲	2.1	▲
	Alcohol	2.0	2.4	2.5		4.9	▲	Not available	
	Barbiturates	xx	xx	xx		0.1		Not available	
	Hallucinogens	xx	xx	xx		1.0	▲	Not available	
	Other Narcotics	xx	xx	xx		1.7	▲	Not available	
	Other Synthetic Narcotics	2.3	0.9	9	▲	20.8	▲	Not available	
	Other Unspecified Drugs	8.6	xx	1.2	▲	18.7	▲	Not available	
Narcan Administrations[9]		Not available	Not available	5,506		47,201	▲	Not available	

Rate per 100,000 population

**Includes other opioids, methadone, and other synthetic narcotics*

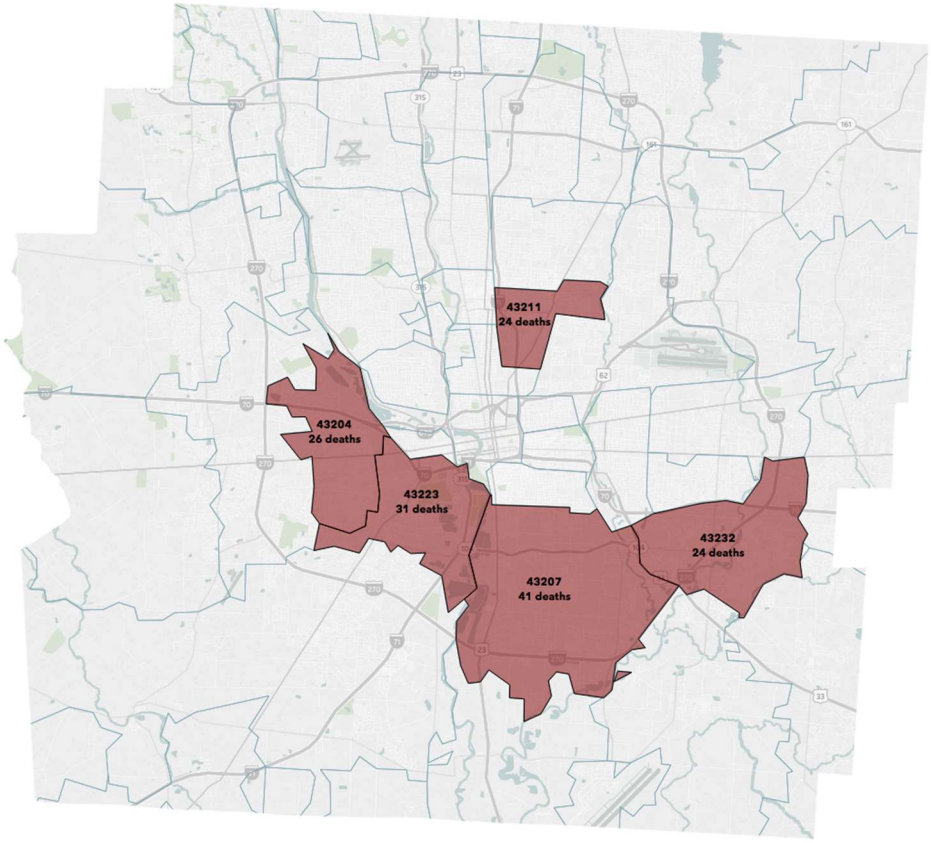
xx indicates rates not calculated due to counts less than 10

A Closer Look, Priority #1: Overdose Deaths

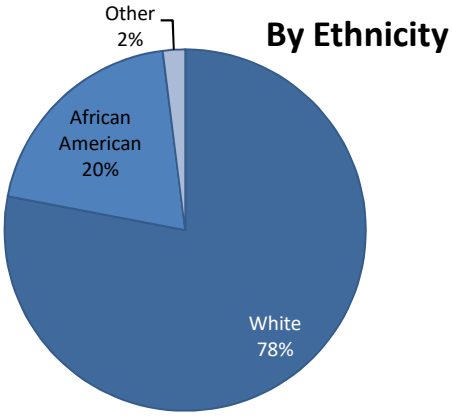
In 2017, there were 520 overdose deaths in Franklin County, a 47% increase from the previous year. Two-thirds involved fentanyl (see table below).*

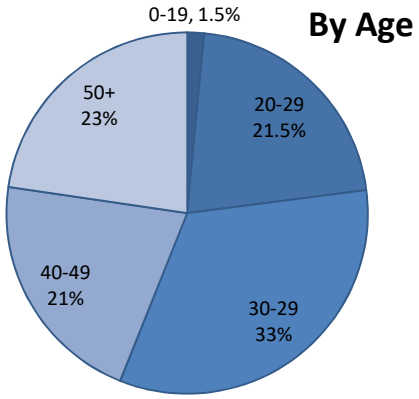
Overdose Deaths, By Substance	
Fentanyl	67%
Cocaine	36%
Heroin	16%
Carfentanil	14%
Methamphetamine	5%

Among those who died from an overdose in 2017, the most common zip codes of residence were 43207, 43223, 43204, 43211, and 43232.* These are shaded in red in the map below, with the number of deaths in each.



The ethnicity and age breakdowns of overdose deaths overall are shown in the figures below.*





The counts and rates of unintentional overdose deaths by drug in 2016, broken down by ethnicity, are listed in the following table.[+]

Overdose Deaths By Ethnicity								
	White		Black		American Indian		Asian	
Drug Category	**Count**	**Rate**	**Count**	**Rate**	**Count**	**Rate**	**Count**	**Rate**
Opiates	219	23.8	48	15.8	1	*	1	*
Heroin	105	11.3	16	5.3	0	*	0	*
Fentanyl and Analogues	79	8.5	36	11.9	0	*	1	*
Benzodiazepines	28	3.1	6	*	0	*	0	*
Cocaine	91	10.1	36	12.4	0	*	1	*
Alcohol (all types)	27	2.8	7	*	0	*	0	*
Methadone	12	1.2	1	*	1	*	0	*
Hallucinogens	2	*	2	*	0	*	0	*
Barbiturates	0	*	0	*	0	*	0	*
Other Opiates	67	7.4	12	3.8	0	*	0	*
Other Narcotics	6	*	2	*	0	*	0	*
Prescription Opiates	151	16.5	42	13.8	1	*	1	*
Other Synthetic Narcotics	83	9	34	11.1	0	*	1	*
Other Unspecified Drugs	12	1.2	5	*	0	*	0	*

Rate per 100,000 population

**Rate is too small to be displayed*

The counts and rates of unintentional overdose deaths by drug in 2016, broken down by gender, are listed in the following table.[+]

Overdose Deaths By Gender				
	Male		Female	
Drug Category	**Count**	**Rate**	**Count**	**Rate**

Opiates	189	28.9	81	12.5
Heroin	83	12.4	38	6
Fentanyl and Analogues	90	13.6	27	4.1
Benzodiazepines	19	2.8	15	2.4
Cocaine	91	14.1	37	6
Alcohol (all types)	27	4.1	7	*
Methadone	7	*	7	*
Hallucinogens	3	*	1	*
Barbiturates	0	*	0	*
Other Opiates	50	7.8	29	4.5
Other Narcotics	6	*	2	*
Prescription Opiates	137	21.1	59	9
Other Synthetic Narcotics	86	13	33	5
Other Unspecified Drugs	12	1.7	5	*

Rate per 100,000 population
**Rate is too small to be displayed*

The counts and rates of unintentional overdose deaths by drug in 2016, broken down by age, are listed in the following table.[+]

Overdose Deaths By Age						
	15-24 years		25-34 years		35-44 years	
Drug Category	**Count**	**Rate**	**Count**	**Rate**	**Count**	**Rate**
Opiates	21	12.3	89	38.7	71	42.1
Heroin	13	7.6	44	19.1	29	17.2
Fentanyl and Analogues	8	4.7	47	20.4	25	20.7
Benzodiazepines	3	1.8	10	4.3	9	5.3
Cocaine	8	4.7	34	14.8	39	23.1
Alcohol (all types)	1	0.6	13	5.6	6	3.6
Methadone	0	*	3	1.3	4	2.4
Hallucinogens	1	0.6	2	0.9	0	*
Barbiturates	0	*	0	*	0	*
Other Opiates	4	2.3	21	9.1	23	13.6
Other Narcotics	0	*	1	*	1	*
Prescription Opiates	12	7	63	27.4	55	32.6
Other Synthetic Narcotics	8	4.7	46	20	35	20.7
Other Unspecified Drugs	1	0.6	9	3.9	3	1.8

	45-54 years		55-64 years		65-74 years	
Drug Category	**Count**	**Rate**	**Count**	**Rate**	**Count**	**Rate**
Opiates	54	34.3	32	22.1	3	3.4
Heroin	24	15.3	11	7.6	0	*
Fentanyl and Analogues	13	8.3	12	8.3	2	2.3

Benzodiazepines	7	4.5	5	3.4	0	*
Cocaine	25	15.9	18	12.4	4	4.6
Alcohol (all types)	8	5.1	4	2.8	2	2.3
Methadone	1	0.6	6	4.1	0	*
Hallucinogens	1	0.6	0	*	0	*
Barbiturates	0	*	0	*	0	*
Other Opiates	18	11.4	12	8.3	1	1.1
Other Narcotics	5	3.2	0	*	1	1.1
Prescription Opiates	38	24.2	25	17.2	3	3.4
Other Synthetic Narcotics	16	10.2	13	9	1	1.1
Other Unspecified Drugs	2	1.3	1	0.7	1	1.1

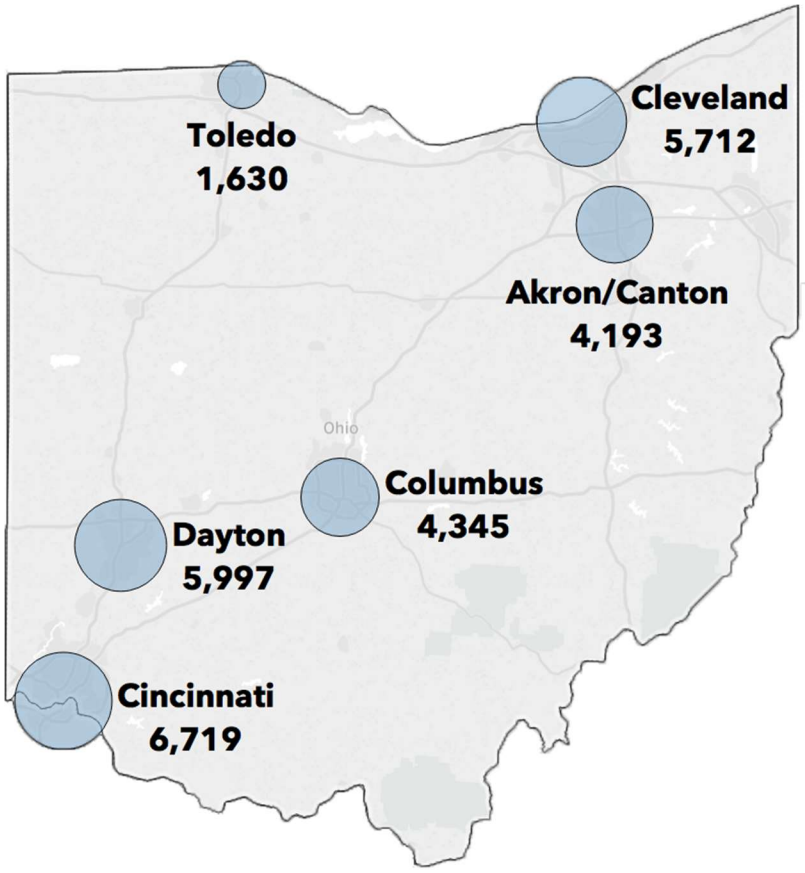
Rate per 100,000 population

**Rate is too small to be displayed; counts unavailable for <15 yeas and 75+ years*

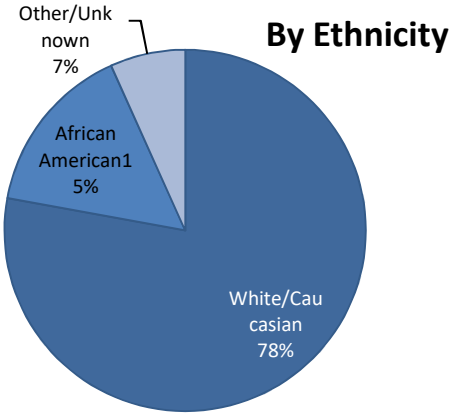
"A Closer Look" References: [*]Franklin County Coroner's Office, 2017; [+]Ohio Department of Health Public Health Data Warehouse, 2016

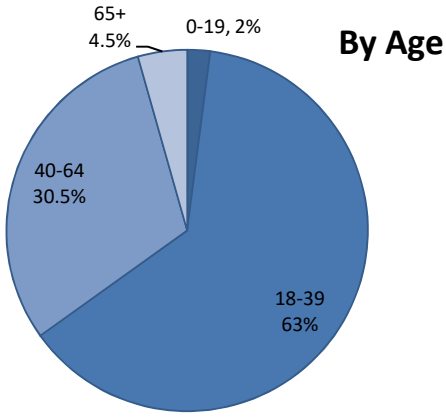
A Closer Look, Priority #1: Opioid Overdoses

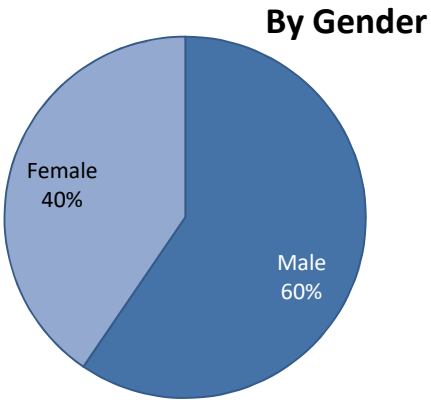
The number of opioid overdoses resulting in an inpatient or outpatient encounter at a hospital in Ohio's metropolitan areas are displayed in the map below. In Columbus, there were 4,345 opioid overdoses recorded at hospitals in 2017.[*]


Toledo
1,630
Cleveland
5,712
Akron/Canton
4,193
Ohio
Columbus
4,345
Dayton
5,997
Cincinnati
6,719

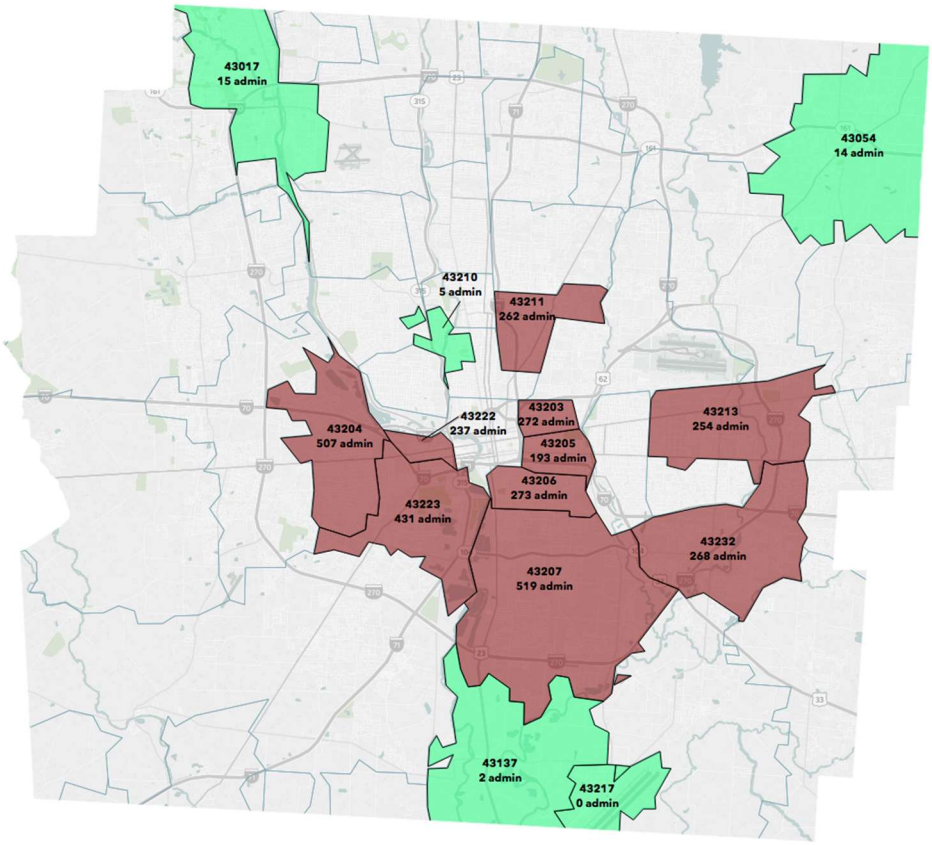
The ethnicity, age, and gender breakdowns of opioid overdoses resulting in an inpatient or outpatient encounter are displayed in the figures below.*







Narcan is a medication given to people experiencing an opioid overdose to block the effects of the opioid. The zip codes in Franklin County where the most Narcan administrations occurred in 2017 are highlighted in red in the map below; the zip codes where the fewest Narcan administrations occurred are in green.[+]



The table to the right lists the zip codes with the most Narcan administrations, and how many patients received the treatment, in 2017. In both 43207 and 43204, Narcan was administered over 500 times to over 300 patients.[+]

Zip Codes With Most Narcan Administrations, 2017

Zip	# Admin	# Patients
43207	519	316
43204	507	306
43223	431	278
43206	273	173
43203	272	165
43232	268	183
43211	262	167
43213	254	168
43222	237	144
43205	193	118

"A Closer Look" References: [*]Ohio Hospital Association Statewide Database, 2017;
[+]Ohio Emergency Medical Services – Incident Reporting System, 2017

In Franklin County, a higher percentage of residents have used illicit drugs in the past month compared to the last *HealthMap.*

Illicit Drug Use

	Franklin County			Ohio	United States
	HM2013	HM2016	HM2019	HM2019	HM2019
Illicit Drug Use in Past Month[10,11]	Not available	11.9%	13.1% ▲	10.5% ▲	10.4% ▲
Illicit Drug Use Other than Marijuana in Past Month[11,12]	Not available	4.3%	4.1%	3.1%	3.5%
Illicit drug dependence or abuse (in the past year)[12]	Not available	4.0%	3.9%	Not available	Not available
Marijuana Use in Past Month[11,12]	Not available	9.3%	10.6% ▲	9.1% ▲	8.7% ▲
Marijuana Use in Past Year[11,12]	Not available	16.0%	17.8% ▲	14.0% ▲	13.8%
Non-medical use of pain relievers (in the past year)[11,12]	Not available	6.1%	5.6%	4.6%	4.5%
Illicit Drug Use Disorder in Past Year[11]	Not available	Not available	Not available	2.6%	2.8%

References

[1] Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Survey Data, 2016 (HM2019), 2012 (HM2016), 2010 (HM2013)

[2] Ohio Department of Public Safety, Traffic Crash Facts Report (Franklin County and Ohio), 2016 (HM2019), 2013 (HM2016), 2010 (HM2013); National Highway Traffic Safety Administration, Traffic Safety Facts: Alcohol Impaired Driving (United States), 2016 (HM2019), Deaths: 2012, Injuries: 2010 (HM2016)

[3] Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Survey Data, 2016 (HM2019), 2012, 2013 (HM2016), 2010 (HM2013)

[4] Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Survey Data, 2015 (HM2019), 2013 (HM2016), 2010 (HM2013)

[5] Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Survey Data, 2015 (HM2019), 2013 (HM2016), 2009 (HM2013)

[6] Ohio Colleges of Medicine Government Resource Center, Ohio Medicaid Assessment Survey (Franklin County and Ohio), 2015 (HM2019), 2012 (HM2016); National Survey of Children's Health (United States), 2016 (HM2019); Centers for Disease Control and Prevention High School Youth Risk Behavior Survey (United States), 2013 (HM2016), 2009 (HM2013)

[7] Ohio Department of Health, Vital Statistics (Franklin County and Ohio), 2016 (HM2019), 2012 (HM2016), 2008 (HM2013); Centers for Disease Control and Prevention (CDC) WISQARS Fatal Injury Data (United States), 2016 (HM2019), 2012 (HM2016), 2008 (HM2013)

[8] Ohio Department of Health, Vital Statistics, Ohio Resident Mortality Data (Franklin County and Ohio), 2016 (HM2019), 2013 (HM2016), 2010 (HM2013); National Institute on Drug Abuse, Overdose Death Rates (United States), 2015 (HM2019), 2013 (HM2016)

[9] Ohio Emergency Medical Services, Naloxone Administration by Ohio EMS Providers By County, Ohio, 2017 (HM2019), 2013 (HM2016), 2010 (HM2013)

[10] Substance Abuse and Mental Health Services Administration, Center for Behavioral Health and Statistics and Quality, National Survey on Drug Use and Health (Franklin County), Average of 2011, 2013 & 2014 (HM2019), Average of 2010, 2011 & 2012 (HM2016)

[11] Substance Abuse and Mental Health Services Administration, Center for Behavioral Health and Statistics and Quality, National Survey on Drug Use and Health (Ohio and United States), Average of 2015 & 2016 (HM2019), Average of 2013 & 2014 (HM2016); National Survey on Drug Use and Health (United States), 2010 (HM2013)

[12] Substance Abuse and Mental Health Services Administration, Center for Behavioral Health and Statistics and Quality, National Survey on Drug Use and Health Small Area Estimates (Franklin County), 2012-2014 (HM2019), 2010-2012 (HM2016)

Maternal and Infant Health

Health issues facing mothers and their newborn children in Franklin County are described in this section.
In Franklin County, 165 infants died before their first birthday in 2016. Overall, the infant mortality rate has remained relatively constant since the last *HealthMap*. However, this rate remains higher than the statewide and national rates.

Key Findings – Maternal and Infant Health

The infant mortality rate in Franklin County remained relatively constant since the last *HealthMap*. However, the infant mortality rate among Blacks has increased and remains higher than infant mortality rates among Whites.

On a more positive note, the rates of pregnancies and live births among adolescents in Franklin County have decreased since the last *HealthMap*.

The percentage of mothers who smoke during the third trimester and rates of babies hospitalized due to Neonatal Abstinence Syndrome remain lower than Ohio overall.

The infant mortality rate among Blacks has increased since the last *HealthMap* (from 13.7 to 15.2 per 1,000 live births), and remains considerably higher than Whites (5.8 per 1,000 live births).

Infant Mortality Rates[1]

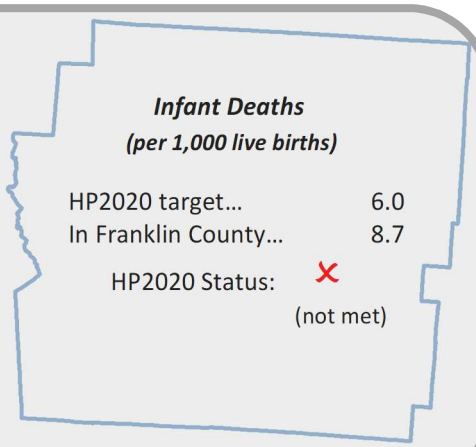
		Franklin County				Ohio		United States
		HM2013	HM2016	HM2019		HM2019		HM2019
Infant Mortality Rate	**Total**	**8.2**	**8.3**	**8.7**		**7.4**		**5.9**
	White	5.0	5.7	5.8		5.8		4.8
	Black	16.0	13.7	15.2	▲	15.2		11.4
	Native American	0.0	xx	xx		xx		8.2
	Asian / Other Pacific Islander	4.9	xx	xx		xx		3.4
	Hispanic	6.2	xx	xx		7.3	▲	5.2

Rates per 1,000 live births

xx = rate not reported; may be unstable due to small numbers

Healthy People 2020 Goal

How does Franklin County match up with national objectives? As part of its *Healthy People 2020* initiative, the Department of Health and Human Services set a goal for the infant mortality rate to decrease to 6.0 per 1,000 live births by the year 2020. Currently, Franklin County does not achieve this target, with an infant mortality rate of 8.7 in 2016 and 8.2 in 2017 (see A Closer Look below).



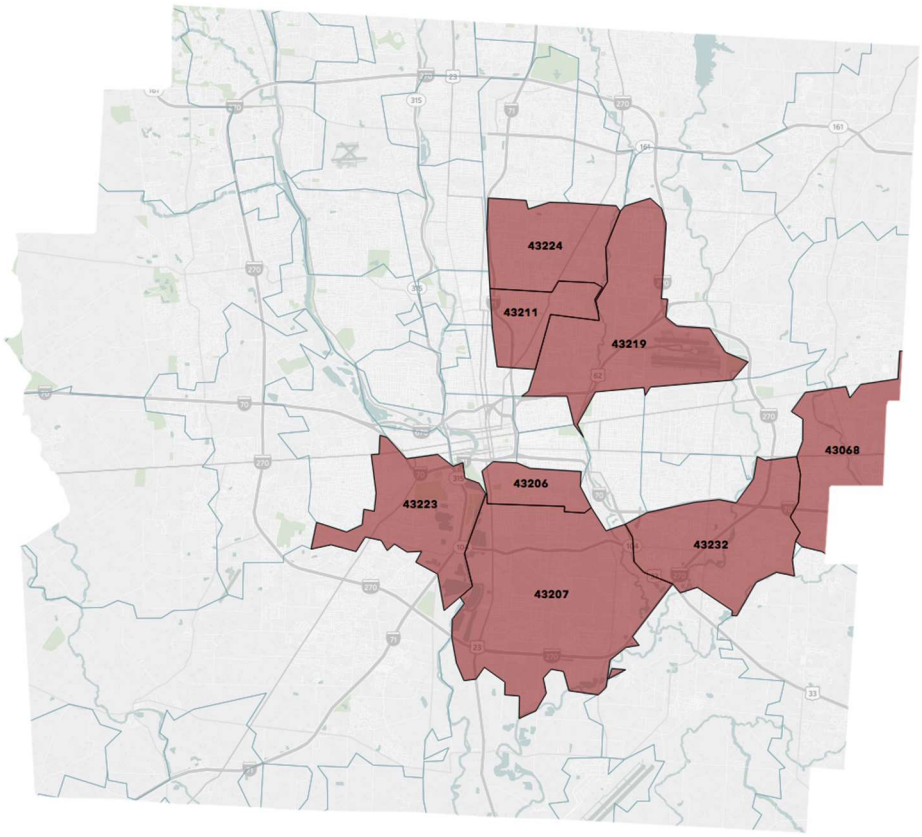
A Closer Look, Priority #3: Infant Mortality

Pre-pregnancy health and pre-term births were the prioritized health needs identified by the steering committee, but infant mortality is an important, related issue. In 2017, there were 18,880 births in Franklin County and 155 infant deaths. Therefore, the infant mortality rate was 8.2 per 1,000 live births, still higher than the Healthy People 2020 Goal of 6.0. Non-Hispanic black infants are 2.7 times more likely to die than non-Hispanic white infants.*

Infant Mortality, 2017 Rates per 1,000 live births	
Franklin County, overall	8.2
By Ethnicity	
Non-Hispanic White	5.5
Non-Hispanic Black	14.6

Three-quarters of infant deaths occurred before babies were 28 days old. The remaining 25% occurred between 28 days and 1 year old.*

The zip codes with the most infant deaths in Franklin County between 2012-2016 are shaded in red in the map below.[+]



"A Closer Look" References: [*]Office of Epidemiology, Columbus Public Health, CY 2017;
[+]Office of Epidemiology, Columbus Public Health, 2012-2016

In Franklin County and Ohio, the rates of live births and estimated pregnancies among adolescents under 18 years old have decreased since the last *HealthMap*. Abortion rates in Franklin County have also decreased.

The percentage of low birth weight babies (i.e., <2,500 grams, or 5.5 pounds) and preterm births have remained relatively constant since the last *HealthMap.*

Maternal and Infant Health

		Franklin County			Ohio	United States
		HM2013	HM2016	HM2019	HM2019	HM2019
Adolescent Pregnancies[2]	17 & under	7.5	4.0	3.1 ▼	2.8 ▼	5.1 ▼
	10-14 years	0.7	0.4	0.2 ▼	0.3	0.5 ▼
	15-17 years	18.5	10.2	8.0 ▼	6.7 ▼	15.6 ▼
	18-19 years	57.0	31.6	29.1	29.1 ▼	60.8 ▼
Adolescent Live Births[3]	17 & under	4.9	2.5	1.9 ▼	1.7 ▼	4.3 ▼
	10-14 years	0.4	0.2	0.1 ▼	0.1	0.3
	15-17 years	12.1	6.3	5.0 ▼	4.4 ▼	10.9 ▼
	18-19 years	37.2	21.8	19.9	20.1 ▼	43.8
Low Birth Weight[4]	Low birth weight babies (<2500 grams)	7.8%	7.2%	7.4%	7.1%	8.1%
	Very low birth weight babies* (<1500 grams)	1.7%	1.8%	1.9%	1.6%	1.4%
Abortion[5]	Total induced abortion rate**	13.7	14.0	11.1 ▼	8.9	12.1 ▼
Preterm Birth Rate[6]	Preterm births (<37 weeks)	11.6%	10.4%	10.7%	10.4%	11.0%

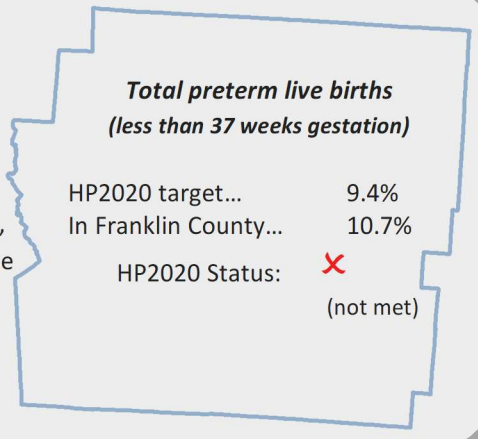
Rates per 1,000 females in same age group unless otherwise noted

**VLBW babies percentage is contained in the LBW babies percentage above*

***Rate per 1,000 females age 15-44*

Healthy People 2020 Goal

How does Franklin County match up with national objectives? The *Healthy People 2020* goal is for only 9.4% of all live births to occur before 37 weeks gestation by the year 2020. Currently, Franklin County does not achieve this target, as 10.7% of live births are considered preterm.



A Closer Look, Priority #3: Preterm Births

As shown in the table on the previous page, in 2016, 10.7% of live births in Franklin County occurred pre-term, or before 37 weeks completed gestation. In 2017, 10.6% of lives births occurred pre-term, which still does not achieve the Healthy People 2020 goal of 9.4%.[*]

The percentages of preterm births broken down by age and ethnicity are shown in the following table.[+]

Preterm births			
By Age		**By Ethnicity**	
< 15 years	0.0%	Hispanic	10.1%
15-17 years	**	Non-Hispanic	10.6%
18-19 years	14.2%		
20-24 years	11.1%		
25-29 years	10.1%		
30-34 years	9.5%		
35-39 years	11.5%		
40-44 years	16.9%		
45+ years	**		

***Cell values blinded for confidentiality*

"A Closer Look" References: [*]Office of Epidemiology, Columbus Public Health, CY 2017;
[+]Ohio Department of Health Public Health Data Warehouse, 2017

Preconception and pregnancy health and behavior indicators are listed in the table on the next page. Before becoming pregnant, 4.7% of women in Franklin County had been diagnosed with diabetes and 48.5% were overweight or obese. About half of women in Franklin County and Ohio overall were not taking multi-vitamins, pre-natal vitamins, or folic acid the month before becoming pregnant.

During pregnancy, fewer women in Franklin County smoked cigarettes during their third trimester than Ohio overall (5.0% vs. 12.2%). Also, rates of babies hospitalized with neonatal abstinence syndrome, a result of mothers using drugs during pregnancy, is 12.3 out of every 1,000 live births in Franklin County, a slightly lower rate than Ohio overall (14.7).

In Franklin County, about one-quarter of pregnancies were unintended, meaning these women did not want to get pregnant or wanted to get pregnant at a later time. Finally, the percent of women age 18-44 without health insurance in Franklin County and Ohio has decreased since the last *HealthMap*.

Preconception & Pregnancy Health and Behavior Indicators

		Franklin County				Ohio	
		HM2013	HM2016	HM2019		HM2019	
Health Before Pregnancy[7]	Had Type 1 or Type 2 diabetes	Not available	Not available	4.7%		3.8%	
	Had hypertension	Not available	Not available	4.9%		6.0%	
	Were overweight or obese	Not available	Not available	48.5%		54.0%	▲
Tobacco Use[7]	Currently smoke	Not available	Not available	11.0%		17.2%	
	Smoked cigarettes during 3rd trimester	Not available	Not available	5.0%		12.2%	▼
Alcohol Use[7]	Drank alcohol during 3rd trimester	Not available	Not available	7.4%		6.4%	
	Heavy drinker before pregnant (1+ drinks per day)	Not available	Not available	2.1%		2.9%	
Folic Acid Deficiency[7]	Percent of births to women who did not take multi-, prenatal, or folic acid vitamins the month before pregnancy	Not available	Not available	49.9%		53.3%	
Unintended Pregnancy[7]	Pregnant women who did not want to be pregnant or wanted to be pregnant later	Not available	Not available	24.8%		30.1%	▼
Lack of Health Insurance and Check Ups	Age 18-44 without health insurance[8]	Not available	16.5%	12.0%	▼	11.1%	▼
	Have not had a health check up in past year[7]	Not available	Not available	10.9%		6.2%	
	Have not had a PAP in the past 3 years[9]	Not available	15.0%	13.1%	▼	18.1%	
Neonatal Abstinence Syndrome (NAS)[10]	Rate of NAS hospitalizations out of total live births*	Not available	Not available	12.3		14.7	

**Rate out of 1,000 live births*

A Closer Look, Priority #3: Health Before Pregnancy

As shown in the table on the previous page, in 2016, 24.8% of pregnant women in Franklin County were experiencing unintended pregnancies, meaning they did not want to be pregnant, or wanted to be pregnant at a later time. The percentages of these women broken down by age and ethnicity are shown in the table below. For example, 30.2% of pregnant women under 24 years old were experiencing an unintended pregnancy.[*]

Unintended Pregnancy			
By Age		**By Ethnicity**	
< 24 years	30.2%	White	27.4%
25-34 years	26.5%	Black	22.2%
35+ years	**	Other	19.7%

**Cell value blinded for confidentiality

Some additional data related to health before pregnancy in Franklin County in 2017 include:[+]

- 56.5% of births occurred to women who had inter-pregnancy intervals of at least 24 months
- 1.9% of births occurred with no prenatal care
- 7.1% of pregnant women in Franklin County smoked cigarettes during their 3rd trimester

"A Closer Look" References: [*]Ohio Department of Health, Ohio Pregnancy Survey, 2016;
[+]Ohio Better Birth Outcomes, Nationwide Children's Hospital, 2017

References

[1] Ohio Department of Health, Public Health Data Warehouse (Franklin County), 2016 (HM2019); Ohio Department of Health, Infant Mortality Data (Ohio), 2016 (HM2019); National Kids Count Data Center (United States), 2015 (HM2019), 2011 (HM2016), 2010 (HM2013); Ohio Department of Health, Vital Statistics (Franklin County and Ohio), 2012 (HM2016), 2010 (HM2013)

[2] Ohio Department of Health, Public Health Data Warehouse & 2014 Annual Induced Abortions in Ohio Report (Franklin County and Ohio), 2014 (HM2019); National Vital Statistics Report (United States), 2014 (HM2019); Ohio Department of Health, Office of Vital Statistics (Franklin County and Ohio), 2013 (HM2016); Centers for Disease Control and Prevention, National Center for Health Statistics Data Brief No. 136, 2008 (HM2016, HM2013); Ohio Department of Health, Center for Public Health Statistics and Informatics (Franklin County and Ohio), 2008 (HM2013)

[3] Ohio Department of Health, Public Health Data Warehouse (Franklin County and Ohio), 2016 (HM2019); National Vital Statistics Report (United States), 2014 (HM2019), 2013 (HM2016); Ohio Department of Health, Office of Vital Statistics, data analyzed by Columbus Public Health; Ohio Department of Health Public Health Information Warehouse (Franklin County), 2014, (Ohio), 2013 (HM2016); Ohio Department of Health, Center for Public Health Statistics and Informatics (Franklin County and Ohio), 2008 (HM2013); Centers for Disease Control and Prevention, National Center for Health Statistics Data Brief No. 136 (United States), 2008 (HM2013)

[4] Ohio Department of Health Public Data Warehouse (Franklin County and Ohio), 2014 (HM2019), 2012 (HM2013); Centers for Disease Control and Prevention, Kids Count Data (United States), 2015 (HM2019); Ohio Department of Health Vital Statistics analyzed by Columbus Public Health (Franklin County and Ohio), 2012 (HM2016); National Vital Statistics Report (United States), 2012 (HM2016); Ohio Department of Health, Vital Statistics (Franklin County and Ohio), 2008 (HM2013)

[5] Ohio Department of Health, Induced Abortions in Ohio (Franklin County and Ohio), 2016 (HM2019), 2012 (HM2016), 2009 (HM2013); Centers for Disease Control Abortion Surveillance Summary (United States), 2014 (HM2019), 2010 (HM2016)

[6] Ohio Department of Health Public Data Warehouse (Franklin County and Ohio), 2016 (HM2019), 2014 (HM2016); Centers for Disease Control and Prevention, Kids Count Data (United States), 2014 (HM2019), 2012 (HM2016); Ohio Department of Health Vital Statistics data analyzed by Columbus Public Health (Franklin County and Ohio), 2008 (HM2013)

[7] Ohio Department of Health, Ohio Pregnancy Assessment Survey, 2016 (HM2019)

[8] U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016 (HM2019), 2008-2012 (HM2016)

[9] Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Survey Data, 2016 (HM2019), Ohio: 2011-2012, Franklin County: 2012 (HM2016)

[10] Ohio Hospital Association, 2017 (HM2019)

Mental and Social Health

This section describes issues associated with the mental and social health of Franklin County residents, including depression, suicide, and domestic violence.

Key Findings – Mental and Social Health

The mental and social health of Franklin County residents has improved according to some indicators. For example, rates of depression have decreased.

According to other indicators, the mental and social health of Franklin County residents has declined. Since the last *HealthMap:*

- Domestic violence incidents have increased among Franklin County adults
- Reports of elder abuse have increased

Almost 22% of Franklin County adult residents have been told they have a form of depression. While this rate is higher than statewide, rates of depression have been decreasing in Franklin County and Ohio.

The homicide rate (8.0 per 1,000) is similar to the previous *HealthMap* (8.7), though still higher than the statewide rate (5.9). The suicide rate is also comparable to the last *HealthMap.* Neither the suicide rate nor the homicide rate meets the Healthy People 2020 objectives.

Regarding domestic violence, the number of incidents in Franklin County increased since the last *HealthMap,* while the percentage of all people involved in domestic violence incidents who were injured has decreased.

The decrease in the rate of psychiatric admissions since the last *HealthMap* should be interpreted with caution. Beds at freestanding psychiatric hospitals have recently increased in Franklin County, and admissions to these types of hospitals are not included in the data. General hospitals dedicate 112 beds to psychiatric admissions, while psychiatric hospitals now have over 400 beds. If admissions to these hospitals were included, the rate of 35.7 would likely be higher.

Mental and Social Health

		Franklin County			Ohio	United States
		HM2013	HM2016	HM2019	HM2019	HM2019
Prevalence of Depression[1]	Have ever been told have a form of depression	Not available	25.2%	21.8% ▼	17.4% ▼	17.4%
Suicide Deaths[2]	Suicides*	12.4	11.6	12.3	13.5	13.3
Hospitalizations[3]	Assault / Alleged abuse** (intentional)	Not available	Not available	87.2	Not available	Not available
	Attempted suicide** (injury hospitalization and self-inflicted)	Not available	Not available	4.8	Not available	Not available
Psychiatric Admissions[4]	Psychiatric admissions***	44.6	49.1	35.7 ▼	37.2 ▼	Not available
Homicides[5]	Homicides*	8.7	8.7	8.0	5.9	5.4
Domestic Violence[6]	Domestic violence incidents	9,011	10,138	11,224 ▲	76,416 ▲	1,109,610 ▼
	Domestic violence victims	5,886	7,247	6,781	67,201 ▲	630,720
	Victims with injury****	55.6%	53.5%	43.3% ▼	41.2%	Not available

**Age adjusted rate per 100,000 population*

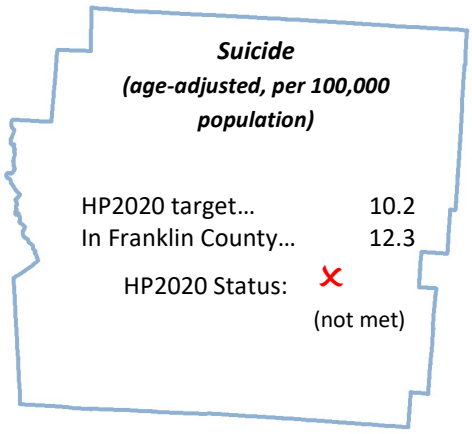
***Rate per 100,000 population*

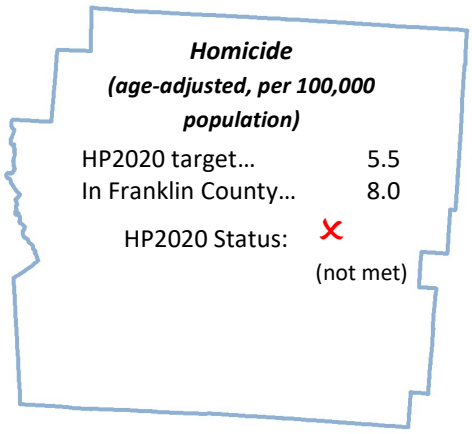
****Rate per 1,000 population; data do not include admissions to freestanding psychiatric hospitals*

***** Percentage of all people involved in all incidents who were injured*

Healthy People 2020 Goals

How does Franklin County match up with national objectives? As part of its *Healthy People 2020* initiative, the Department of Health and Human Services aims for the suicide rate in the U.S. to decrease to 10.2 per 100,000 and the homicide rate to decrease to 5.5 by the year 2020. Currently, Franklin County does not achieve either HP2020 target.





In Franklin County, the number of child abuse cases is similar to the last *HealthMap*, but the types of abuse have shifted somewhat. Physical abuse cases make up a larger percentage of cases (42%, compared to 35%), while a smaller percentage are considered neglect, sexual abuse, or include multiple allegations of abuse or neglect.

Child Abuse Cases[7]

		Franklin County				Ohio		United States	
		HM2013	HM2016	HM2019		HM2019		HM2019	
	Number of cases	12,883	13,353	13,580		97,602		1,897,196	
Percent of cases	Physical abuse	24.4%	35.0%	42.0%	▲	30.0%	▲	18.2%	
	Neglect	23.9%	22.0%	19.0%	▼	26.0%	▼	74.8%	
	Sexual abuse	10.9%	11.0%	9.0%	▼	9.0%	▼	8.5%	
	Emotional maltreatment	0.4%	1.0%	1.0%		1.0%	▼	5.6%	▼
	Multiple allegations of abuse / neglect	Not available	12.0%	10.0%	▼	14.0%	▲	Not available	
	Family in need of services, dependency, & other	40.4%	19.0%	19.0%		19.0%		6.9%	▼

As shown in the table below, reports of abuse, neglect and exploitation of adults age 60 and older in non-protective settings such as homes and apartments have increased in Franklin County since the last *HealthMap.*

Elder Abuse[8]

	Franklin County			
	HM2013	HM2016	HM2019	
Number of reports of abuse, neglect, and exploitation of individuals age 60+, in non-protective settings (i.e., independent living environments such as homes and apartments)	Not available	1,258	1,635	▲

In addition to these reports, the Ohio Office of the Long-Term Care Ombudsman investigated 11,846 complaints about abuse, neglect and exploitation in long-term care facilities in 2016, an increase from the 10,256 complaints investigated in 2013.[9] Note these complaints are not limited to seniors, and may not include additional complaints investigated by the Ohio Department of Health Abuse, Neglect and Exploitation Investigation Unit or the Ohio Attorney General's Health Care Unit.

The suicide rate among youths age 15-24 is 12.8, a slightly higher number than Ohio overall, but similar to the national rate.

Mental and Social Health – Youth

	Franklin County			Ohio	United States
	HM2013	HM2016	HM2019	HM2019	HM2019
Suicide deaths age 15-24[10]	Not available	Not available	12.8	10.7	13.4 ▲
Children currently in foster care[11]	Not available	13.2	13.7	9.3 ▲	5.8

Suicide rate per 100,000 population; Ohio & U.S. are crude rates

Children in foster care rate per 1,000 population age 18 and under

References

[1] Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Survey Data, 2016 (HM2019), 2012-2013 (HM2016)

[2] Ohio Violent Death Reporting System Annual Report (Franklin County and Ohio), 2015 (HM2019); Centers for Disease Control and Prevention, Web-based Injury Statistics Query and Reporting System (WISQARS) (United States), 2015 (HM2019); Ohio Department of Health Vital Statistics, data analyzed by Columbus Public Health (Franklin County), 2010-2012 (HM2016); Centers for Disease Control and Prevention, National Center for Health Statistics, WONDER Online Database (Ohio and United States), 1999-2012 (HM2016); Ohio Department of Health, Vital Statistics, (Franklin County and Ohio), 2006-2008 (HM2013)

[3] Central Ohio Trauma System, 2017 (HM2019)

[4] Ohio Hospital Association, 2017 (HM2019), 2013 (HM2016), 2009 (HM2013)

[5] Office of Criminal Justice Services, Crime by County Statistics (Franklin County and Ohio), 2014 (HM2019); Centers for Disease Control and Prevention, National Center for Health Statistics, WONDER Online Database (United States), 1999-2016 (HM2019); Ohio Department of Health Vital Statistics, data analyzed by Columbus Public Health (Franklin County), 2010-2012 (HM2016); Centers for Disease Control and Prevention, National Center for Health Statistics, WONDER Online Database (Ohio and United States), 1999-2012 (HM2016); Ohio Department of Health Vital Statistics, 2006-2008 (HM2013)

[6] Ohio Bureau of Criminal Identification and Investigation, Domestic Violence Report (Franklin County and Ohio), 2017 (HM2019), 2013 (HM2016), 2010 (HM2013); U.S. Department of Justice Bureau of Justice Statistics Crime Victimization Bulletin (United States), 2016 (HM2019)

[7] Public Children Services Association of Ohio Factbook (Franklin County and Ohio), 2016 (HM2019); U.S. Department of HHS Child Maltreatment Report (United States), 2016 (HM2019), 2012 (HM2016); Ohio Department of Job and Family Services, SACWIS/FACSIS data (Franklin County and Ohio), 2011 (HM2016); Public Children Services Association of Ohio, 2009-2010 PCSAO Factbook (Franklin County and Ohio), 2007 (HM2013)

[8] Ohio Office of Aging, 2016 (HM2019), 2013 (HM2016)

[9] Ohio Office of the Long-Term Care Ombudsman, 2016 (HM2019), 2013 (HM2016)

[10] Ohio Department of Health, Youth Suicide in Ohio (Franklin County and Ohio), 2012-2014 (HM2019); Centers for Disease Control, WISQARS (United States), 2016 (HM2019), (Ohio and United States), 2013 (HM2016), 2010 (HM2013)

[11] Ohio Department of Job and Family Services data request (Franklin County and Ohio), 2016 (HM2019), 2012 (HM2016); National Data Archive on Child Abuse and Neglect, Child trends analysis from the Adoption and Foster Care Analysis and Reporting System (AFCARS) (United States), 2015 (HM2019), 2012 (HM2016)

Death, Illness, and Injury

This section describes leading causes of death, illness, and injury among the residents of Franklin County.

Key Findings – Death, Illness, and Injury

Several measures indicate Franklin County residents' health has remained the same or improved since the last *HealthMap*.

From *HealthMap2016* to *HealthMap2019,* a similar amount of people:

- Rate their health as "fair" or "poor"
- Are overweight or obese
- Have been diagnosed with high blood pressure, high cholesterol, or arthritis
- Have died from lung, breast, and prostate cancers

Fewer adults have been diagnosed with diabetes or asthma, and rates of death from lung cancer have decreased.

The most common reasons Franklin County residents visit emergency departments include respiratory infections and chest pain.

Regarding Franklin County residents' overall health, about 16% consider their health to be "fair" or "poor," slightly lower than the state overall, but on par with the United States as a whole.

Perceptions on Health Status[1]

		Franklin County			Ohio	United States
		HM2013	HM2016	HM2019	HM2019	HM2019
How is your general health?	Excellent, very good, or good	84.5%	83.0%	83.8%	82.0%	83.8%
	Fair or poor	15.5%	17.0%	16.2%	18.0%	16.7%

Turning to mortality rates overall, lung cancer is the leading causes of death in Franklin County, though the mortality rate has decreased since the last *HealthMap*. The next most common causes of death are heart disease and dementia. While death rates from dementia have decreased, this trend should be interpreted with caution.

According to the National Center for Health Statistics, the ICD-10 code for dementia is discouraged from being entered on death certificates in favor of a more useful description.[2]

Mortality – Leading Causes in Adults (ages 15+)[3]

	Franklin County			Ohio	United States
	HM2013	HM2016	HM2019	HM2019	HM2019
Bronchus or Lung Cancer	69.1	64.3	57.7 ▼	60.0	48.1 ▼
Coronary Artery Disease	63.5	53.7	53.1	59.4 ▼	53.2
Dementia	56.6	62.2	51.1 ▼	42.4 ▼	33.3 ▼
Chronic Obstructive Pulmonary Disease (COPD)	49.0	43.0	46.5	46.1	38.7
Alzheimer's	35.8	32.3	41.2 ▲	41.2 ▲	37.6 ▲

Age adjusted rates per 100,000

Among Franklin County males, heart disease and lung cancer are the most common causes of death. Death rates from COPD have increased while death rates from heart attacks and dementia have decreased since the last *HealthMap*.

Among Franklin County females, dementia is the most common cause of death, followed by lung cancer. Mortality rates associated with dementia have decreased, while mortality rates from Alzheimer's have increased, as they have statewide and nationally.

Mortality – Leading Causes by Gender[3]

		Franklin County			Ohio	United States
		HM2013	HM2016	HM2019	HM2019	HM2019
Males	Coronary Artery Disease	73.5	58.9	58.9	63.5 ▼	56.6
	Bronchus or Lung Cancer	67.2	59.7	55.5	58.6	46.0 ▼
	Chronic Obstructive Pulmonary Disease (COPD)	44.2	33.6	40.8 ▲	39.9	33.6
	Heart Attack	49.3	40.2	32.4 ▼	41.6 ▼	37.2 ▼
	Dementia	36.9	43.1	31.9 ▼	29.3 ▼	22.4 ▼
Females	Dementia	48.0	51.7	44.6 ▼	35.6 ▼	28.3 ▼
	Bronchus or Lung Cancer	44.2	43.4	37.9 ▼	38.4	31.4 ▼
	Alzheimer's	30.6	27.7	35.5 ▲	36.1 ▲	33.0 ▲
	Chronic Obstructive Pulmonary Disease (COPD)	35.3	34.0	33.3	33.6	28.1
	Coronary Artery Disease	34.0	31.2	29.5	34.5 ▼	30.7 ▼

Age adjusted rates per 100,000

Causes are ranked using count data (not displayed in this report)

The mortality rate of youth ages 1-14 is 24.6, meaning about 25 children died per 100,000 in the population.

Youth Mortality Ages 1-14[4]

	Franklin County			Ohio	United States
	HM2013	HM2016	HM2019	HM2019	HM2019
Total Deaths, Ages 1-14	16.9	Not available	24.6	18.4	16.7

Rate per 100,000 population

Turning to mortality rates of cancer specifically, lung cancer is the most deadly cancer in Franklin County. Breast and prostate cancers have the next highest mortality rates, followed by colon and rectum cancer and pancreatic cancer.

Cancer Mortality Rates – Top Cancers[5]

	Franklin County			Ohio		United States	
	HM2013	HM2016	HM2019	HM2019		HM2019	
Lung and Bronchus*	62.0	52.3	51.1	48.9	▼	44.7	
Breast (Female)	28.4	24.2	24.3	22.7		21.2	
Prostate	27.5	Not available	20.0	19.0	▲	20.1	▲
Colon and Rectum**	17.6	16.2	15.2	15.1	▼	14.8	
Pancreas	12.2	11.1	11.2	12.1		10.9	

Age adjusted rates per 100,000

**Lung and Bronchus also included cancer of the trachea in 2013 and 2016, so interpretations of change should be made with caution*

***Colon and Rectum also included cancer of the anus in 2013 and 2016, so interpretations of change should be made with caution*

Lung cancer is the most deadly among both Franklin County males and females. Males are next most likely to die from prostate or colon and rectum cancer. Breast cancer is the next most deadly cancer among females.

Cancer Mortality Rates by Gender[5]

		Franklin County			Ohio		United States
		HM2013	HM2016	HM2019	HM2019		HM2019
Males	Lung*	64.1	Not available	57.7	61.0	□	55.9
	Prostate	18.9	Not available	21.3	19.0		20.1
	Colon and Rectum**	20.9	Not available	18.1	17.8	▼	17.7
	Pancreas	14.3	Not available	13.0	13.4		12.6
Females	Lung*	43.8	Not available	42.1	39.8		36.3
	Breast	24.2	Not available	24.9	22.7		21.2
	Colon and Rectum**	12.8	Not available	13.0	13.0		12.4
	Ovary	7.7	Not available	Not available	6.6	▼	7.4

Age adjusted rates per 100,000

**For Franklin County, this category included cancers of the bronchus and trachea in 2013. For Ohio & U.S., this category included cancers of the trachea and bronchus in 2016, and cancer of the bronchus in 2019. Thus, interpretations of change should be made with caution.*

***This category included cancer of the anus in 2013 for Franklin County and in 2016 for Ohio & U.S. Thus, interpretations of change should be made with caution.*

Breast, lung, and prostate cancer have the highest incidence rates in Franklin County, but incidence rates of prostate and colon and rectum cancer have decreased since the last *HealthMap.*

Cancer Incidence Rates – Top Cancers[6]

	Franklin County			Ohio	United States
	HM2013	HM2016	HM2019	HM2019	HM2019
Breast (females)	Not available	127.3	128.4	127.9	124.9
Lung & Bronchus	Not available	75.9	69.2	67.2	55.8
Prostate (males)	Not available	163.5	125.2 ▼	99.2 ▼	119.8 ▼
Colon & Rectum	Not available	44.7	38.9 ▼	42.3	40.1 ▼
Melanoma of the Skin	Not available	20.2	19.7	25.4 ▲	22.3

Age adjusted rates per 100,000

Causes are ranked using count data (not displayed in this report)

Prostate cancer is the most commonly diagnosed cancer among men, though incidence rates are decreasing in Franklin County, in Ohio, and across the United States. Breast cancer is the most common cancer among women. Lung and bronchus cancer has the next highest incidence rate for both genders.

Cancer Incidence Rates by Gender[6]

		Franklin County			Ohio	United States
		HM2013	HM2016	HM2019	HM2019	HM2019
Males	Prostate	Not available	163.5	125.2 ▼	99.2 ▼	119.8 ▼
	Lung & Bronchus	Not available	93.5	87.5	78.5 ▼	65.7 ▼
	Colon & Rectum	Not available	52.8	45.8 ▼	48.2 ▼	46.0 ▼
	Bladder	Not available	35.8	33.3	37.5	34.9
	Melanoma of the Skin	Not available	22.3	25.6 ▲	29.8 ▲	29.2
Females	Breast	Not available	127.3	128.4	127.9	124.9
	Lung & Bronchus	Not available	63.8	59.4	58.9	48.4
	Colon & Rectum	Not available	38.8	36.3	37.6	35.1 ▼
	Thyroid	Not available	21.2	19.6	22.4 ▲	21.0 ▲
	Melanoma of the Skin	Not available	Not available	17.6 □	22.7 □	17.3

Age adjusted rates per 100,000

In an attempt to diagnose cancer in its early stages, adults often undergo routine cancer screenings. To screen for cervical cancer, 86.9% of women age 21-65 have had a pap test within the past three years, and to screen for

breast cancer, 75.4% of Franklin County women have recently had a mammogram. In addition, 64.9% of adults between the ages of 50 and 75 have had a colonoscopy in the past 10 years.

Cancer Screenings[7]

		Franklin County			Ohio	United States
		HM2013	HM2016	HM2019	HM2019	HM2019
Cervical Cancer Screening	Pap smear: Women aged 21-65 who have had a pap test within past 3 years	Not available	84.9%	86.9%	81.9%	79.8%
Colorectal Cancer Screening (Ages 50+)	Blood stool test: Adults aged 50+ who have had test within past 2 years	17.1%	9.3%	Not available	Not available	Not available
	Blood stool test: Adults aged 50-75 who have had test within past year	Not available	4.8%	7.1% ▲	8.1%	8.0%
	Colonoscopy: Adults aged 50+ who have ever had a sigmoidoscopy or colonoscopy	66.2%	69.7%	Not available	Not available	Not available
	Colonoscopy: Adults aged 50-75 who have had a colonoscopy in past 10 years	Not available	63.2%	64.9%	63.6%	63.5%
Breast Cancer Screening	Mammography: Women aged 40+ who have had a mammogram within the past 2 years	75.8%	82.4%	75.4%	73.7%	72.5%

Regarding diagnoses of other diseases, the percentage of adults diagnosed with high blood pressure, high cholesterol, and arthritis have remained relatively constant since the last *HealthMap.* The percentages of adults diagnosed with diabetes and asthma have decreased since the last *HealthMap.* A higher percentage of children have been diagnosed with asthma (15.8% compared to 11.8%).

Diagnoses

		Franklin County			Ohio	United States
		HM2013	HM2016	HM2019	HM2019	HM2019
Diabetes[1]	Ever been told by a doctor that you have diabetes	9.8%	10.0%	8.9% ▼	12.0%	11.3% ▲
High Blood Pressure[8]	Ever been told they have high blood pressure	28.5%	31.3%	31.0%	34.3%	30.9%
High Blood Cholesterol[8]	Had blood cholesterol checked and told it was high	38.6%	39.7%	38.1%	36.7%	36.3%
	Had blood cholesterol checked within the last 5 years	76.1%	76.7%	78.2%	77.9%	77.7%
Arthritis[9]	Been told they have arthritis	26.7%	26.0%	23.7%	30.5%	25.8%
Asthma	Adults told they currently have asthma[1]	10.5%	15.8%	14.2% ▼	9.7%	9.3%
	Youth diagnosed with asthma[10]	16.5%	11.8%	15.8% ▲	14.2% □	22.8%

The following tables present data related to emergency department visits to the four major health systems in Central Ohio. In Franklin County, the rates of trips to the emergency department for mental health issues, asthma, and diabetes are higher than statewide rates.

Emergency Department Visits For Selected Health Issues[11]

	Franklin County			Ohio
	HM2013	HM2016	HM2019	HM2019
Mental health	Not available	Not available	165.7	148.9
Asthma	Not available	Not available	50.7	35.5
Diabetes	Not available	Not available	50.7	44.9
Cardiovascular disease	Not available	Not available	29.2	29.3
Dental care	Not available	Not available	8.3	9.8
Influenza	Not available	Not available	6.3	5.0
Hepatitis C	Not available	Not available	2.7	1.9
HIV	Not available	Not available	2.5	1.1
Alzheimer's	Not available	Not available	0.9	1.0
Sepsis	Not available	Not available	0.7	0.7
Stroke	Not available	Not available	0.4	1.0
Hepatitis B	Not available	Not available	0.4	0.2
Gonorrhea	Not available	Not available	0.2	0.1
Chlamydia	Not available	Not available	0.1	0.1
Syphilis	Not available	Not available	0.1	0.04
Pertussis	Not available	Not available	0.04	0.02

Rate per 1,000 population

Categories may be a combination of more than one ICD-10 code

When patients visit an emergency room in Franklin County they can be treated and released or admitted to the hospital. The table below shows the top diagnoses among patients who are treated and released. Each diagnosis includes the ICD-10 code and description.

Acute upper respiratory infections and unspecified chest pains are the most common causes of these emergency department visits, followed by abdominal pain, headache, and other types of chest pain.

Leading Causes of Emergency Department Admissions[11]

	Franklin County			Ohio
	HM2013	HM2016	HM2019	HM2019
Acute Upper Respiratory Infection (J06.9; infection affecting the upper respiratory tract)	Not available	Not available	21.4	14.8
Chest Pain Unspecified (R07.9; chest pain)	Not available	Not available	11.6	10.6
Unspecified Abdominal Pain (R10.9; pain in the abdominal region)	Not available	Not available	9.8	7.9
Headache (R51)	Not available	Not available	9.8	7.8
Other Chest Pain (R07.89; chest pain not classified elsewhere)	Not available	Not available	9.5	10.8
Streptococcal Pharyngitis (J02.0; infection of the throat)	Not available	Not available	8.1	4.7
Urinary Tract Infection Site Not Specified (N39.0; infection affecting any part of the urinary tract)	Not available	Not available	7.5	8.9
Acute Pharyngitis Unspecified (J02.9; throat inflammation)	Not available	Not available	7.2	7.4
Low Back Pain (M54.5; acute or chronic pain in lower back)	Not available	Not available	6.9	6.1
Viral Infection Unspecified (B34.9; a disease produced by a virus)	Not available	Not available	5.7	4.8

Rate per 1,000 population

The table below shows the top diagnoses among emergency department patients who are eventually admitted to the hospital. Sepsis is the most common cause of these hospital admissions, followed by acute kidney failure, and hypertensive heart and chronic kidney disease.

Leading Causes of Hospital Admissions From Emergency Department[11]

	Franklin County				Ohio
	HM2013	HM2016	HM2019		HM2019
Sepsis Unspecified Organism (A41.9; bacteria or toxins in the blood causing a rapidly progressing systemic reaction)	Not available	Not available	4.2		4.5
Kidney Failure Unspecified (N17.9; acute loss of kidney function)	Not available	Not available	1.4		1.7
Hypertensive Heart and Chronic Kidney Disease With Heart Failure and Stage 1 Through Stage 4 Chronic Kidney Disease, Or Unspecified Kidney Disease (I13.0)	Not available	Not available	1.4		1.6
Hypertensive Heart Disease With Heart Failure (I11.0)	Not available	Not available	1.2		1.3
Chronic Obstructive Pulmonary Disease With Acute Exacerbation (J44.1; acute flare-up of COPD)	Not available	Not available	1.1		1.8
Non-ST Elevation Myocardial Infarction (I21.4; heart attack without observable q wave abnormalities)	Not available	Not available	1.0		1.3
Acute and Chronic Respiratory Failure With Hypoxia (J96.21; respiratory failure without enough oxygen in blood)	Not available	Not available	0.8		0.8
Pneumonia Unspecified Organism (J18.9; inflammation of the lung usually caused by an infection)	Not available	Not available	0.7		1.4
Cerebral Infarction Unspecified (I63.9; stroke)	Not available	Not available	0.7		0.7
Urinary Tract Infection Site Not Specified (N39.0; infection affecting any part of the urinary tract)	Not available	Not available	0.7		1.0

Rate per 1,000 population

The table below shows the top diagnoses among youth patients who are treated and released. Acute upper respiratory infections are the most common causes of these emergency department visits, followed by strep throat, other types of throat infections, fever, and viral infection.

Leading Causes of Emergency Department Admissions: Youth Age 0-18[11]

	Franklin County			Ohio
	HM2013	HM2016	HM2019	HM2019
Acute Upper Respiratory Infection (J06.9; infection affecting the upper respiratory tract)	Not available	Not available	64.6	39.7
Streptococcal Pharyngitis (J02.0; infection of the throat)	Not available	Not available	26.1	15.1
Acute Pharyngitis Unspecified (J02.9; throat inflammation)	Not available	Not available	18.2	15.5
Fever Unspecified (R50.9; higher than normal body temperature)	Not available	Not available	17.8	13.5
Viral Infection Unspecified (B34.9; a disease produced by a virus)	Not available	Not available	17.6	12.7
Otitis Media Unspecified Right Ear (H66.91; ear infection in the middle ear area)	Not available	Not available	13.0	8.3
Cough (R05)	Not available	Not available	12.3	7.0
Otitis Media Unspecified Left Ear (H66.92; ear infection in the middle ear area)	Not available	Not available	11.7	7.5
Acute Obstructive Laryngitis Croup (J05.0; inflammation in the larynx and barking cough)	Not available	Not available	11.5	8.1
Vomiting Unspecified (R11.10; ejecting the stomach contents through the mouth)	Not available	Not available	9.8	6.6

Rate per 1,000 population

The table below shows the top diagnoses among youth emergency department patients who are eventually admitted to the hospital. Acute bronchiolitis due to RSV, or a respiratory infection caused by a virus, is the most common cause of hospital admission among youth. Other causes include types of major depression, other respiratory infections, pneumonia, and complications from type 1 diabetes.

Leading Causes of Hospital Admissions From Emergency Department: Youth Ages 0-18[11]

	Franklin County			Ohio
	HM2013	HM2016	HM2019	HM2019
Acute Bronchiolitis Due To RSV (J21.0; respiratory infection caused by respiratory syncytial virus)	Not available	Not available	1.3	0.6
Major Depression Disorder, Recurrent Severe Without Psychotic Features (F33.2; major depression that is severe and recurring with no psychotic symptoms)	Not available	Not available	0.5	0.4
Acute Bronchiolitis Due To Other Specified Organisms (J21.8; respiratory infection)	Not available	Not available	0.4	0.2
Type 1 Diabetes Mellitus With Ketoacidosis Without Coma (E10.10; type 1 diabetes when the body produces high levels of blood acids)	Not available	Not available	0.3	0.3
Dehydration (E86.0; loss of too much water from the body)	Not available	Not available	0.2	0.3
Pneumonia Unspecified Organism (J18.9; inflammation of the lung usually caused by an infection)	Not available	Not available	0.2	0.3
Major Depressive Disorder, Single Episode, Unspecified (F32.9; single episode of major depression)	Not available	Not available	0.2	0.5
Acute Bronchiolitis Unspecified (J21.9 - respiratory infection)	Not available	Not available	0.2	0.3
Unspecified Bacterial Pneumonia (J15.9; inflammation of the lung caused by bacterial infections)	Not available	Not available	0.2	Not available
Major Depressive Disorder, Single Episode, Severe Without Psychotic Features (F32.2; major depressive episode that is severe with no psychotic symptoms)	Not available	Not available	0.2	0.2

Rate per 1,000 population

The next several tables present data about injuries. In 2016, 8,390 injured patients were admitted to the hospital or transferred in or out of the emergency department for further evaluation in Franklin County. The table below lists the different categories of causes of injury.

Trauma Patients – Mechanism of Injury[12]

	Franklin County		
	HM2013	HM2016	HM2019
Total Patients	**Not available**	**Not available**	**6.6**
Falls	Not available	Not available	331.6
Motor Vehicle Traffic	Not available	Not available	123.7
Struck By or Against	Not available	Not available	65.7
Firearm	Not available	Not available	29.3
Motor Vehicle, Non-Traffic	Not available	Not available	27.8
Fire/Hot Object	Not available	Not available	16.0
Cut/Pierce	Not available	Not available	15.7
Natural/Environment	Not available	Not available	9.8
Other Specified - Classifiable	Not available	Not available	8.3
Pedal Cyclist, Other (Non-MVC)	Not available	Not available	7.8
Overexertion	Not available	Not available	7.7
Pedestrian, Other (Non-MVC)	Not available	Not available	7.3
Other Land Transport	Not available	Not available	4.8
Unspecified/Other	Not available	Not available	2.8
Other Specified - NEC	Not available	Not available	2.6
Machinery	Not available	Not available	2.5

Rate per 1,000 population

Presented another way, of the 8,390 trauma patients hospitalized for injury in 2016, 50% experienced falls, and 18.6% were involved in motor vehicle crashes.

Trauma Patients – Percent of Total Trauma Patients[12]

	Franklin County

	HM2013	HM2016	HM2019	
Falls	Not available	50.3%	50.0%	
Motor Vehicle Traffic Crashes	Not available	20.1%	18.6%	
Struck By or Against	Not available	9.3%	9.9%	
Firearm Related Injuries	Not available	5.4%	4.4%	▼
Motor Vehicle, Non-Traffic	Not available	Not available	4.2%	

Franklin County residents die from motor vehicle traffic injuries at the same rate as in the last *HealthMap*, a rate slightly lower than the statewide and national rates.

Motor Vehicle Traffic Injury Mortality[13]

	Franklin County			Ohio	United States
	HM2013	HM2016	HM2019	HM2019	HM2019
Total	9.0	9.0	8.7*	11.1	12.2

Rate per 100,000 population

**Crude rate*

As shown on the next page, in Franklin County, the elderly are most likely to suffer injury and visit a hospital due to a fall. Young adults between the ages of 18 and 24 visit hospitals due to injuries from motor vehicle traffic and non-traffic injuries, being struck, or firearms a higher rate than any other age group.

Top Five Mechanisms of Injury by Age[12]

		Franklin County		
		HM2013	HM2016	HM2019
Falls	0-17 years	Not available	134.7	141.3
	18-24 years	Not available	77.5	84.6
	25-44 years	Not available	134.1	128.3
	45-64 years	Not available	322.6	354.5
	65 years +	Not available	1,595.3	1,460.0
Motor Vehicle, Traffic Injuries	0-17 years	Not available	Not available	37.3
	18-24 years	Not available	Not available	215.1
	25-44 years	Not available	Not available	148.6
	45-64 years	Not available	Not available	131.0
	65 years +	Not available	Not available	139.6
Struck By or Against	0-17 years	Not available	Not available	28.5
	18-24 years	Not available	Not available	118.4
	25-44 years	Not available	Not available	86.3
	45-64 years	Not available	Not available	68.6
	65 years +	Not available	Not available	34.2

Rate per 100,000 population

Top Five Mechanisms of Injury by Age, Continued[12]

		Franklin County		
		HM2013	HM2016	HM2019
Firearm	0-17 years	Not available	Not available	17.8
	18-24 years	Not available	Not available	107.2
	25-44 years	Not available	Not available	36.2
	45-64 years	Not available	Not available	10.6
	65 years +	Not available	Not available	5.6
Motor Vehicle, Non-Traffic Injuries	0-17 years	Not available	Not available	8.7
	18-24 years	Not available	Not available	62.8
	25-44 years	Not available	Not available	34.7
	45-64 years	Not available	Not available	26.9
	65 years +	Not available	Not available	20.2

Rate per 100,000 population

Examining elderly patients and falls specifically, Franklin County residents age 65 and older are hospitalized because of a fall at the rate slightly lower than the national rate.

Elderly Patients (65+) Hospitalized By Fall[12,14]

	Franklin County			Ohio	United States
	HM2013	HM2016	HM2019	HM2019	HM2019
Elderly Patients Hospitalized by Fall	Not available	16.0	14.6	Not available	17.6 ▲

Rate per 1,000 population

Females are more likely to visit the hospital due to an injury from falling compared to males. However, males are more likely to visit the hospital due to motor vehicle traffic and non-traffic incidents, being struck, or firearms.

Top Five Mechanisms of Injury by Gender[12]

		Franklin County		
		HM2013	HM2016	HM2019
Falls	Male	Not available	301.6	312.6
	Female	Not available	348.3	349.7
Motor Vehicle, Traffic Injuries	Male	Not available	Not available	142.1
	Female	Not available	Not available	106.1
Struck By or Against	Male	Not available	Not available	101.3
	Female	Not available	Not available	31.8
Firearm	Male	Not available	Not available	53.0
	Female	Not available	Not available	6.6
Motor Vehicle, Non-Traffic Injuries	Male	Not available	Not available	33.5
	Female	Not available	Not available	22.4

Rate per 100,000 population

In Franklin County, White residents are more likely to visit the hospital due to an injury from falling compared to Black residents. However, Blacks are more likely to visit the hospital due to motor vehicle traffic and non-traffic incidents, being struck, or firearms.

Top Five Mechanisms of Injury by Race[12]

		Franklin County			
		HM2013	HM2016	HM2019	
Falls	White	Not available	389.6	404.8	
	Black	Not available	233.7	264.8	▲
	Other / Unknown	Not available	141.7	148.6	
Motor Vehicle, Traffic Injuries	White	Not available	Not available	109.6	
	Black	Not available	Not available	216.3	
	Other / Unknown	Not available	Not available	68.2	
Struck By or Against	White	Not available	Not available	56.1	□
	Black	Not available	Not available	125.0	
	Other / Unknown	Not available	Not available	30.8	□
Firearm	White	Not available	Not available	9.5	□
	Black	Not available	Not available	105.3	
	Other / Unknown	Not available	Not available	9.7	
Motor Vehicle, Non-Traffic Injuries	White	Not available	Not available	24.4	
	Black	Not available	Not available	49.2	
	Other / Unknown	Not available	Not available	15.7	

Rate per 100,000 population

Men in Franklin County are much more likely to be hospitalized as a result of an injury sustained while at work.

Hospitalization From Work-Related Injuries[12]

		Franklin County		
		HM2013	HM2016	HM2019
Hospitalization Due to Work-Related Injuries	**Total**	**Not Available**	**Not available**	**16.1**
	Females	Not available	Not available	19.2%
	Males	Not Available	Not available	80.8%

Rate per 100,000 population

Considering all types of injuries and unintentional injuries specifically, those age 0-17 years old are least likely to be hospitalized, while those 65 years and older are most likely. Regarding intentional injuries, those ages 18-24 years are most likely to be hospitalized, and rates decrease as residents get older.

Franklin County Injury Hospitalizations – By Age[12]

		Franklin County		
		HM2013	HM2016	HM2019
All Injuries	0-17 years	Not available	Not available	326.6
	18-24 years	Not available	Not available	677.6
	25-44 years	Not available	Not available	504.8
	45-64 years	Not available	Not available	681.8
	65 years and over	Not available	Not available	1,753.7
Unintentional Injuries	0-17 years	Not available	Not available	292.7
	18-24 years	Not available	Not available	440.7
	25-44 years	Not available	Not available	364.7
	45-64 years	Not available	Not available	597.6
	65 years and over	Not available	Not available	1,730.0
Intentional Injuries	0-17 years	Not available	Not available	31.2
	18-24 years	Not available	Not available	223.2
	25-44 years	Not available	Not available	136.8
	45-64 years	Not available	Not available	81.2
	65 years and over	Not available	Not available	20.9

Rate per 100,000 population

In Franklin County, males are more likely than females to be hospitalized for both unintentional and intentional injuries.

Franklin County Injury Hospitalizations – By Gender[12]

		Franklin County		
		HM2013	HM2016	HM2019
All Injuries	Male	Not available	Not available	761.4
	Female	Not available	Not available	570.2
Unintentional Injuries	Male	Not available	Not available	603.4
	Female	Not available	Not available	529.2
Intentional Injuries	Male	Not available	Not available	151.0
	Female	Not available	Not available	39.7

Rate per 100,000 population

When examining rates of injuries by race, Black residents are more likely than White residents to be hospitalized for all types of injuries. This difference is seen more dramatically among rates of intentional injuries than unintentional injuries.

Franklin County Injury Hospitalizations – By Race[12]

		Franklin County		
		HM2013	HM2016	HM2019
All Injuries	White	Not available	Not available	686.5
	Black	Not available	Not available	887.3
	Other / Unknown	Not available	Not available	325.3
Unintentional Injuries	White	Not available	Not available	621.1
	Black	Not available	Not available	639.5
	Other / Unknown	Not available	Not available	288.5
Intentional Injuries	White	Not available	Not available	62.9
	Black	Not available	Not available	236.4
	Other / Unknown	Not available	Not available	36.2

Rate per 100,000 population

References

[1] Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Survey Data, 2016 (HM2019), 2013 (HM2016), 2010 (HM2013)

[2] Personal communication with a statistician from the Mortality Statistics Branch of the National Center for Health Statistics (September 21, 2018)

[3] Centers for Disease Control and Prevention, National Center for Health Statistics, WONDER Online Database, Detailed Mortality File 1999-2016, 2016 (HM2019), 2013 (HM2016), 2010 (HM2013)

[4] Ohio Department of Health, Data Warehouse (Franklin County and Ohio), 2016 (HM2019), 2012 (HM2016), 2006-2008 (HM2013); Centers for Disease Control and Prevention National Vital Statistics, WONDER Online Database, Underlying Cause of Death (United States), 2016 (HM2019), 2012 (HM2016), 2010 (HM2013)

[5] Franklin County Cancer Profile (Franklin County), 2010-2014 (HM2019); Ohio Department of Health Office of Health Improvement and Wellness, Ohio Annual Cancer Report (Ohio), 2015 (HM2019); SEER Cancer Statistics Review, 1975-2014, National Cancer Institute (United States) 2010-2014 (HM2019);
Ohio Department of Health Vital Statistics Data Analyzed by Columbus Public Health (Franklin County), 2010-2012 (HM2016); Centers for Disease Control and Prevention, National Center for Health Statistics, WONDER Online Database, Underlying Cause of Death, 1999-2012 (Ohio and United States), 2010-2012 (HM2016); Ohio Department of Health, Ohio Cancer Incidence Surveillance System, Ohio Cancer Facts & Figures 2010 (Franklin County), 2003-2007 (HM2013)

[6] Franklin County Cancer Profile (Franklin County), 2010-2014 (HM2019); Ohio Department of Health Office of Health Improvement and Wellness, Ohio Annual Cancer Report (Ohio), 2015 (HM2019); Ohio Department of Health Ohio Cancer Incidence Surveillance System, End of Year File 1996-2011 (Franklin County and Ohio), 2006-2010 (HM2016); SEER Cancer Statistics Review, 1975-2010 / 1975-2014, National Cancer Institute (United States) 2010-2014 (HM2019), 2006-2010 (HM2016)

[7] Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Survey Data, 2016 (HM2019), 2012 (HM2016), 2010 (HM2013)

[8] Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Survey Data, 2015 (HM2019), 2013 (HM2016), 2009 (HM2013)

[9] Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Survey Data, 2016 (HM2019), 2013 (HM2016), 2009 (HM2013)

[10] Ohio Department of Health Local Asthma Profiles (Franklin County and Ohio), 2014 (HM2019); Centers for Disease Control and Prevention High School YRBSS (United States), 2015 (HM2019); Ohio Colleges of Medicine Government Resource Center, Ohio Medicaid Assessment Survey (Franklin County), 2012 (HM2016); Centers for Disease Control and Prevention High School Youth Risk Behavior Survey (Ohio and United States), 2013 (HM2016), (United States) 2009 (HM2013); Ohio Family Health Survey (Franklin County and Ohio), 2008 (HM2013)

[11] Ohio Hospital Association, 2017 (HM2019)

[12] Central Ohio Trauma System, 2016 (HM2019)

[13] Ohio Department of Public Safety Traffic Crash Facts (Franklin County), 2016 (HM2019); Centers for Disease Control and Prevention, WISQARS (Ohio and United States), 2016 (HM2019), 2012 (HM2016); Ohio Department of Health Vital Statistics, data analyzed by Columbus Public Health (Franklin County), 2010-2012 (HM2016); Central Ohio Trauma Systems Registry, data analyzed by Columbus Public Health (Franklin County), 2010 (HM2013); Ohio Hospital Association (Ohio), 2010 (HM2013); WISQUARS Non-Fatal Injury Report (United States), 2013 (HM2013)

[14] Central Ohio Trauma System (Franklin County), 2014 (HM2016); Ohio Department of Health, Falls Among Older Adults (Ohio), 2012 (HM2016); Centers for Disease Control and Prevention WISQARS Nonfatal Injury Reports (United States), 2016 (HM2019), 2013 (HM2016)

Infectious Diseases

This section describes diseases caused by organisms, such as viruses and bacteria that enter and multiply in the body.

Key Findings – Infectious Diseases

In Franklin County, progress has been made as the rate of people suffering from some infectious diseases, such as pertussis, has decreased since the last *HealthMap.*

However, rates of other infectious diseases have grown. For example, from *HealthMap2016* to *HealthMap2019:*

- Rates of syphilis, gonorrhea, and chlamydia have increased
- Rates of hepatitis B and hepatitis C have increased
- Rates of people living with HIV have increased

Regarding preventative measures for elderly residents, a higher percentage have received a pneumonia vaccination, while fewer have received a flu shot in the past year, compared to the last *HealthMap.*

Among Franklin County residents ages 65 years and older, a higher percentage report having had a pneumonia vaccination than the last *HealthMap*, but fewer have gotten a flu shot in the past year.

Vaccines (65 years and Older)[1]

	Franklin County				Ohio	United States
	HM2013	HM2016	HM2019		HM2019	HM2019
Adults age 65+ ever had a pneumonia vaccination	74.4%	72.3%	80.9%	▲	74.7%	73.4%
Adults age 65+ had a flu shot within the past year	69.3%	68.3%	60.8%	▼	57.3%	58.6%

Overall, there were 1,330 confirmed cases of the flu in Franklin County during the 2017-2018 flu season, translating into a rate of 102.9 per 100,000 people.

Influenza Cases[2]

	Franklin County			Ohio	United States
	HM2013	HM2016	HM2019	HM2019	HM2019
Confirmed Influenza Cases	Not available	Not available	102.9	Not available	68.2

Rate per 100,000

Rates of several infectious diseases in Franklin County, Ohio, and the U.S. are shown on a table on the next page. The rates of syphilis, gonorrhea, and chlamydia among Franklin County residents continue to increase since the last *HealthMap* and remain higher than the statewide and national rates.

Rates of hepatitis B and hepatitis C are increasing in Franklin County, Ohio, and the U.S.

The rate of pertussis has descreased from the last *HealthMap,* but remains higher than statewide and national rates.

Incidence of Infectious Disease

	Franklin County				Ohio		United States	
	HM2013	HM2016	HM2019		HM2019		HM2019	
Syphilis (Primary and Secondary)[3,4]	9.7	25.1	39.7	▲	13.9	▲	8.6	
Gonorrhea[4,5]	279.4	243.1	336.3	▲	176.8	▲	145.0	
Chlamydia[4,6]	725.8	648.0	768.8	▲	521.9	▲	494.7	
Tuberculosis[7]	5.7	4.2	3.9		1.2		2.9	
Meningococcal Diseases[8]	0.4	0.2	0.1	▼	0.1		0.1	▼
Hepatitis A[9]	0.7	0.6	0.6		0.4	▼	0.6	▲
Measles[9]	N/A	N/A	N/A		0.0		0.0	
Mumps[9]	N/A	0.2	0.4	▲	0.5	▲	2.0	▲
Pertussis[9]	19.7	26.7	21.2	▼	7.4	▼	5.6	▼
Tetanus[10]	N/A	N/A	Not available		0.0		0.0	
Rubella[10]	N/A	0.1	Not available		N/A		0.0	
Diptheria[10]	N/A	N/A	Not available		N/A		Not available	
Varicella[11]	12.4	6.0	3.9	▼	3.8	▼	3.5	▼
*E. coli**O157:H7[11]	1.2	0.5	4.5	▲	2.4	▲	2.5	
Listeriosis[11]	0.1	0.2	0.2	▲	0.2	▲	0.2	▲
Salmonellosis[11]	12.9	12.1	11.3		12.0	▲	16.7	
Hepatitis B (Acute)[11]	3.1	4.5	5.8	▲	2.4	▲	1.0	▲
Hepatitis C (Chronic)[12]	Not available	Not available	170.3		186.7		Not available	
Hepatitis C (Acute)[11]	0.1	0.3	3.1	▲	1.9	▲	1.0	▲
Strep pneumo (inv), drug resistant[12]	Not Available	Not Available	1.0	□	2.6	□	Not available	
Cryptosporidiosis[12,13]	Not Available	Not Available	5.1	□	5.6	□	4.2	

Rate per 100,000 population

N/A=no cases reported

**CDC reports E. Coli O157:H7 cases in combination with other STEC (Shiga toxin-producing Escherichia coli) cases*

While rates of tuberculosis have remained constant overall, rates of the disease in every demographic group are higher in Franklin County compared to Ohio.

Tuberculosis[14]

		Franklin County				Ohio	
		HM2013	HM2016	HM2019		HM2019	
Tuberculosis Rate, Overall		**Not available**	**4.2**	**4.2**		**1.3**	
Tuberculosis Rates by Race	Male	Not available	5.5	4.9	▼	1.7	
	Female	Not available	2.9	3.6	▲	0.9	
	White	Not available	1.3	0.8	▼	0.4	▼
	African American	Not available	10.0	9.7		4.0	▲
Tuberculosis Rates by Age	0-4 years	Not available	N/A	N/A		N/A	
	5-14 years	Not available	1.9	0.6	▼	0.1	▼
	15-24 years	Not available	3.4	4.1	▲	1.0	▲
	25-44 years	Not available	6.3	5.5	▼	2.1	▲
	45-64 years	Not available	3.8	5.3	▲	1.1	
	65 years old+	Not available	5.6	4.9	▼	1.9	▼

Rate per 100,000 population

N/A=no cases reported

The rates of Franklin County residents currently living with a diagnosis of HIV infection (392.6 per 100,000) is higher than the last *HealthMap* (348.8), and this rate is almost double the statewide rate (199.5).

Prevalence of HIV / AIDS[15]

	Franklin County				Ohio		United States	
	HM2013	HM2016	HM2019		HM2019		HM2019	
Persons living with a diagnosis of HIV infection	293.4	348.8	392.6	▲	199.5	▲	303.5	▼

Rate per 100,000 population

Among Franklin County residents, the incidence of *Clostridium difficile* (*C. diff*) and CLABSI are comparable to the statewide rates, when looking at only outpatient cases.

Incidence (Cases) of Healthcare-Associated Infections – Outpatient Only[16]

	Franklin County			Ohio
	HM2013	HM2016	HM2019	HM2019
Clostridium difficile (C. diff)	Not available	Not available	0.7	0.5
Bloodstream infection due to central venous catheter (CLABSI)	Not available	Not available	0.03	0.03

Rate per 10,000 population

References

[1] Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Survey Data, 2016 (HM2019), 2013 (HM2016), 2010 (HM2013)

[2] 2017-2018 Columbus and Franklin County Seasonal Influenza Activity Weekly Summary (Franklin County), 2017-2018 Influenza Season (HM2019); Centers for Disease Control and Prevention, 2017-2018 Influenza Season Week 18 Ending May 5, 2018 (United States), 2017-2018 Influenza Season (HM2019)

[3] 2013-2017 Ohio Infectious Disease Status Report: Total Syphilis (Franklin County and Ohio), 2016 (HM2019)

[4] Centers for Disease Control and Prevention MMWR, Summary of Notifiable Diseases (United States), 2016 (HM2019); Annual Summary of Reportable Diseases 2012-2013, Ohio Reportable Disease Data (non-TB, preliminary) – Quarterly Summary of Selected Reportable Infectious Diseases (Franklin County and Ohio), 2013 (HM2016); Ohio Department of Health, STD Surveillance Report (Franklin County and Ohio), 2010 (HM2013); Centers for Disease Control and Prevention, Sexually Transmitted Disease Surveillance (United States), 2009 (HM2013)

[5] 2013-2017 Ohio Infectious Disease Status Report: Gonorrhea (Franklin County and Ohio), 2016 (HM2019)

[6] 2013-2017 Ohio Infectious Disease Status Report: Chlamydia (Franklin County and Ohio), 2016 (HM2019)

[7] Ohio Department of Health TB Demographic Breakdown for Ohio and Four Selected Counties (Franklin County and Ohio), 2016 (HM2019), 2013 (HM2016); Centers for Disease Control and Prevention MMWR, Summary of Notifiable Diseases (United States), 2016 (HM2019); Ohio Department of Health, 2010 TB Cases (Franklin County and Ohio), 2010 (HM2013); Centers for Disease Control and Prevention, Reported Tuberculosis in the United States (United States), 2010 (HM2013)

[8] Ohio Department of Health Quarterly Summary of Selected Reportable Infectious Diseases, Ohio (Franklin County and Ohio), 2017 (HM2019), 2013 (HM2016), 2010 (HM2013); Centers for Disease Control and Prevention MMWR, Summary of Notifiable Diseases (United States), 2016 (HM2019), 2012 (HM2016), 2010 (HM2013)

[9] Ohio Department of Health Quarterly Summary of Selected Reportable Infectious Disease, Ohio (Franklin County and Ohio), 2017 (HM2019), 2010 (HM2013); Centers for Disease Control and Prevention MMWR, Summary of Notifiable Diseases (United States), 2016 (HM2019), 2012 (HM2016), 2010 (HM2013); Annual Summary of Reportable Diseases 2012-2013, Ohio Reportable Disease Data (non-TB, preliminary) – Quarterly Summary of Selected Reportable Infectious Diseases (Franklin County and Ohio), 2013 (HM2016)

[10] Ohio Department of Health Reported Cases of Notifiable Diseases by County of Residence, Ohio (Franklin County and Ohio), 2016 (HM2019), 2010 (HM2013); Centers for Disease Control and Prevention MMWR, Summary of Notifiable Diseases (United States), 2016 (HM2019), 2012 (HM2016), 2010 (HM2013); Annual Summary of Reportable Diseases 2012-2013, Ohio Reportable Disease Data (non-TB, preliminary) – Quarterly Summary of Selected Reportable Infectious Diseases (Franklin County and Ohio), 2013 (HM2016)

[11] Ohio Department of Health Quarterly Summary of Selected Reportable Infectious Disease, Ohio (Franklin County and Ohio), 2017 (HM2019); Centers for Disease Control and Prevention MMWR, Summary of Notifiable Diseases (United States), 2016 (HM2019), 2012 (HM2016); Annual Summary of Reportable Diseases 2012-2013, Ohio Reportable Disease Data (non-TB, preliminary) – Quarterly Summary of Selected Reportable Infectious Diseases (Franklin County and Ohio), 2013 (HM2016); Ohio Department of Health (Franklin County and Ohio), 2010 (HM2013)

[12] Ohio Department of Health Quarterly Summary of Selected Reportable Infectious Disease, Ohio Fourth Quarter, 2017 (HM2019)

[13] Centers for Disease Control and Prevention, WONDER Online Database, Reported Cases of Notifiable Diseases and Rates Per 100,000, Excluding U.S. Territories, 2016 (HM2019)

[14] Ohio Department of Health, Ohio TB Cases, Demographic Breakdowns for Ohio and Four Selected Counties, 2017 (HM2019), 2013 (HM2016)

[15] Ohio Department of Health, HIV Infection in Ohio (Franklin County and Ohio), 2016 (HM2019); Centers for Disease Control and Prevention, HIV in the United States by Geography (United States), 2015 (HM2019), 2011, (HM2016); Ohio Department of Health, HIV/AIDS Surveillance Program (Franklin County and Ohio), 2013 (HM2016), 2009 (HM2013)

[16] Ohio Hospital Association, 2017 (HM2019)

Potential Partners / Resources

Priority #1: Mental Health and Addiction

Potential Partners/Other Resources
Action for Children
ADAMH Board of Franklin County
Alvis House
Amethyst
Buckeye Ranch
Community Mental Health Centers
Directions for Youth and Families
Eastway Behavioral Healthcare, Heritage of Hannah Neil
Guidestone
Huckleberry House
Maryhaven Inc.
Mental Health America of Franklin County
National Alliance on Mental Illness
Saint Vincent's Family Center
Sequel Pomegranate of Central Ohio
St. Stephen's Community House
Star House
United Methodist Children's Home
Veteran Administration Outpatient Health Center
YMCA and YWCA Family Centers

Franklin County Bedboard Providers
Columbus Springs
Mount Carmel Health System
Nationwide Children's Hospital
OhioHealth
Netcare Access
Ohio Hospital for Psychiatry
Ohio State University Wexner Medical Center
River Vista
SUN Behavioral Health
Twin Valley Behavioral Healthcare

Priority #2: Income/Poverty

Potential Partners/Other Resources
Career Transition Institute
Cap4Kids
Center for Employment Opportunities
Central Community House
The Columbus Foundation
Columbus Metropolitan Housing Authority
Columbus Urban League
Columbus Works
Community Development for All People
Community Mediation Services
Community Properties of Ohio
Community Shelter Board
Congregational Outreach Ministries Program of Assistance & Social Service (COMPASS)
Economic Community Development Institute
Federally Qualified Health Centers
Fortuity Calling
Franklin County Free Clinics
Franklin County Jobs and Family Services
Gladden Community House
Godman Guild
Goodwill Columbus
Healthy Homes Home port
Human Services Chamber of Franklin County
Impact Community Action
Legal Aid Society of Columbus
Lutheran Social Services
Mid-Ohio Food Bank
Military veterans Resources Center
Nehemiah House of Refuge
New Directions Career Center
Ohio Hispanic Coalition
Ohio Means Jobs – Franklin County
OSU Extension
Partners Achieving Community Transformation
Physician Care Connection
Reeb Avenue Center
Saint Stephen's Community House
Salvation Army
United Way of Central Ohio
YMCA and YWCA of Central Ohio

Priority #3: Maternal and Infant Health

Potential Partners/Other Resources

Amethyst/Alvis women's treatment programs
Boys and Girls Clubs of Columbus
CelebrateOne
Center for Healthy Families
Central Ohio Hospital Council
City of Columbus/Department of Development
Columbus City Schools
Columbus Diaper Bank and Diaper Coalition
Columbus Public Health
Community Development for All People
Federally Qualified Health Centers
Franklin County Department of Job and Family Services
Franklin County Family and Children First Council
MaryHaven Women's Program
Maternity Resource Center
Moms2B
Ohio Better Birth Outcomes
Physicians CareConnection
Planned Parenthood
Total Health and Wellness
St. Stephen's Community House
Stable Cradle
Women, Infants and Children (WIC)

Summary

Franklin County HealthMap2019 provides a comprehensive overview of our community's health status and needs. There are numerous indicators that suggest the health of Franklin County, Ohio's residents compares favorably with the state and country.

Franklin County HealthMap2019 also uncovered a number of indicators that suggest areas in which the health of Franklin County's residents either has diminished over time or compares unfavorably to Ohio or the nation.

Consistent with federal requirements, the contributing hospitals will use this report to inform development and implementation of strategies to address its findings. It is intended that a wide range of stakeholders – many more than represented on the *Franklin County HealthMap2019* Community Health Needs Assessment Steering Committee – will also use this report for their own planning efforts. Subsequent planning documents and reports will be shared with stakeholders and with the public.

Users of *Franklin County HealthMap2019* are encouraged to send feedback and comments that can help to improve the usefulness of this information when future editions are developed. Questions and comments about *Franklin County HealthMap2019* may be shared with:

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Navigating Our Way to a Healthier Community Together

Community Impact Report

In 2016, Nationwide Children's Hospital set out to accomplish specific goals to improve the health of Franklin County's children and young adults. Since the majority of our patients live in Franklin County, we focused on indicators specific to these residents' needs. The following report is a review of the 2016 Nationwide Children's Implementation Strategy.

Goals for improvement were determined after review of morbidity and mortality data and a series of community meetings, which were designed to solicit feedback from residents on how Nationwide Children's could better serve them. The *HealthMap**2016*** was posted to the Nationwide Children's website following its approval in August 2016. There were no public written comments for either the Community Health Needs Assessment or the Implementation Strategy.

Nationwide Children's succeeded in achieving many of its goals for improvement, and going forward will continue to be responsive to the community's health care needs by regularly evaluating each service we provide.

The primary targets for Nationwide Children's efforts fall into the following categories, which were identified as areas of need by the Franklin County *HealthMap**2016***:

- **Access to Care:** Nationwide Children's will expand its presence in the communities it serves, work to advance patient-centered medical home models, and improve coordination of care to ensure community members have access to high-quality primary, dental, specialized, urgent and emergency care in appropriate settings.
- **Behavioral Health:** Nationwide Children's will maintain and expand inpatient, outpatient and community-based efforts to innovatively prevent, treat and minimize the impact of behavioral health problems in its target population by providing care in the most appropriate setting.
- **Chronic Conditions:** Nationwide Children's will continue to reduce asthma and diabetes incidence and complications by optimizing treatment given through primary care visits, school-based programs and, when necessary, through hospitalizations.
- **Infant Mortality:** By participating in the endeavors of Ohio Better Birth Outcomes and providing care for infants in need through the Ohio Fetal Medicine Collaborative, Nationwide Children's will aim to increase the availability of birth control, prenatal care and immunizations to reduce prematurity and to prevent infant morbidity and mortality.
- **Infectious Diseases:** Nationwide Children's will continue to raise standards for hand hygiene, infection prevention, community and staff vaccination efforts, antibiotic stewardship and research to prevent, manage and treat infectious diseases. In addition, the hospital will expand testing and education associated with sexually transmitted infections.
- **Obesity:** Nationwide Children's will continue striving to reduce the incidence of obesity and its complications by increasing patient treatment contact and community educational outreach. Additionally, Nationwide Children's will offer specialty sessions for specific obese populations and develop evidence-based interventions to reduce disparities in the care of the high-risk, vulnerable populations.

Access to Care

PRIMARY CARE

2016 Implementation Strategy Initiatives:

To improve access to pediatric primary care services, Nationwide Children's committed to:

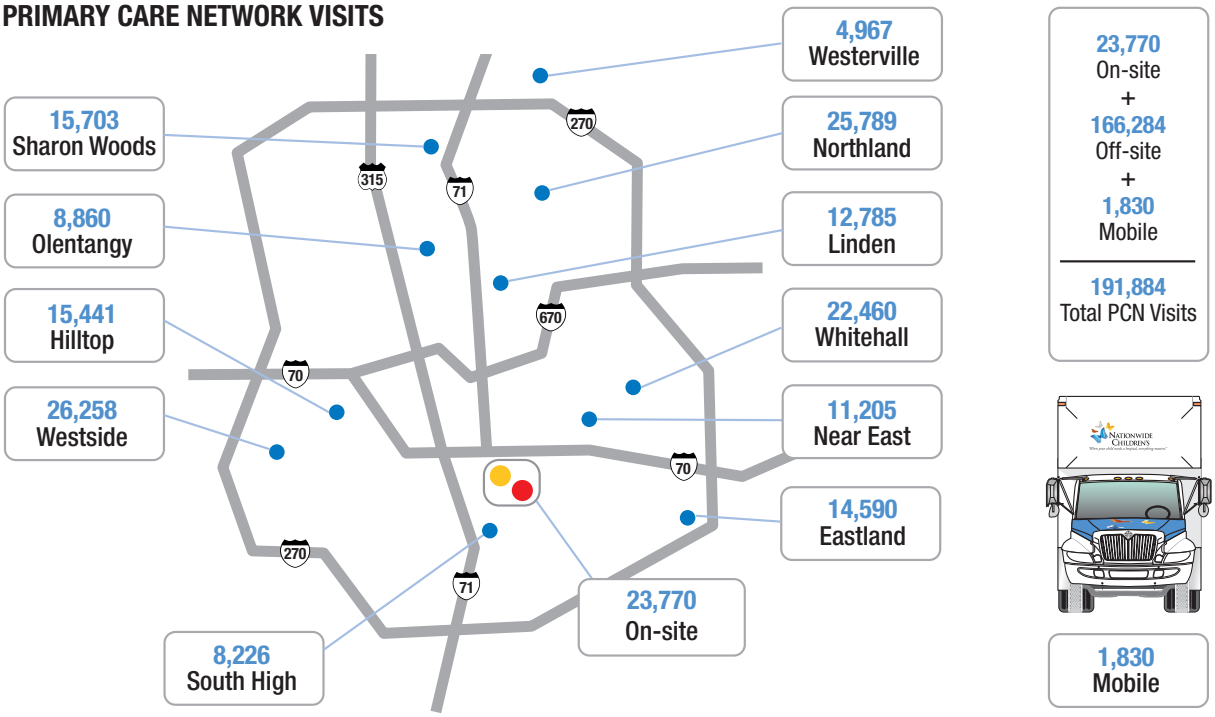
- Promote growth and development of the Primary Care Centers, including relocating the Olentangy Primary Care Center and the Main Campus Primary Care Centers to new, more accessible locations, which are expected to increase capacity at those centers
- Develop a comprehensive patient education program by increasing the availability of online and print materials conveying preventative health messages, as well as increasing the time that clinicians spend with patients to ensure they understand the nature of their illnesses and ways to prevent future illnesses
- Increase clinical research activity and initiate an increasing number of interdepartmental research collaborations to improve primary care outcomes
- Improve patient and family experience and engagement

Nationwide Children's network of Primary Care Centers is located in the most underserved areas of Franklin County, where few to no primary care physicians provide services. In addition to the Primary Care Centers, two affiliated mobile health care centers provide services at schools, child care centers, family shelters and other locations. Nationwide Children's partners with Columbus City Schools, KIPP Columbus and Cristo Rey Columbus High School to provide additional health care access to students in the school setting. The Primary Care Network also has spent time and resources to better educate patients and their caretakers, broaden services available on weekends and increase research that ultimately benefits children.

Promote growth and development of the Primary Care Centers, including relocating the Olentangy Primary Care Center and the Main Campus Primary Care Centers to new, more accessible locations, which are expected to increase capacity at those centers

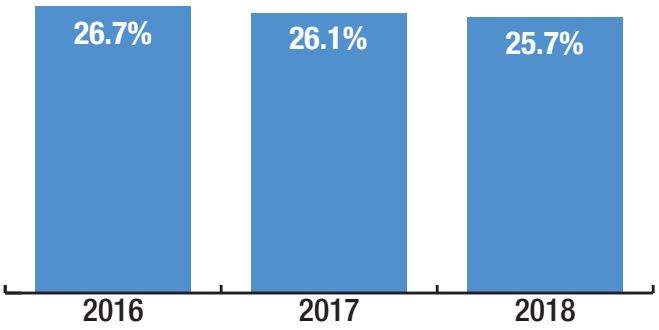
The Olentangy Primary Care Center relocated in July 2018 to provide better access to patients. Through December 2018, patient volume increased by 6% at this new location compared to the same five months of 2017. Downtown Primary Care Centers, referred to as Primary Care Red and Primary Care Yellow, moved to their new location at the newly constructed Livingston Ambulatory Center in April 2017. Patient volumes increased by 31% at Primary Care Red and 23% at Primary Care Yellow from 2017 to 2018. The Primary Care Network as a whole experienced 5% growth from 2017 to 2018 and expects to continue to expand and relocate to meet the needs of the patients and their families.

2018 PRIMARY CARE NETWORK VISITS



In August 2018, the primary care scheduling system was overhauled, increasing efficiencies. Based on the number of patients scheduled per day per provider, clinicians had an average of 21% more time to spend with each patient compared to the past year. The time is spent on a more comprehensive assessment and patient education, which has resulted in an improved overall patient experience. Since changing the scheduling system, the rate of missed appointments has dropped.

PRIMARY CARE MISSED APPOINTMENT RATE BY YEAR



Develop a comprehensive patient education program by increasing the availability of online and print materials conveying preventative health messages, as well as increasing the time that clinicians spend with patients to ensure they understand the nature of their illnesses and ways to prevent future illnesses

To improve patient access to educational material, NationwideChildrens.org was updated to emphasize the importance of well visits and having a primary care provider. This information was also provided to patients and their families through a variety of means, such as digital signage, on-hold messaging and on Nationwide Children's "700 Children's" blog, reaching more than 2,000 visitors and callers annually. Similar messaging was distributed to schools, including education on when and how to seek preventative care, such as immunizations and well visits. In addition, "Helping Hands" education materials, which provide information on conditions and diagnoses, were updated for distribution to families. In the school-based setting, clinicians and health educators provided more than 800 middle and high school students with in-class education on reproductive and sexual health utilizing materials describing methods of contraception and how to access services.

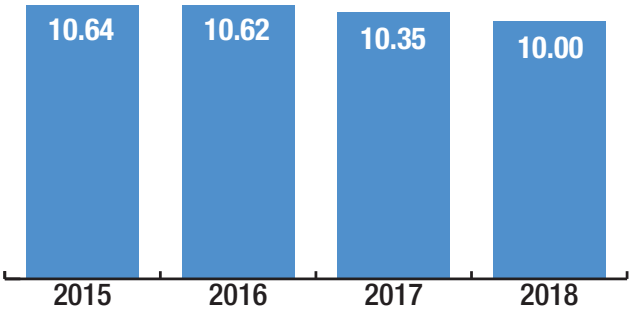
Increase clinical research activity and initiate an increasing number of interdepartmental research collaborations to improve primary care outcomes

Research is a focus of the Primary Care Network. This is evident by the growing number of published research papers written by division investigators: 14 in 2016, 22 in 2017 and 30 in 2018. Since 2016, several faculty recruited to Primary Care have been given significant time and resources to further their research programs. Division researchers have produced studies on patient screening, asthma, HPV vaccination, resident education and more.

These interdepartmental research projects have been shown to improve patient outcomes. Many Primary Care faculty members and nursing leaders have been and continue to be formally trained in quality improvement through the hospital's Quality Improvement Essentials course.

For several years, asthma QI research has been a focus in Primary Care. In 2017, Primary Care was awarded the Children's Hospital Association Pediatric Quality Award for Clinical Care for its longitudinal, multi-year (and still ongoing) project to reduce Emergency Department (ED) visits from asthma in their patient population. From 2011 to 2018, ED visits per asthma patient declined 30%. Had the asthma visitation rate remained unchanged over that time, the ED would have had to manage over 1,700 more visits.

ASTHMA PARTNERS FOR KIDS (PFK) ED VISITS PER 1,000 MEMBERS PER MONTH, ANNUALIZED

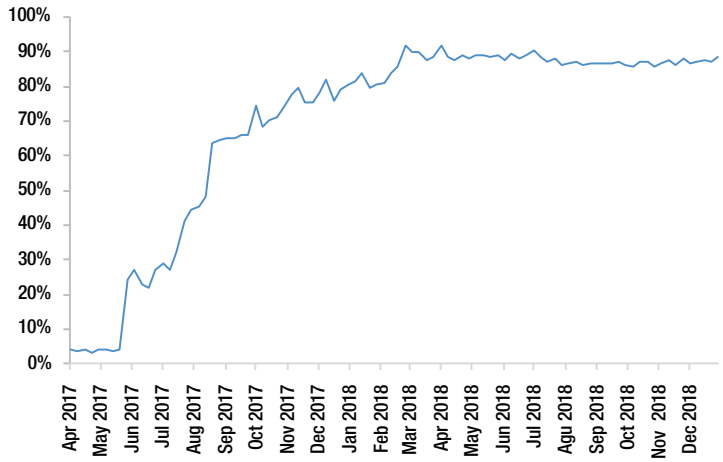


Improve patient and family experience and engagement

Studies indicate that patients and their families value a continuous health care relationship with a provider, time spent with their clinician and easy access to care.

Beginning in 2017, to improve continuity of care, the Primary Care Network began an initiative to assign a primary care provider to each patient. Literature shows this as an important step in improving patient satisfaction and long-term health outcomes. Approximately 90% of all patients seen in the past year had an individual primary care provider assigned.

PERCENTAGE OF PRIMARY CARE NETWORK PATIENTS WITH ASSIGNED PRIMARY CARE PROVIDER

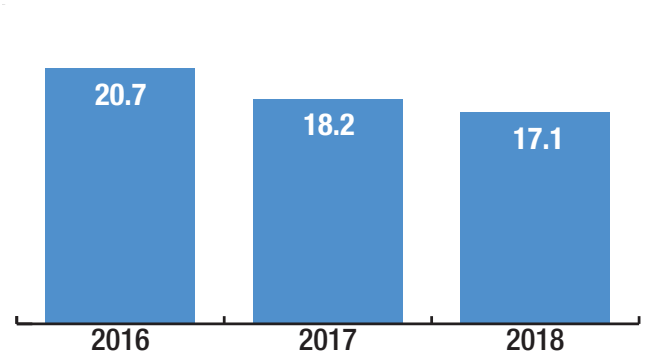


The aforementioned scheduling overhaul increased the amount of time providers and staff spent with each patient in 2018, also contributing to an enhanced patient experience.

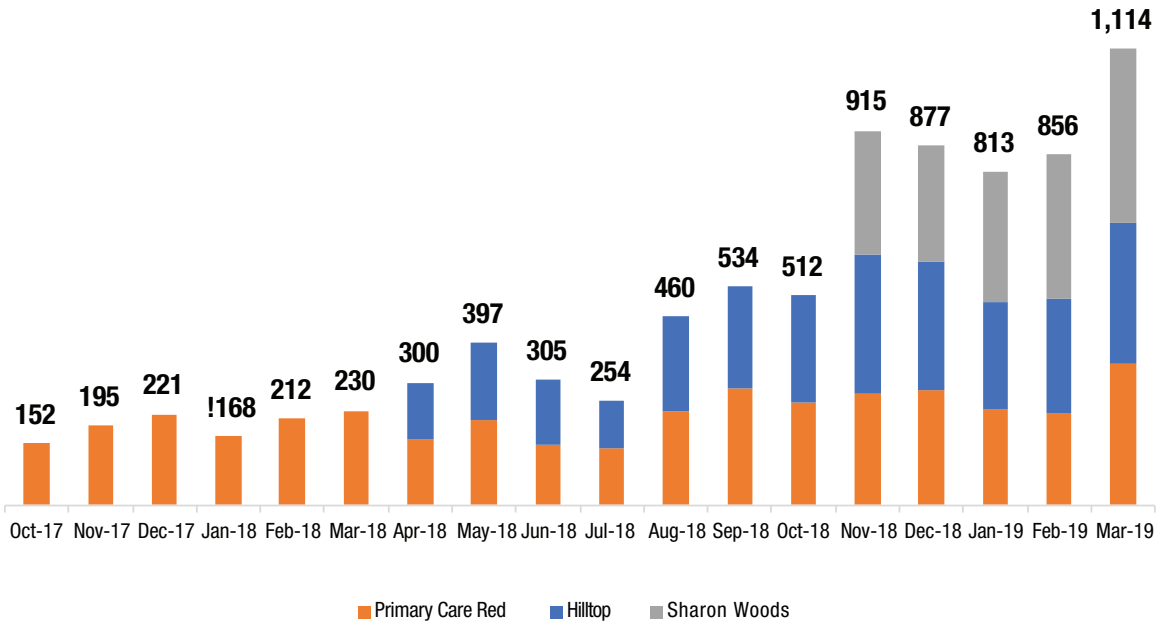
Primary Care also expanded Saturday hours from 2016-2018, and modified them to include all visit types. Only well-child care visits were available on Saturdays beforehand. In 2017, walk-in sick clinics started at the Primary Care downtown office (referred to as Primary Care Red), the Hilltop and the Sharon Woods locations, improving access for acute, same-day care for patients. Such access can lead to greater engagement and connection of patient families to the medical home and has led to a reduction in Emergency Department (ED) and Urgent Care visits by the primary care population. Through its partnership program with Columbus public and private schools called Care Connection, Nationwide Children's has added clinicians to school-based health services. The clinicians help provide sick care in schools where there are high concentrations of chronically ill children, providing an alternative to visiting an ED or Urgent Care.

Overall, use of the Nationwide Children's ED by Primary Care patients has declined more than 10% in the past 18 months. During this time, there have been over 5,000 fewer ED visits and over 8,000 fewer Urgent Care visits versus the baseline rate, which had been 20.7 visits per 1,000 Primary Care Network patients. The baseline is now 17.1 per 1,000.

EMERGENCY DEPARTMENT VISITS PER 1,000 PRIMARY CARE NETWORK PATIENTS



PRIMARY CARE WALK-IN SICK CLINIC VISITS



ORAL CARE

2016 Implementation Strategy Initiatives:

To improve access to pediatric preventive and restorative dental care, Nationwide Children's committed to:

- Relocate the main campus Dental Clinic to a larger space in the Livingston Ambulatory Center and expand access to patient services by adding 11 chairs to the new clinic
- Expand access to community dental care by adding mobile dental services and exploring teledentistry capabilities
- Enhance services for medically compromised and special needs patients
- Improve early identification, non-surgical intervention and disease management for children with early childhood tooth decay
- Begin integrating preventive dental services within Primary Care to provide dental homes within medical homes for up to age 3
- Expand medical-dental and interprofessional collaborations for joint research and quality improvement initiatives such as dental behavior management with pediatric psychology
- Increase capacity to meet the dental needs of adolescent patients in the evening Dental Clinic
- Increase capacity in the community for infant oral health care by providing expert training to general dentists and creating a network of community providers
- Develop patient and community education materials to improve oral health literacy

Every year, Nationwide Children's delivers dental care to more than 30,000 children, the vast majority of whom are Medicaid recipients in Franklin County. The Dentistry Department provides preventive care and restorative care in addition to outpatient dental surgery. Dentistry manages nearly 48,000 clinic visits and 3,700 surgical appointments annually. The department and partners have expanded access to adolescents, outreach into the community and research, and enhanced services for medically complex patients.

Relocate the main campus Dental Clinic to a larger space in the Livingston Ambulatory Center and expand access to patient services by adding 11 chairs to the new clinic

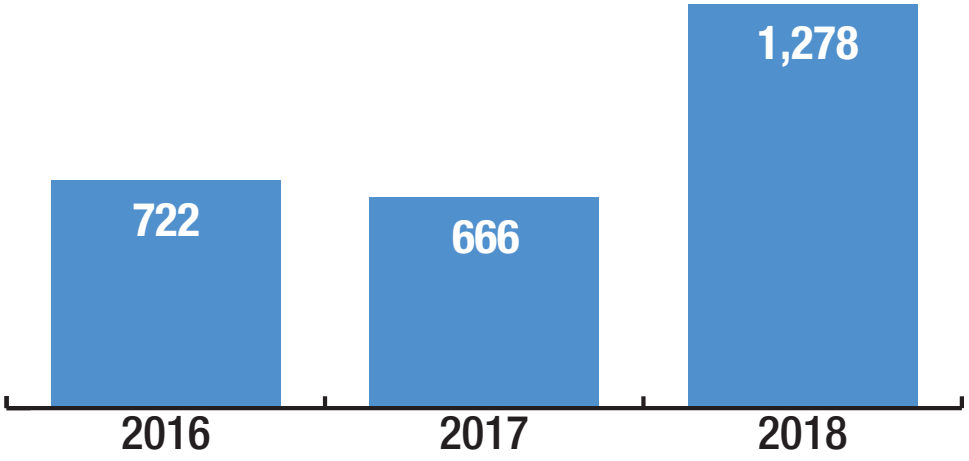
The Dental Department opened a new 30-chair clinic in the Livingston Ambulatory Center in 2017, an addition of 11 new chairs to accommodate patients. The department continues to operate a three-chair clinic for sedation and care of in-house patients in the Outpatient Care Center on Nationwide Children's main campus, adjacent to the Dental Surgery Center. With more capacity, dental clinic visits grew 10% and continued growth is planned.

Expand access to community dental care by adding mobile dental services and exploring teledentistry capabilities

Department faculty and staff are providing care in the community Early Head Start at 28 neighborhood sites through a partnership with The Ohio State University and Head Start. The department began this initiative in the spring of 2017 and sees approximately 160 children each year. This initiative maximizes a team approach to dental care and utilizes a hygienist under the Oral Health Access Supervision Program. The hygienist performs screenings, cleanings and fluoride applications. A dentist performs an exam on each child at the sites at least once per year. Children in need of treatment are scheduled at the Nationwide Children's Hospital Dental Clinic.

In collaboration with the Lewis Center Emergency Department, the hospital's main campus Urgent Care, and select Primary Care Centers, the department began piloting a teledentisty program in 2018. Teledentistry allows dentists to provide care to more patients, increasing access to the community. Upon assessment of this initial pilot program, the goal is to expand patient access by including additional primary care facilities, school-based health care clinics and strategic referral partners in the program.

DENTAL CLINIC MEDICALLY COMPLEX PROGRAM VISITS



Enhance services for medically complex and special needs patients

The department has instituted a process to improve access for children with special health care needs through the Medically Complex Patient (MCP) program. Previously, all children with special health care needs were treated by dental residents at every visit, limiting the number of providers and thus access. As of 2018, all new patients are treated by a dental resident during their first visit. But, based on the resident's assessment, 85% of the patients are now seen by a hygienist with special training and experience in treating children with their needs, during subsequent hygiene appointments. The process has increased the number of potential providers to care for these children and improved access.

The Department of Dentistry has also developed a Dental Hygiene Ambassador program to provide oral hygiene instructions, dietary counseling and assessment compatible with the unique needs of Nationwide Children's inpatients. The advice, continuity of care, and links to dentistry services when needed have enhanced satisfaction and outcomes of complex and special needs patients. The hygienist, working with the Bone Marrow Transplant Long Term Follow-up Team or Hemophilia Team, frees residents to spend more time providing care in other dental settings, increasing access to care.

Improve early identification, non-surgical intervention and disease management for children with early childhood tooth decay

The Department of Dentistry continues to run a robust baby clinic program to prevent early childhood tooth decay. This condition is typically associated with the highest cost and potential morbidity for children. To enhance early treatment, the department has incorporated the use of silver diamine fluoride for nonsurgical intervention. A fraction of a drop of silver diamine fluoride applied with a microbrush can slow or stop the progression of dental decay. This can help delay traditional dental treatment or eliminate the need altogether in some children. The product can also be used with other dental materials for minimally invasive dentistry to reduce the need for sedation.

As previously mentioned above, the Dentistry Department is providing care in the community Early Head Start at 28 neighborhood sites through a partnership with The Ohio State University and Head Start. The collaboration contributes to efforts to improve infant oral health.

Begin integrating preventive dental services within Primary Care to provide dental homes within medical homes for up to age 3

The Department of Dentistry provides education for medical care providers within Nationwide Children's Hospital and the larger community. The department collaborated with community medical providers to provide direct training on fluoride varnish, resulting in 21 primary care sites providing and participating in fluoride varnish quality improvement projects. The department provided direct training, access to training resources and webinars featuring experts on the subject. The department is looking for ways to strategically increase these services in primary care clinics in the community.

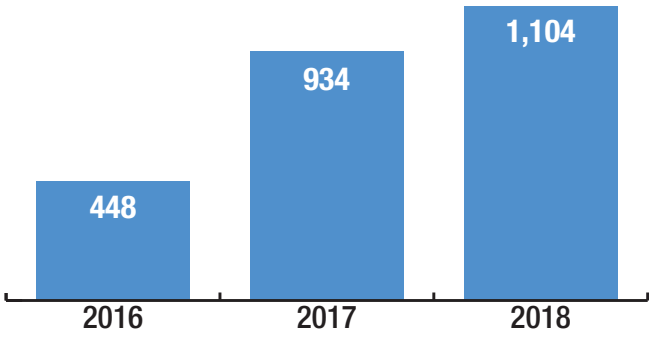
Expand medical-dental and interprofessional collaborations for joint research and quality improvement initiatives such as dental behavior management with pediatric psychology

Medical-dental and interprofessional collaborations have been established throughout the hospital since 2016. Dentistry and The Center for Family Safety and Healing are studying the relationship between child abuse and oral health. The department and the Division of Nephrology are evaluating the impact of bisphosphonate therapy on routine dental treatment. With the Department of Anesthesiology and Pain Medicine, dentistry is studying physiological characteristics of children that may increase their risk for anesthesia-adverse events. Pending approval of a multicenter research grant, Dentistry and Psychiatry intend to study the behavior of children with autism in the dental environment.

Increase capacity to meet the dental needs of adolescent patients in the evening Dental Clinic

The evening clinic expansion for adolescents ages 13-18 allowed for double the visits (448 in 2016 to 1,104 in 2018) while maintaining daytime adolescent visit volumes. Evening access obviously limits impact on education. During daytime hours in the clinic, two general dentists are specifically allocating one day per week to treating adolescent patients, improving access for adolescents. The day clinic treated 827 patients 13 to 18 years old in 2016, 627 in 2017 and 855 in 2018. A general dentist is also now providing care for adolescent patients with special health care needs in the main operating room, increasing the number of cases the department is able to book.

ADOLESCENTS AGES 13 TO 19 VISITING THE EVENING DENTAL CLINIC ANNUALLY



Increase capacity in the community for infant oral health care by providing expert training to general dentists and creating a network of community providers

The Department of Dentistry faculty have collaborated with The Ohio State College of Dentistry to create a continuing education course with the goal of teaching dentistry for children to general dentists. Nationwide Children's pediatric dentists teach general dentists from the community specifics in providing oral health care to children. This course, first held in 2018, attracted 50 attendees. The department will offer the course again and expand it to include different faculty members. As mentioned above, the department has and will continue integrating preventive dental services within Primary Care clinics to provide dental homes within medical homes for children up to age 3.

Develop patient and community education materials to improve oral health literacy

Dentistry faculty and staff have partnered with The Ohio State University's Early Head Start to create an entertaining, accessible and culturally competent book, *Early Start to a Healthy Smile*, to educate families on infant oral health and dental visits. The Department of Dentistry is also collaborating with other departments to ensure that Nationwide Children's "Helping Hands" patient and family resource library has updated content that fits the needs of both departments.

EMERGENCY AND URGENT CARE SERVICES

2016-2018 Implementation Strategy Initiatives:

To improve access to emergency and/or urgent pediatric care, Nationwide Children's committed to:

- Add a new freestanding Emergency Department in southern Delaware County
- Continue asthma education programs to reduce unnecessary Emergency Department utilization by asthmatic patients
- Continue working with other central Ohio Emergency Departments to ensure all hospitals are using best practices in caring for medical, trauma and behavioral health patients, to reduce the chance that the patients will return for treatment for the same illnesses

Nationwide Children's continues to serve more patients outside of the hospital's main emergency room, including more than 20,000 patients at the Lewis Center Emergency Department, and at more accessible locations or through more appropriate programs. The Emergency Medicine Department strives to be a leader in pediatric emergency medicine and quality improvement in Ohio.

Add a new freestanding Emergency Department in southern Delaware County

To assist with overflow in the main campus Emergency Department, the Lewis Center Emergency Department (LCED) opened in February 2017. This full service emergency department is open 24/7 and staffed with fellowship-trained emergency medicine physicians. Just as at Nationwide Children's main campus Emergency Department, LCED staff provide expertise in pediatric advanced life support and resuscitation as well as evaluation and treatment in every area for acute medical and surgical conditions. From its opening through the end of 2018, a total of 22,788 patients visited or were transported to LCED. LCED treated patients from all over the state, drawing patients from 57 municipalities, primarily in northern central Ohio.

Continue asthma education programs to reduce unnecessary Emergency Department utilization by asthmatic patients

Asthma was a top diagnosis within Nationwide Children's Emergency Department. Among the ways that Nationwide Children's has succeeded in reducing volume in the hospital's Emergency Department is by expanding services for asthma patients, including providing more asthma education regarding the correct use of preventive therapy, trigger avoidance and steps to reduce or prohibit acute flares during inpatient stays, outpatient visits and in the home. Supporting quality outpatient management, as well as school based intervention, has also contributed to reduced Emergency Department utilization for asthma (see Asthma on pages 21-23 for more information on this initiative).

The Emergency Medicine Quality Improvement team has continued to work with the Asthma Quality Improvement team toward reducing emergency department usage for asthmatic patients. Asthma ED visits for Partners For Kids patients dropped by 3.29% in 2018. Usage by patients in Nationwide Children's Primary Care Network decreased by 6.25% in 2018.

Continue working with other central Ohio Emergency Departments to ensure all hospitals are using best practices in caring for medical, trauma and behavioral health patients, to reduce the chance that the patients will return for treatment for the same illnesses

Nationwide Children's Hospital Emergency Medicine (EM) department continues to be an active participant in the Central Ohio Trauma System (COTS) with the Emergency Medicine Division Chief serving as a member of the COTS Emergency Services Advisory Board. COTS provides a forum for independent health care systems and community partners to come together to improve trauma and other time-critical diagnoses care within the central Ohio region. Members gather for training and tabletop and full-scale collaborative exercises, an annual disaster summit and more.

In addition, Nationwide Children's EM hosted a Pediatric Emergency Care Coordinator Workshop in 2018 (sponsored by the Ohio Emergency Medical Services for Children). The workshop was a means to provide central Ohio hospitals with an enhanced understanding for the need to a have a Pediatric Emergency Care Coordinator (PECC) available to every EMS agency in Ohio. The PECC is responsible for standardizing care for pediatric patients in emergency services settings through protocol development, quality improvement, continuing education and skill verification. Studies show that having a PECC improves emergency department and EMS readiness to care for pediatric patients.

Nationwide Children's also held the Ohio Pediatrics Emergency Medicine Fellow Conference covering topics related to pediatric protocol development and the importance of quality improvement work in the prehospital setting. Conference participants came from children's hospitals around the state, including Nationwide Children's, Akron Children's Hospital, Cincinnati Children's Hospital, and University Hospitals Rainbow Babies & Children's Hospital in Cleveland.

Behavioral Health

2016 Implementation Strategy Initiatives:

To improve access to pediatric behavioral health services, Nationwide Children's committed to:

- Build a behavioral health pavilion, adding 40 new inpatient psychiatric beds
- Add at least one new outpatient clinic
- Continue to expand school-based programs and services
- Increase prevention efforts at high-need/at-risk early learning centers
- Increase research and education efforts
- Continue to engage the community through partnerships
- Expand integration of therapy and psychiatry services within primary care

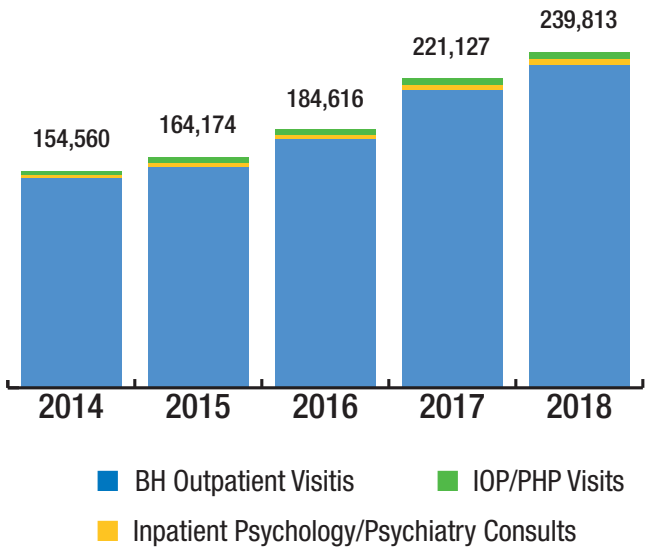
A Centers for Disease Control and Prevention study estimates that as many as one in five children experience a mental disorder in a given year. Since 2016, Nationwide Children's Behavioral Health Services has seen an increase of 30% in patient visits. Nationwide Children's and partners are expanding facilities, services and programs to address the unmet needs of children living with a behavioral health disorder.

Build a behavioral health pavilion, adding 40 new inpatient psychiatric beds

Nationwide Children's is currently in the process of constructing America's largest behavioral health treatment and research center dedicated to the treatment of children and adolescents. The Big Lots Behavioral Health Pavilion is scheduled to open in early March 2020.

The Behavioral Health Pavilion will house three separate inpatient units: one for children; one for adolescents; and one for children with intellectual and developmental disabilities, providing a total of 48 inpatient beds with capacity to add more in the future.

BEHAVIORAL HEALTH VISITS



Add at least one new outpatient clinic

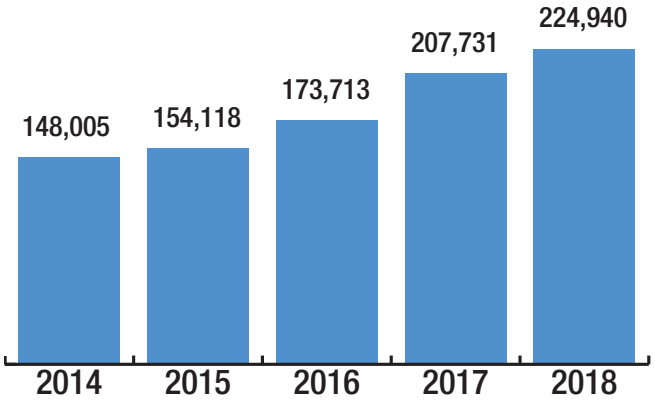
To meet the continuing needs of patients and help with access to care, Behavioral Health opened a new outpatient clinic in Westerville in 2016. This clinic is dedicated to providing psychiatric outpatient care for the patients and families in Westerville and surrounding communities.

Since *HealthMap**2016*** Nationwide Children's has opened new clinical space for and added psychiatry services to the THRIVE program. THRIVE specializes in the care of differences/disorders of sex development, complex urological conditions and gender concerns. The

program is dedicated to providing best-practice, patient-specific, evidence-based care in a manner that values mental health and emphasizes emotional support.

This amongst growth in other outpatient clinic visits resulted in a 29.5% increase in Behavioral Health outpatient visits from 2016 to 2018.

BEHAVIORAL HEALTH OUTPATIENT VISITS



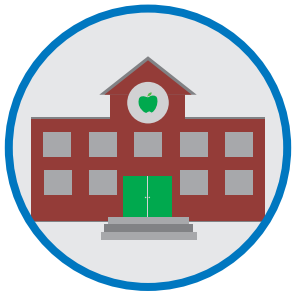
Continue to expand school-based programs and services

Nationwide Children's provides school-based behavioral health services that start in preschool and continue through high school. The services include prevention and targeted one-on-one interventions. In Franklin County, 72 schools have participated in prevention programs and 49 have direct therapeutic services.

Nationwide Children's Early Childhood Mental Health Program (ECMH) is composed of a multidisciplinary team with specialized training and experience in early childhood development and mental health. The team provides training and consultation on how to manage challenging behaviors and other topics to elementary schools with pre-kindergarten and kindergarten classrooms.

Funded by a Whole Child Matters grant from Ohio Mental Health and Addiction Services (OhioMHAS), ECMH provides classroom consultation services to 25 childcare centers/preschools per year in a 16-county region of central Ohio, including Franklin County. Through 2018, ECMH has consulted with 345 teachers in 115 classrooms, impacting 2,070 children. ECMH has also focused on classroom consultation on pre-kindergarten programs in the neighborhood near the hospital.

EARLY CHILDHOOD MENTAL HEALTH



25

Child care centers/preschools received consultation

345

teachers consulted in 115 classrooms impacting 2,070 children

Two master trainers, also funded through OMHAS, and ECMH consultants provided professional development training on topics related to ECMH, early learning standards and trauma informed care to 3,073 early childhood professionals in 2018, up from 767 in 2016, as part of the Whole Child Matters program.

Expulsion rates for children prior to kindergarten are up to 34 times higher than the rates of children from kindergarten through 12th grade combined. Recognizing this problem, the Whole Child grant also funded the implementation of the Ohio Preschool Expulsion Prevention Partnership (OPEPP) Hotline for any licensed childcare or preschool provider in the state of Ohio.

ECMH prevention consultants provide rapid responses to hotline calls made from sites in the 16-county central Ohio region. The hotline received 303 calls for assistance in 2016, 382 in 2017 and 464 in 2018, from the majority of Ohio's 88 counties. Fewer than 8% of children were expelled after teachers received ECMH consultation.

For families active in ECMH treatment, ECMH clinicians provide childcare center/preschool classroom observations and psychoeducation and coach teachers on how to make classroom accommodations for traumatized children. ECMH clinicians also assist families in treatment with getting children linked with special needs preschools and other community resources. Appointments with clinicians grew steadily from 3,907 in 2016 to 11,309 in 2018.

Nationwide Children's ECMH team collaborates with the Legal Aid Society of Columbus to provide education and advocacy. The team also advocates for federally-required plans providing children with certain mental, behavioral or physical disabilities with accommodations (504 plans) and/or specialized instruction (Individualized Education Programs) and related classroom services in primary and secondary schools.

In the elementary schools, the PAX Good Behavior Game® teaches parents and caregivers how to improve social and emotional learning in their child. PAX processes help children understand their thoughts and feelings, allowing them to better manage their emotions and behaviors. Children begin to recognize the needs of others, improving relationships with classmates, teachers and parents.

These skills provide a lifetime of benefits, including:

- Improved classroom performance – Students have higher reading levels than their classmates, and higher graduation and college entrance rates.
- Improved mental health – Children have a lower risk for mental, emotional and behavioral health disorders and fewer symptoms of depression.
- Decreased substance abuse – Children show less abuse of tobacco, alcohol and illicit drugs, including opioids.

The PAX program was offered in 113 classrooms in Franklin County in 2016 and 146 classrooms in Franklin and Muskingum counties in 2018. In Columbus City School classrooms that use the program, there has been a 50% reduction in suspensions and a nearly 70% reduction in disruptive behaviors.

In the middle and high schools, Signs of Suicide (SOS), a nationally recognized suicide prevention program, is offered by The Center for Suicide Prevention and Research. The SOS program teaches students, school staff and parents that suicide is preventable by promoting the ACT® message. When anyone notices warning signs of depression or suicide they should acknowledge there is a serious concern, care and show the person you care, and tell a trusted adult.

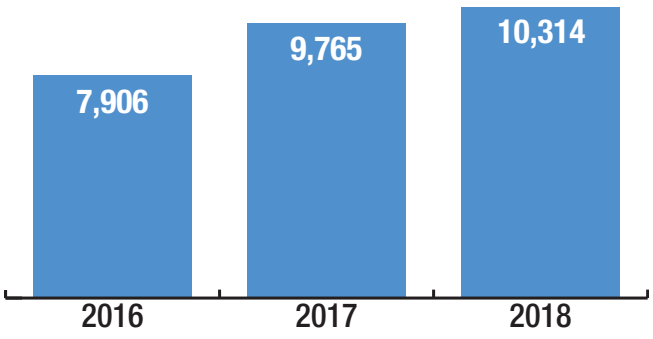
SOS:

- Decreases suicide attempts by students.
- Increases the ability of participants to identify signs and symptoms of depression and to respond in a way that keeps students safe.
- Encourages students to seek help for themselves or a friend.

Since 2016, more than 14 counties with over 28,000 students have gone through SOS. The program was completed in 33 schools and 349 classrooms in 2016, 70 schools and 482 classrooms in 2018. The Center for Suicide Prevention and Research has also made efforts to increase the number of school staff who are able to assess

risk and plan for student safety by training counselors, nurses, and social workers in school districts and community providers. All of this is available without cost to districts. Feedback from staff and students has been overwhelmingly positive.

STUDENT PARTICIPANTS IN SIGNS OF SUICIDE PROGRAM



Individual therapy and family therapy are offered to students who are more at risk in the schools. Licensed mental health professionals provide counseling and prevention services to help children in the schools. They assist children to overcome life's problems, feel better, manage their relationships with others and improve how they do in school. School-based therapists are now present in more than 49 central Ohio schools.

Increase prevention efforts at high-need/at-risk early learning centers

ECMH initially only accepted referrals from Franklin County Children Services. In 2016, ECMH expanded their services and began accepting referrals from all sources. Referrals have grown at the rate of 30-50% each year at the program's current downtown Columbus location. ECMH added outpatient treatment in addition to community-based treatment and increased the size of both programs by hiring two new clinical lead supervisors and nine new clinicians. The clinicians and supervisors were trained and certified in evidence-based practices including the Positive Parenting Program (Triple P), Parent-Child Interaction Therapy, Trauma-Focused Cognitive Behavioral Therapy and Child-Parent Psychotherapy.

Increase research and education efforts

Behavioral Health continues to expand its research efforts, focusing on imaging technologies and social development to study anxiety and depression during adolescence, neurocognitive and familial risk for depression and suicide in young children, and more.

The Center for Suicide Prevention and Research (CSPR) was established in October 2015 and rapidly built a team and school-based suicide prevention programming and processes to serve schools in central and southeast Ohio. The CSPR evaluated numerous suicide prevention programs and determined the Signs of Suicide prevention program (SOS) had the strongest evidence of effectiveness in reducing student suicidal behavior. A plan to disseminate and evaluate SOS was developed with Behavioral Health leadership. Programming includes planning and implementing gold standard processes in youth suicide prevention: 1) a standard set of trainings for school staff, community members and students; 2) universal screening and risk assessment for youth who screen positive for depression or suicide; and, 3) consultation on school policy and staff response to suicide risk.

When the CSPR started, only a handful of schools used evidence-based suicide prevention programming due to staff, financial and training limitations. Since 2016, more than 14 counties with over 28,000 students have gone through SOS. In the past three years, the CSPR has fostered numerous partnerships to ensure that schools feel confident and competent to engage in suicide prevention.

Responsible reporting on suicide has the power to save lives. How media shape a story — the details given, words used and resources provided — can minimize suicide contagion for vulnerable individuals and increase awareness of this major public health issue. Seeing the need for responsible reporting on suicide, an OhioMHAS suicide reporting guidelines grant allowed CSPR to develop and increase connections with local and national media, train journalists at six major Ohio universities and led to the adoption of suicide reporting guidelines by the American Association of Suicidology.

Behavioral Health trainee numbers continue to grow. Nationwide Children's currently provides multidisciplinary

training across 17 programs, including psychiatry, psychology, advanced practice nursing, masters-level clinicians, research and developmental behavioral pediatrics. At the end of 2018, 103 people were engaged in the training programs, representing an increase of more than 60% since 2016.

The Child and Adolescent Nurse Practitioner post-graduate fellowship was launched in August 2018 with two fellows. The mission of this program is to transform the delivery of pediatric mental health care in central Ohio through the expansion and development of expert psychiatric nurse practitioners to meet the complex needs and improve the outcomes of the acute and chronically ill child and adolescent mental health population.

The Accreditation Council for Graduate Medical Education Child and Adolescent Psychiatry Fellowship brought on two trainees in 2017 and three in 2018. The hospital's clinical counseling and psychology training programs continued to expand, including adding trainees in autism and pediatric acute treatment tracks.

Continue to engage the community through partnerships

Nationwide Children's Behavioral Health Services has developed and expanded its community engagement and development efforts by hiring three staff specifically directed to develop and promote these activities. The staff has initiated an Acute and Residential workgroup, convened through the Columbus Foundation and facilitated by Nationwide Children's staff. Five area providers, several governmental child-serving organizations and Nationwide Children's staff are participating in a quality-improvement project to improve outcomes for youth in out-of-home placements and reduce unnecessarily long lengths of stay.

Behavioral Health has helped lead focus groups in central and southeastern Ohio to identify common areas of clinical interest and concerns, and to promote collaborative problem-solving. Currently the southeast group is targeting youth behavioral-health crisis services as its priority and a problem-solving process has begun to identify opportunities for program development. Behavioral Health provides multiple community training events in schools, businesses, and other public venues to promote behavioral health awareness, stigma reduction and education. Staff is working with area providers to provide electronic access to medical records for shared behavioral health patients at no cost to these providers. This access is intended to improve continuity of care for patients and reduce the burden to outside providers whose patients are accessing Nationwide Children's specialty services.

Through the process of developing a community resource guide, Nationwide Children's has developed a better understanding of community resources and closer working relationships with community providers, which ultimately helps patients gain access to beneficial outside services.

ECMH also engaged in community partnerships through Franklin and surrounding counties in addition to its work with schools and preschools. For example, at the SPARK Columbus program aimed at preparing children for kindergarten, the team serves on the SPARK committee to review challenging cases and make recommendations for referrals and services. The team is also an active member of the Ohio Association for Infant Mental Health, where an ECMH psychiatrist serves on the board.

ECMH has a contract with Franklin County Children Services (FCCS) to provide ECMH treatment services to families referred from FCCS. The team also has an ADAMH grant from the Alcohol, Drug and Mental Health Board of Franklin County to support ECMH treatment and prevention efforts in the county.

Funded by a grant from the Ohio Children Trust Fund in 2018, ECMH provides parenting groups for parents of young children in a 13 county region in central Ohio, especially targeting parents at risk for child abuse, neglect and substance misuse. The Positive Parenting Program (Triple P) is for parents and caregivers of children 0 to 8 years old. It helps parents manage behavior and address problem behaviors. Nationwide Children's collaborated with local community-action and faith-based organizations, homeless shelters, domestic-violence

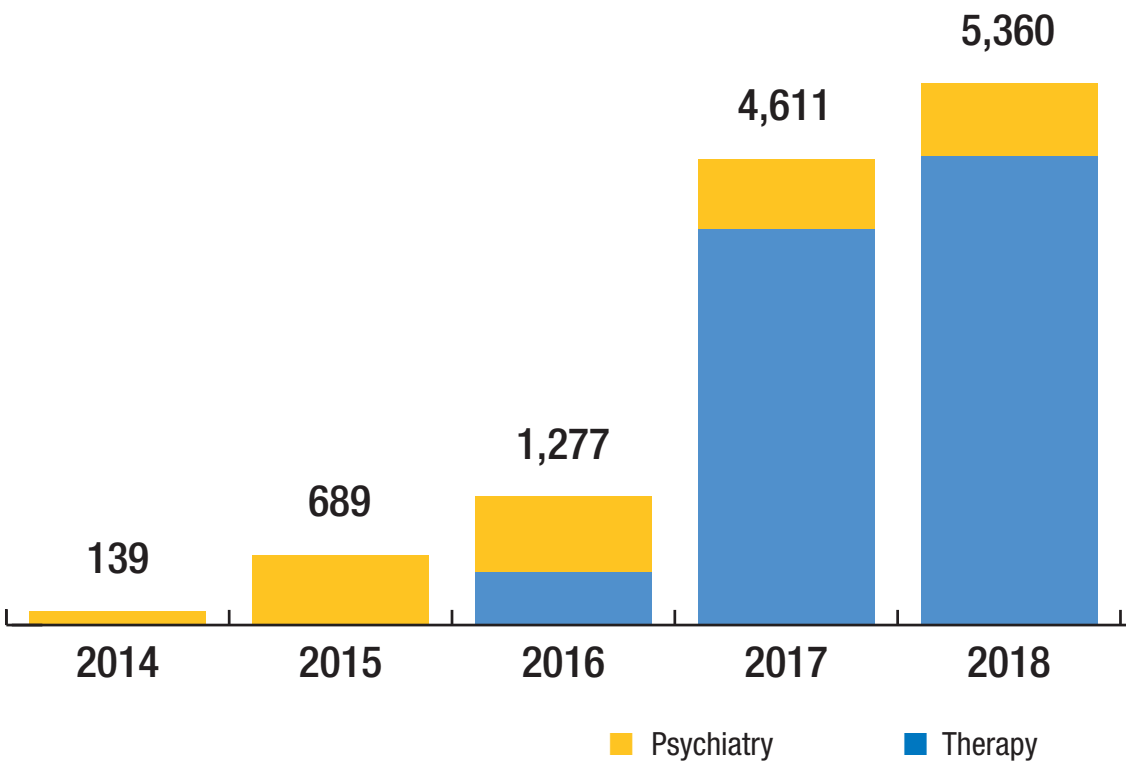
shelters, libraries and substance-abuse treatment centers to provide Triple P to more than 2,000 parents.

A partnership with Action for Children supports ECMH consultation and training referrals and the OPEPP hotline while a partnership with Delaware/Morrow ADAMH board supports ECMH classroom consultation in their ADAMH board area.

Expand integration of therapy and psychiatry services within primary care

Children with medical problems can also have emotional, behavioral or social problems. It is helpful to understand how these problems affect each other so they can be addressed. That's why Behavioral Health has continued expanding services to primary care practices. Aligning with Nationwide Children's Primary Care growth, Behavioral Health has focused on expanding services to provide behavioral health clinicians as part of the primary care team available for consultation during the primary care appointment. The clinician may provide a brief intervention and/or referral to additional treatment as needed. The Behavioral Health Primary Care integration resulted in a significant increase in the number of Primary Care visits with a behavioral health provider, as shown below. By 2018, behavioral health had integrated into six Primary Care Centers, up from two in 2016.

PRIMARY CARE THERAPY AND PSYCHIATRY VISITS



Chronic Conditions

ASTHMA

2016 Implementation Strategy Initiatives:

To keep children out of the hospital and minimize the impact of asthma on children's well-being, Nationwide Children's committed to:

- Reduce asthma-related Emergency Department visits for Franklin County patients who receive Medicaid by optimizing treatment within the Nationwide Children's Primary Care Centers
- Expand the School-Based Asthma Therapy program
- Support community pediatricians with programs to improve asthma care
- Provide caregivers of children with severe, frequently symptomatic asthma in-home education and assistance with care coordination
- Reduce asthma-related inpatient stays for Franklin County patients by continuing to improve processes

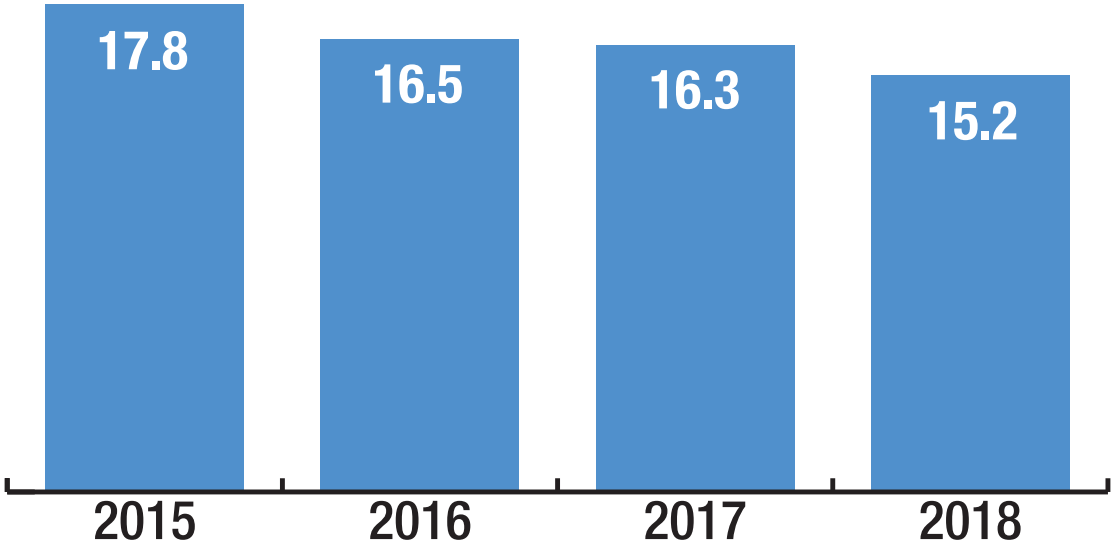
Asthma is the most common chronic childhood illness and can significantly impact quality of life with missed school days, difficulty with physical activity and exacerbations resulting in Emergency Department visits and/or hospitalization. Nationwide Children's Hospital has launched initiatives in Primary Care Centers, schools, community pediatricians' offices and through home visits to help children and their families improve control of their asthma and reduce the impacts. One result has been a significant reduction in visits to Emergency Departments due to symptom flare-ups.

Reduce asthma-related Emergency Department visits for Franklin County patients who receive Medicaid by optimizing treatment within the Nationwide Children's Primary Care Centers

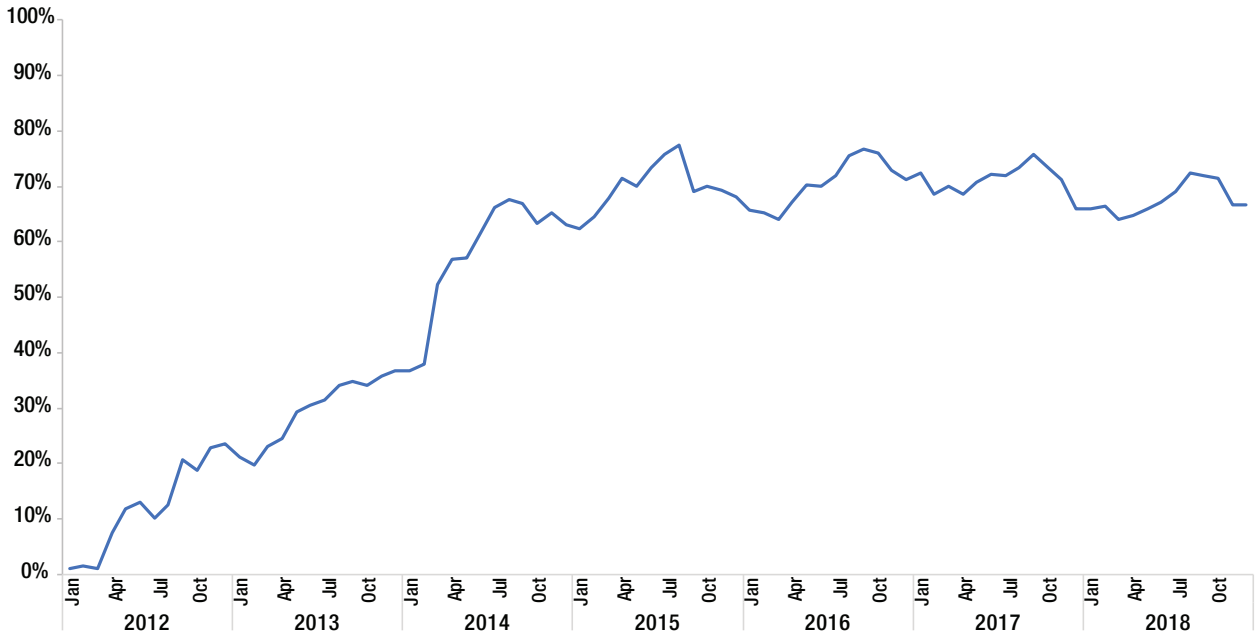
Quality improvement (QI) efforts within Nationwide Children's Primary Care Centers focused on using any visit as an opportunity to assess asthma status. Asthma Control Tests were given to asthma patients at more than 80% of their Primary Care visits and providers documented additional asthma evaluation at over 65% of visits. Between 2016 and 2018, changing medication management (step-up guideline therapy) for children in poor control of their asthma was a major focus of QI work. Step-up therapy interventions rose from historic rates of approximately 30% to goal levels of 50%. The clinics continued holding at least weekly "Asthma Specialty Clinic" sessions, which afforded more intensive asthma assessment and discussions, including lung function measurement and education supported by respiratory therapists and/or health coaches. In response to these and other efforts, Emergency Department utilization by Primary Care Center asthma patients decreased 8% from 2016 to 2018.

Nationwide Children's efforts were recognized with the 2017 Pediatric Clinical Care Quality Award "Quality Improvement in Primary Care: Reducing Emergency Department Visits in Children with Asthma" from the Children's Hospital Association.

ASTHMA ED VISITS PER 1,000 NATIONWIDE CHILDREN'S PRIMARY CARE NETWORK PATIENTS



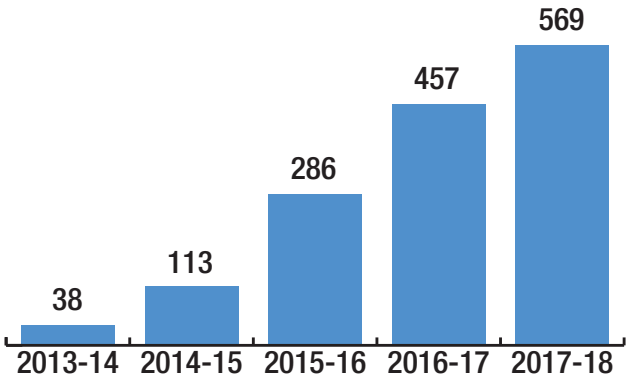
PERCENTAGE OF PRIMARY CARE ASTHMA PATIENTS WITH AN ASTHMA DISCUSSION DURING THEIR VISIT



Expand the School-Based Asthma Therapy program

School-Based Asthma Therapy (SBAT) helps children with poorly controlled asthma, marked by frequent or severe symptoms at school or frequent exacerbations requiring urgent therapy. The program promotes communication among the school, caregiver and health care provider. It focuses on ensuring children are taking their routine controller therapy (medications that help prevent asthma symptoms). Participating schools assist by administering a portion of the students' controller doses at school. In the spring of 2016, SBAT enrolled 286 students in kindergarten through 12th grade. By December 2018, enrollment was just under 600 students from more than 200 schools in nearly 30 school districts.

STUDENTS ENROLLED IN SBAT



Support community pediatricians with programs to improve asthma care

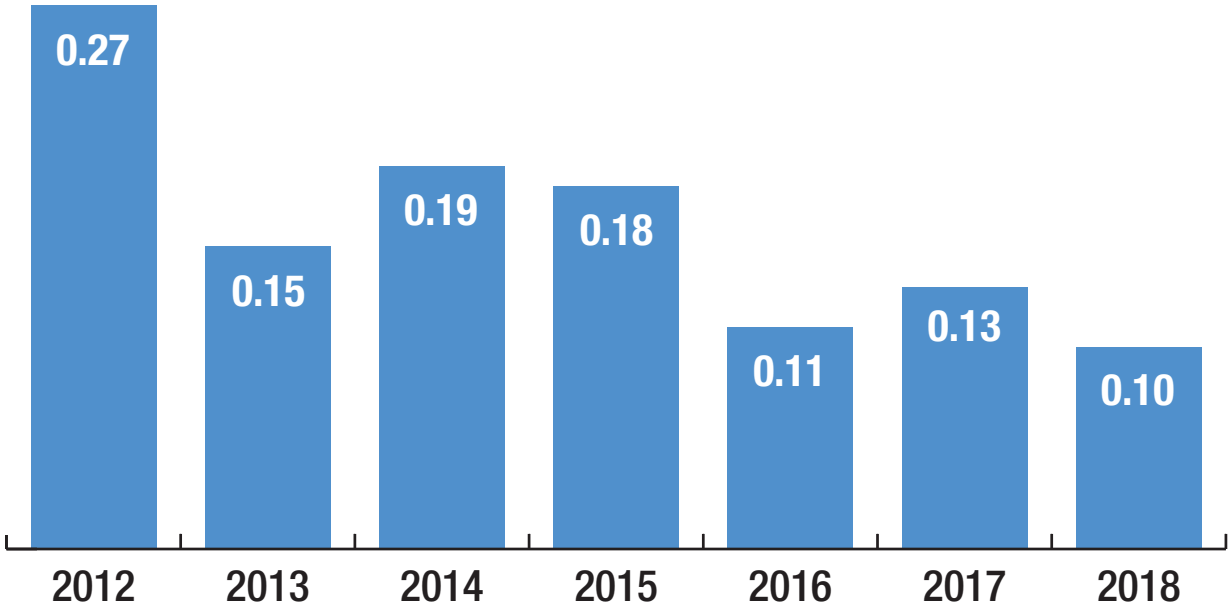
Community pediatric practices vary in size, patient composition and operations. Between 2016 and 2018, Nationwide Children's sponsored asthma projects to address the differences. Historically, the Easy Breathing program, sponsored by Partners For Kids, Nationwide Children's pediatric accountable care organization responsible for more than 330,000 lives of children on Medicaid, was the major community-provider asthma QI program. However, community interest and participation began to wane as it reached its fourth year in 2016. In response, the Asthma QI team changed its approach to educational sessions and training in quality improvement techniques that allowed practices to individually tailor their programs for improving asthma care.

Launched in March 2017, this Partners For Kids-sponsored Asthma QI program has enrolled eight central and southeast Ohio community practices whose care reaches roughly 30,000 children for whom Partners For Kids is responsible. Two of these practices, located in Franklin County, provide care for 20,000 Partners For Kids children. Similar to Nationwide Children's-based clinics, these practices have worked to improve use of Asthma Control Tests, Asthma Action Plans and routine assessment visits with a goal of improving their patients' asthma medication ratio (AMR). The AMR reflects appropriate controller medication use by children with persistent asthma. Since implementing this QI project, awareness of and interest in asthma management among community practices has grown. This increased enthusiasm is expected to result in future program expansion.

Provide caregivers of children with severe, frequently symptomatic asthma in-home education and assistance with care coordination

In the Nationwide Children's Asthma Express program, a nurse asthma-education specialist makes two to three home visits to provide individualized education and practical advice to caregivers of children with potentially severe asthma (those who are hospitalized or visit the emergency room frequently for acute flares). This program assisted families in ensuring that routine controller medication use followed evidence-based guidelines. Patients who "graduated" from the program cut their Emergency Department visits by more than 50% compared to previous years. From 2016 to 2018, this program reached over 500 children.

AVERAGE NUMBER OF ED VISITS IN 90 DAYS FOR PATIENTS ENROLLED IN ASTHMA EXPRESS



For children with problematic asthma, care coordination is provided by a network of asthma programs. The SBAT program assists families with making (and keeping) medical appointments and obtaining their asthma medications. Asthma Express connects families with social work, helps with appointment scheduling, obtains initial prescriptions and provides a report to the child's asthma provider regarding their home visits. In the Nationwide Children's Primary Care Centers, health coaches work with families in asthma specialty clinics and also assist with reaching out to families whose children have recently required emergency room care for acute asthma, to ensure appropriate follow-up. Within Partners For Kids, a dedicated group of care coordinators also assist with the health care coordination needs of patients with histories of high use of asthma acute care.

Reduce asthma-related inpatient stays for Franklin County patients by continuing to improve processes

Although asthma quality efforts have successfully reduced emergency room visits from 10.62 to 10 per 1,000 Franklin County Partners For Kids Medicaid members from 2016 to 2018, reducing hospitalizations has proven more challenging. During that time, asthma inpatient stays rose slightly, from 2.78 to 3.18 per 1,000 members.* The increase was likely due in part to the vaccine-resistant influenza that peaked in early 2018 and a return of enterovirus D68 in the late summer. This latter virus also triggered a dramatic increase in asthma admissions in 2014.

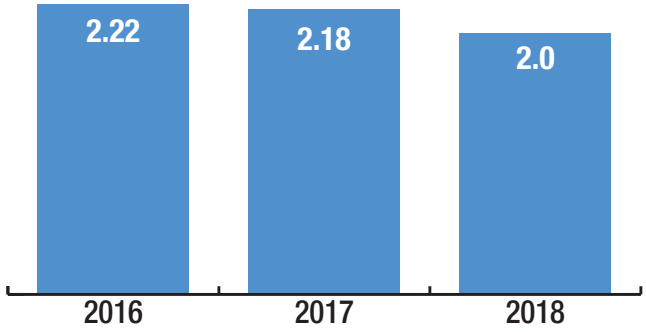
Despite the rise in hospitalizations countywide, asthma inpatient stays by children who received care in Nationwide Children's Primary Care Network fell from 2.79 to 2.42 per 1,000 patients from 2016-2018,

*(*calculated using annualized member months)*

a reflection of the quality of care in this setting as well as higher utilization of the network's home- and school-based programs.

From 2016 to 2018, asthma inpatient quality improvement focused on updating care guidelines and implementing these changes via revised asthma order sets. For children who required hospitalization, improved care efficiency led to a reduction in their length of stay from an average of 2.2 days to 2 days.

INPATIENT LENGTH OF STAY (DAYS) FOR ASTHMA PATIENTS



DIABETES

2016 Implementation Strategy Initiatives:

To improve the quality of life for patients with this chronic pediatric condition, allowing children to live as normal a life as possible, Nationwide Children's committed to:

- Continue to reduce the frequency of diabetes related Emergency Department visits and patient admissions
- Continue to increase the percentage of patients seen for regular follow up visits within 105 days of previous visit
- Increase screening for high risk factors in newly diagnosed patients with Type 1 diabetes
- Increase the percentage of patients age 20 and older who successfully transition to adult endocrinology
- Optimize inpatient insulin therapy by creating a comprehensive hospital policy on insulin and insulin pump use
- Enhance identification of high-risk populations by recognizing and treating depression, which can hinder a patient's ability to take care of himself or herself

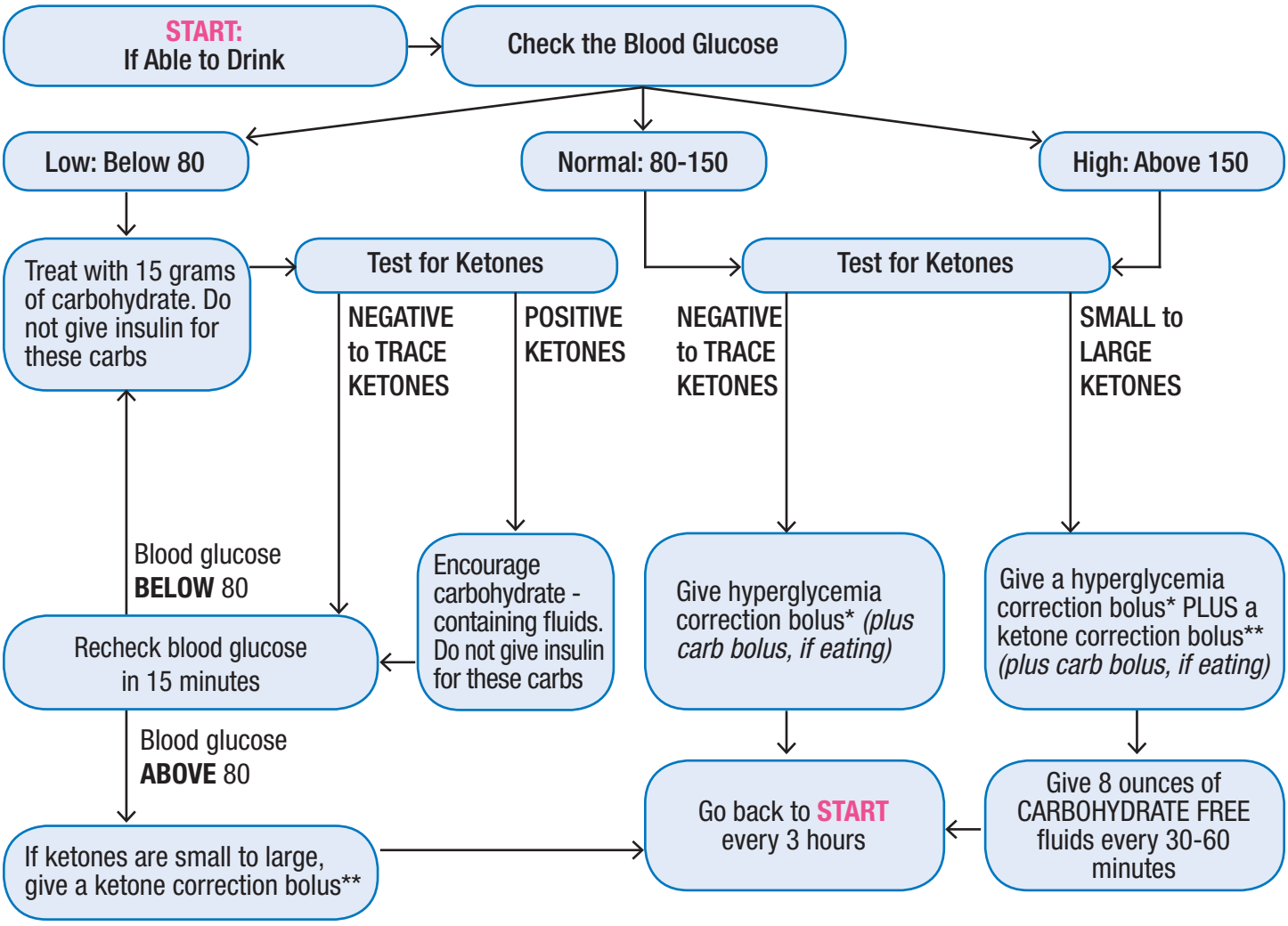
Repeated visits to the Emergency Department are a hallmark of poorly controlled diabetes. Since 2016, the diabetes program at Nationwide Children's has expanded access to care, increased opportunities to engage with patients and families outside an emergency room and provided patients and their families education and tools to effectively self-manage the disease to provide best health outcomes.

Continue to reduce the frequency of diabetes related Emergency Department visits and patient admissions

The Endocrinology Department at Nationwide Children's has taken a number of steps to help patients and their families manage their child's diabetes without relying on visits to the Emergency Department (ED). Patients and families can access care at any time by calling Endocrinology's urgent phone line and talking with an advanced practitioner or on-call provider. During education sessions about new-onset diabetes and clinic visits, staff members introduce and discuss the urgent line to ensure patients and their families are aware of the resource and that they should try to call prior to taking their child to the ED. At the sessions or visits, staff members also provide caretakers information to help them determine when it is appropriate to take their child to the ED. As part of the effort, a diabetes sick day self-management packet is provided to all diabetes patients to guide them and their families when the patient is feeling ill. The packet includes instructions for insulin injection and insulin pump therapy when suffering different symptoms.

Diabetes SOS: Sick Day Self-Management

Flowsheet - Insulin Injection Therapy When Able to Drink



**Only if blood glucose is above target and it has been 3 hours since last carb and/or rapid-acting insulin dose*

***See "SOS" Worksheet to calculate amount of extra insulin for ketone correction*

CALL the Diabetes Center (614) 722-4425 (option 3) if any of the following occur:

- You are not sure what to do
- You have treated a LOW blood glucose (hypoglycemia) TWICE in a row with NO improvement.
- You have treated MODERATE to LARGE ketones TWICE in a row with NO improvement.

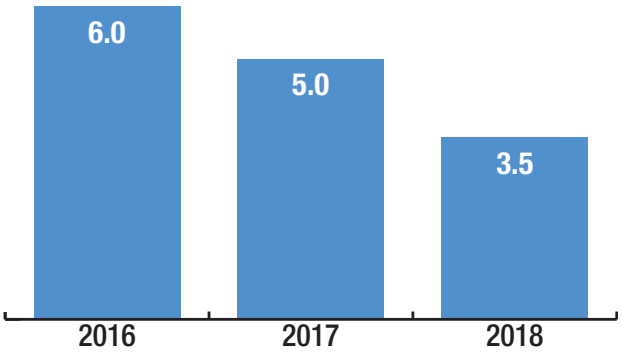
In an Emergency, call 911

When diabetes patients come to the ED, social workers routinely make follow-up phone calls to learn the reasons for the visit and attempt to connect the patient with a diabetes educator, a dietician or other resource that may provide information or care that limits the need for ED use.

To more closely monitor patients and try to prevent issues that would send them to the ED, the department established an email address that newly diagnosed patients with diabetes use to send blood-sugar logs to providers. Providers analyze the logs and respond within 24 hours with their assessment and recommendations for adjustments or education on insulin management.

While these efforts have become standard practice at Nationwide Children's, ED visits for diabetes-related issues decreased from an average of a little more than seven visits per 1,000 patients in 2016 to under four in 2018.

ED VISITS FOR DIABETES-RELATED ISSUES PER 1,000 PATIENTS



Among patients admitted for diabetes-related issues, the average number of inpatient admissions was relatively steady from 2016 to 2019, at between eight and nine per 1,000 patients.

Continue to increase the percentage of patients seen for regular follow-up visits within 105 days of previous visit

Diabetes is a complicated, chronic disease that requires significant, ongoing education and interventions based on patient response to treatment. According to American Diabetes Association guidelines, patients with diabetes should be seen four times per year. When patients register at Nationwide Children's diabetes clinic, more than 95% of patients are scheduled for follow-up visits within 105 days. Of those, an average of nearly 70% per month have been seen within the time frame. To increase attendance at follow-ups, the clinic developed a process to improve its ability to identify patients most likely to miss appointments. Staff then proactively reach out to these patients to improve their likelihood of attending their scheduled visit. Currently, the social work team follows up with high-risk patients who fail to come to appointments, in an effort to discern what roadblocks are preventing patients from showing up at the clinic and to address those. Several quality improvement projects are now underway to identify and use opportunities to see patients with diabetes every 90 days.

The diabetes clinic has focused on using any contact with a patient as an opportunity to follow-up. In 2018, staff identified 2,765 missed opportunities to follow up with patients within 105 days, a 22% improvement over 2017. The opportunities included scheduled visits with staff, screenings for lipids, blood pressure or depression, risk assessments and more – all part of the performance index called the T1D Care Index (T1D) the department uses to track and measure care.

Increase screening for high-risk factors in newly diagnosed patients with Type 1 diabetes

The department performed risk assessments on all newly diagnosed patients with type 1 diabetes. Patients are assessed for other chronic conditions, mental health, alcohol or drug use by the patient or family, social supports and more. The assessments are part of the T1D and a focus of multiple QI projects. Through 2018, the department assessed more than 85% of new diabetes patients and tracked nearly 90% who scored as high-risk patients. The department staff tags their records to ensure the social work team is engaging regularly with these patients. Staff also schedules high-risk patients for monthly visits instead of quarterly visits, until the care team is comfortable with their ability to manage their diabetes.

Increase the percentage of patients age 20 and older who successfully transition to adult endocrinology

Research has shown that as adolescents with diabetes become young adults, they are at increased risk for poor outcomes. This is due to changes within the body as it reaches adulthood and because self-management of the disease and clinic attendance tends to fall off during this time. When patients turn 18, staff provide them information about transitioning to an adult provider at each visit. For those who are reluctant to transition by 20 years of age, Nationwide Children's offers a joint pediatric and adult endocrinologist visit where they transition the care in person. Through the joint visits, 37% of patients transitioned to adult care in 2016, increasing to 52% in 2018. Despite these efforts, nearly 20% of patients age 20 years and older remain with a Nationwide Children's endocrinologist.

Optimize inpatient insulin therapy by creating a comprehensive hospital policy on insulin and insulin pump use

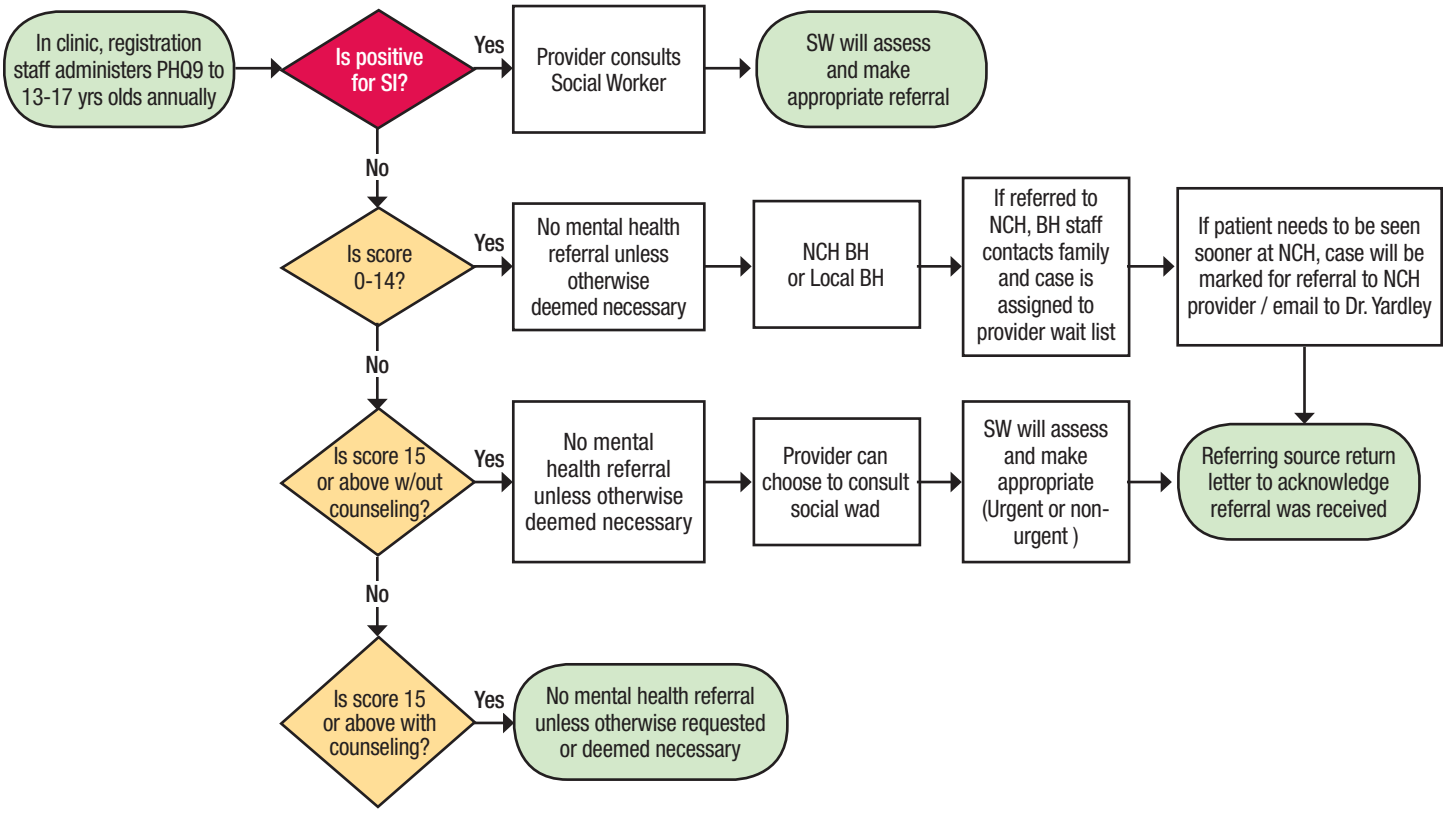
After receiving input from endocrinologists, diabetes educators and other endocrinology staff members with extensive training in insulin therapy, the department revised policies in late 2015 and 2018 to help staff in other areas of the hospital safely and accurately administer insulin via an insulin pen or continuous insulin pump. After implementing the policies and quality improvement projects and providing education, insulin adverse drug events (ADE) declined 1.3 per 1,000 administered doses from 2017 to 2018.

Enhance identification of high-risk populations by recognizing and treating depression, which can hinder a patient's ability to take care of himself or herself

In 2017 and 2018, more than 95% of type 1 diabetes patients 12 or older had been screened for depression within the last year. In the clinic, staff uses the patient health questionnaire PHQ-9 to identify depression/mental health risk. Patients identified as high-risk are immediately connected with a social worker, who intervenes before the patient leaves the clinic. Social work support is available at Nationwide Children's around the clock. Social work refers the patient to appropriate support and clinical services. The clinic also follows the American Diabetes Association clinic model that includes a social work assessment at least annually. The clinic tracks the percentage of patients screened and has QI initiatives aimed at ensuring all eligible patients are screened via the PHQ-9.

ROUTINE DEPRESSION SCREENING AMONG ADOLESCENTS WITH DIABETES

Flow Chart Revised 6/30/18



Infant Mortality

2016 Implementation Strategy Initiatives:

To reduce the rate of premature births and the infant mortality rate, Nationwide Children's committed to:

- Expand BC4Teens and Teen and Pregnant services
- Increase long-acting reversible contraceptive (LARC) insertions among females 15-22 years of age in Franklin County who receive Medicaid
- Increase access to high quality, comprehensive prenatal and postpartum care for teen mothers
- Increase the amount of adolescent well-care visits through collaborative efforts with Primary Care and Adolescent Medicine
- Increase education on safe sleep within Nationwide Children's Hospital

Infant mortality rates in Franklin County continue to be higher than the state and national averages. Adolescent birth rates, however, have declined to 1.9 per 1,000 teens 17 and younger, and 19.9 for young women 18 to 19. Both figures are about equal to the Ohio overall rate but below national rates, according to *HealthMap**2019***. Nationwide Children's and its partners are committed to improving reproductive health, access to prenatal care and other measures to reduce the rates of preterm births, low-weight births and infant deaths.

Nationwide Children's and three other hospital systems, Mount Carmel, OhioHealth and The Ohio State University Wexner Medical Center, along with Columbus Public Health and PrimaryOne, comprise the collaborative Ohio Better Birth Outcomes (OBBO). OBBO works to reduce the incidence of infants dying and babies being born before 37 weeks of pregnancy. OBBO has been identified as a lead partner, working with CelebrateOne, to reduce the infant mortality rate in this community. CelebrateOne is Greater Columbus' community-wide initiative to improve the health of babies. The goal is to assure that all babies survive and thrive well past their first birthdays.

Expand BC4Teens and Teen and Pregnant Services

Nationwide Children's BC4Teens and Teen and Pregnant added second locations in 2016. By providing education and access to birth control, BC4Teens helps reduce teen pregnancies. BC4Teens is a place where young women up to age 22 can learn about birth control and get the best method for them, including IUDs and other implants. A total of 1,172 patients received long-acting reversible contraceptive insertions from BC4Teens from 2016 through 2018. The program saw more than 880 teens from 2016 to 2018.

When teens are pregnant, Nationwide Children's Teen and Pregnant, or TaP, program offers assistance so they can have a healthy pregnancy. TaP provides prenatal and postpartum care to young women up to age 21½. The program was launched in 2012 to address high rates of infant mortality in Franklin County. The program saw more than 475 new patients from 2016 to 2018 for a total of more than 3,900 visits.

Due to low volume, the second locations of BC4Teens and TaP stopped operations in 2018. However, Adolescent Medicine/BC4Teens providers have worked to start training nurse practitioners in the school-based health centers on LARC insertions. In 2018, eight LARC insertions were performed at school-based health centers.

Increase long-acting reversible contraceptive (LARC) insertions among females 15-22 years of age in Franklin County who receive Medicaid

The use of long-acting reversible contraceptive (LARC) insertions such as the IUD and implant is a way to reduce adolescent and unwanted pregnancies, low birth weight rates and infant mortality. LARCs are more than 99% effective at preventing pregnancies for at least three years. LARC insertions performed by BC4Teens and Nationwide Children's Franklin County partners in Ohio Better Birth Outcomes (OBBO) totaled 1,265 in 2017 and 1,363 in 2018. The majority are patients who receive Medicaid.

Increase access to high quality, comprehensive prenatal and postpartum care for teen mothers

Nationwide Children's provided care to pregnant teens in the CenteringPregnancy® prenatal care program at its two TaP Clinics. CenteringPregnancy brings together women who are at similar stages of pregnancy to meet, learn care skills and participate in group discussions. This program has decreased preterm births and increased healthy habits. In 2018, 54 patients participated in CenteringPregnancy. From 2016 to 2018, the hospital helped increase program sites in the community to four through OBBO prenatal clinic partnerships. The new sites are at Whitehall Family Health (Heart of Ohio), OhioHealth Grant Medical Center, and two additional locations at PrimaryOne Health.

A resource of CelebrateOne, StepOne for a Healthy Pregnancy, helps connect women with affordable, timely and convenient prenatal care, and resources like food and housing for a healthy pregnancy, all with a call to their hotline. StepOne connected 258 pregnant adolescents 19 and younger to prenatal care in 2016, 296 in 2017 and 270 aged 15 to 19 in 2018.

Increase the amount of adolescent well-care visits through collaborative efforts with Primary Care and Adolescent Medicine

To increase adolescent well-care visits, the hospital's accountable care organization, Partners For Kids, targeted patients who were overdue or would be due for well-child checks within the next two months with phone calls, letters and postcards. Partners For Kids personnel also supplemented office staff at clinics and practices to schedule patients and tracked the well visits, missed appointments and other data. The organization created an incentive payment for each well visit completed by practices under contract with Partners For Kids. Other steps included hosting training retreats on improving well-care rates, providing pamphlets and guides and other materials on periodicity, the importance of well-care visits and more for practices to use and share with patients. Adolescent well-care visits steadily increased from 9,145 in 2016 to 11,793 in 2018. Partners For Kids is also developing electronic medical records and other tools that will enhance the ability of practices to use their data to improve well visit rates.

Nationwide Children's Primary Care Centers and school-based health centers also target teens who are overdue for well checks by sending postcards. Advertising and marketing in the schools alert teens to the need for a yearly well check.

Increase education on safe sleep within Nationwide Children's

Nationwide Children's has a Safe Sleep core composed of physicians, nurses and other staff from multiple departments, who promote best safe-sleep practices. Nationwide Children's has implemented a standardized safe sleep screening at targeted visits within the neonatal intensive care unit (NICU), Primary Care, the Emergency Department (ED) and Urgent Care Centers. Parents screened for safe sleep risk increased from nearly 40% in 2016 to 90% in late 2017 through 2018. Safe sleep education provided to parents in these locations increased from 10% in late 2016 to more than 80% in 2018. Nationwide Children's also audits hospitalized infants 12 months old and younger to see if staff are complying with all the elements of the safe-sleep protocol, for the safety of the infants while in the hospital and also to show parents the practices they should use when they take their baby home.

To further educate the public on safe sleep, the hospital launched a social media campaign about the ABCs of safe sleep: babies should sleep alone, on their backs, and in a crib. On Facebook, Twitter and Instagram, the infographics drew 317,285 engagements (likes, comments, reactions, shares and clicks) and were linked to 89,607 views of safe sleep videos featuring NICU and Primary Care providers explaining in more detail in 2018. To complement the social media campaign, the hospital also runs digital signage and has information on safe sleep given in clinic. The campaign primarily targeted zip codes with higher concentrations of at-risk populations.

Infectious Diseases

2016 Implementation Strategy Initiatives:

To reduce infectious diseases in central Ohio, Nationwide Children's committed to:

- Continue to expand screening and treatment of sexually transmitted infections, particularly in local schools
- Expand testing for HIV, syphilis and hepatitis C, particularly among youth and pregnant women
- Improve diagnosis of vertically acquired HCV infections by partnering with community physicians and Partners for Kids
- Continue to maintain more than 98% hand hygiene compliance by Nationwide Children's staff
- Continue to lower the rate of hospital acquired infections throughout the institution
- Maintain more than 75% influenza vaccination rates in the Nationwide Children's patient population
- Monitor and decrease use of broad spectrum antimicrobial agents and initiate retrospective analysis of prescribing patterns of antimicrobials in partnership with the Partners For Kids program
- Offer a separate consult service specific to infections in the immunocompromised host population which will be staffed by Infectious Disease physicians with special expertise
- Further develop the Congenital/Perinatal Infectious Diseases program, including creating a business plan for a comprehensive screening program for babies with congenital cytomegalovirus infection
- Decrease preventable readmissions following discharge from the Infectious Disease Unit to less than 1%
- Continue to develop and advance infectious disease research initiatives through The Research Institute at Nationwide Children's

Infectious diseases are a major cause of illness, disability and death. Nationwide Children's continues to expand efforts to diagnose, treat and prevent the spread and damage done though a number of avenues, including screening, vaccination, lowering hospital-acquired infections, antimicrobial stewardship and research.

Continue to expand screening and treatment of sexually transmitted infections, particularly in local schools

Nationwide Children's offers screening and treatment of sexually transmitted infections (STI). At the 13 school-based health clinics, students can be tested for STIs and receive education on them. A Nationwide Children's health educator also educates students about STIs as part of a health curriculum taught in the schools. The Young Women's Contraceptive Program, also referred to as BC4Teens, also offers STI testing at its location.

All patients at Nationwide Children's Teen and Pregnant, or TaP, clinics are screened for STIs at their initial visit and again at 34 weeks gestation. The clinic also tests for infections upon request or if patients are showing symptoms.

Expand testing for HIV, syphilis and hepatitis C, particularly among youth and pregnant women

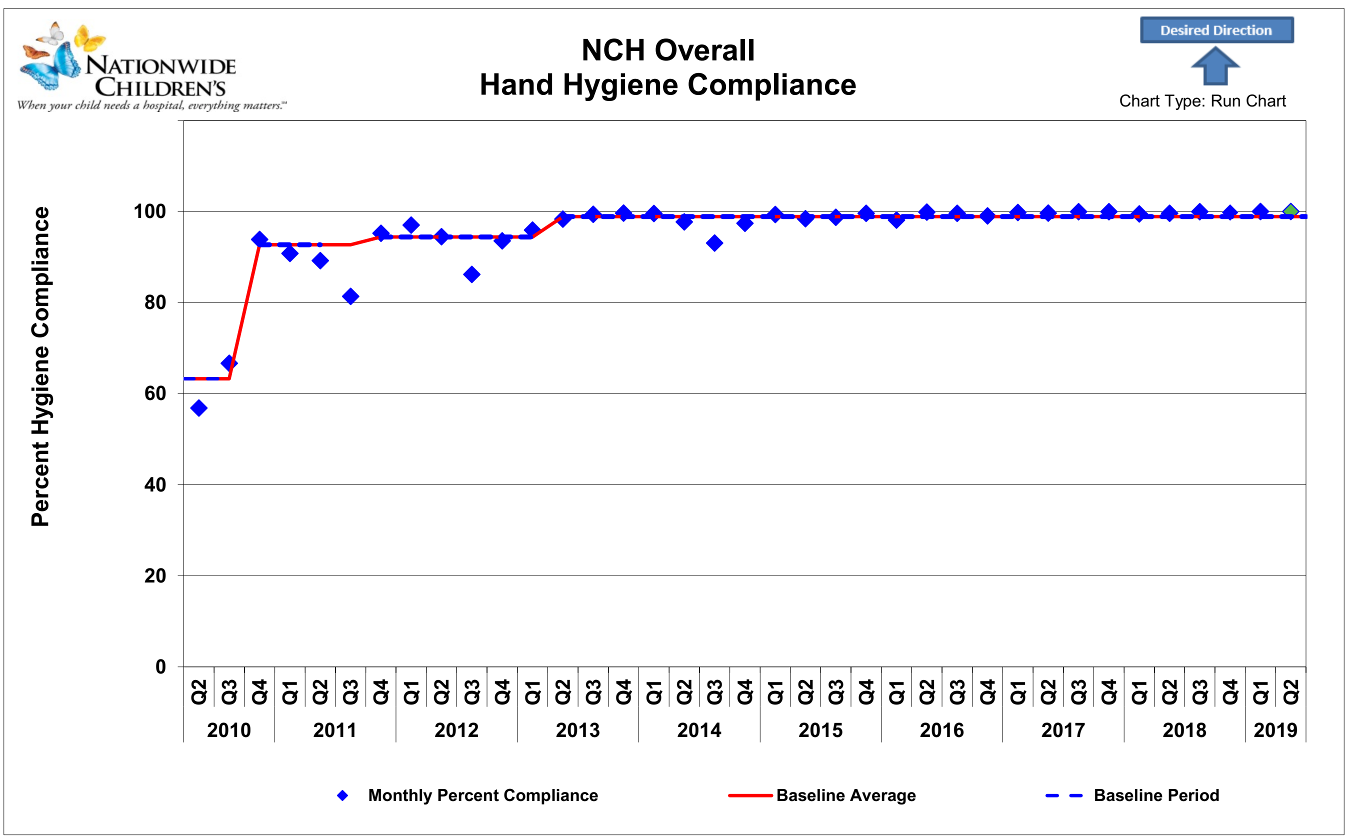
Since its inception in 2012, TaP has routinely screened patients for hepatitis C (HCV) within weeks of testing positive for pregnancy and screened all patients for HIV and syphilis between 24 and 28 weeks of pregnancy. In collaboration with the Ohio Department of Health and the Franklin County Juvenile Detention Facility (JDC), where Nationwide Children's nursing staff provide medical care and screenings for youth, all youth are offered STI testing (specifically syphilis and gonorrhea) upon admittance to the facility. Nationwide Children's Family AIDS Clinic and Educational Services Program offers HIV testing to all youth who test positive for an STI. In the Medication Assisted Treatment of Addiction Clinic, all patients are screened for these diseases at their first clinic visit.

Improve diagnosis of vertically acquired HCV infections by partnering with community physicians and Partners For Kids

Infants with perinatal exposure to HCV, who are born in the area hospitals, are referred to an Infectious Disease Clinic and screened when they are 2-4 months old. The screening results are sent to the primary care physician. If the patients miss the screening appointment, the Division of Infectious Diseases notifies the primary care physician that screening needs completed.

Continue to maintain more than 98% hand hygiene compliance by Nationwide Children's staff

Hand hygiene is essential to patient safety in preventing the spread of infections. Nationwide Children's employee hand hygiene program continues to maintain a compliance rate of 98% and above. To sustain high hand hygiene compliance, frequent hospital-wide and unit-based educational campaigns focus on the importance of hand hygiene for staff, families and visitors. The campaigns employ digital signage throughout the hospital, in-person presentations, hospital website information pages, employee newsletter distributions and required online-learning modules. The Epidemiology Department monitors and reviews the rates monthly to ensure continued compliance.



In/Out Hygiene Performed	108	240	1,628	286	365	1,537	985	946	620	456	1,182	1,211	887	1,180	1,184	927	905	793	918	788	888	721	521	800	826	530	732	527	619	646	598	613	508	451	419	442	277
Gel-In / Gel-Out Observations	190	360	1,734	315	409	1,889	1,034	975	656	529	1,263	1,262	902	1,187	1,188	931	926	852	942	793	902	730	523	815	827	532	739	528	621	646	598	616	510	451	420	442	277

Continue to lower the rate of hospital-acquired infections throughout the institution

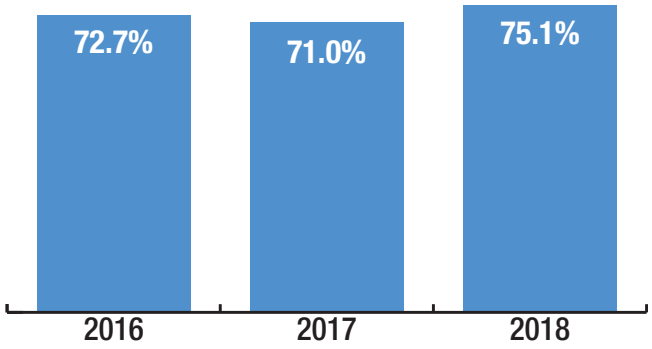
Nationwide Children's goal is to make each patient's stay as safe as possible. Along with the Infectious Diseases team, Nationwide Children's has a dedicated Epidemiology Department working to prevent the spread of infections among all patients, staff and visitors within the health care network. The department also partners with local and state health departments to help prevent the spread of infections within the community as well.

The department routinely monitors and investigates respiratory and gastrointestinal viral infections, multidrug-resistant bacterial infections, medical device-related infections, and procedure-related infections that are associated with hospitalization. Nationwide Children's and the Epidemiology Department implement national best practices to continually prevent health care-associated infections and further reduce infection rates. For example, use of central line insertion and maintenance bundles (the necessary supplies and documented evidence-based procedures) has led to sustained reductions in central line-associated bloodstream infections, from 1.6 infections per line days in 2016 to 1.1 in 2017 and 2018. Line days are calculated by multiplying the number of children with a central line by the number of days the line is in. Educational presentations and simulation exercises keep staff up-to-date on current best practices. Additionally, each central line-associated bloodstream infection, surgical site infection, catheter-associated urinary tract infection and ventilator-associated pneumonia case is reviewed by a multidisciplinary team to identify potential areas for further improvement.

Maintain more than 75% influenza vaccination rates in the Nationwide Children's patient population

Nationwide Children's recognizes the importance of vaccinations to prevent disease and maintain optimal health. The hospital has collaborated across departments to increase vaccination rates. Infectious Diseases and Epidemiology lead a hospital-wide, multidisciplinary effort to improve influenza vaccination rates. During influenza season, the hospital uses a best practice alert in the electronic health record to notify nurses and physicians that a child has not received an influenza vaccine. Epidemiologists meet with physicians and nurses to educate them on the best practices of giving the vaccine. Nurses, physicians, residents and fellows talk with patients and families about the importance of getting the flu vaccine. Nationwide Children's uses a special ordering protocol for the influenza vaccine that enables a nurse to administer a vaccine without a physician order. The best practice alert includes mandatory questions to ask the patient to ensure that the patient can safely receive an influenza vaccine. Weekly reports sent to all department leaders and senior leadership show the percentage of children vaccinated in each area of the hospital. To help children who might not otherwise be vaccinated because of inability to pay, the hospital participates in Vaccines for Children. This federally funded program provides vaccines at no cost to children.

INPATIENT INFLUENZA VACCINATION RATE



Monitor and decrease use of broad-spectrum antimicrobial agents and initiate retrospective analysis of prescribing patterns of antimicrobials in partnership with the Partners For Kids program

To reduce the threat of antibiotic resistance, the Antimicrobial Stewardship Program at Nationwide Children's has expanded its influence over the past three years in both inpatient and outpatient settings. Stewards monitor antimicrobials prescribed daily and collaborate on quality improvement initiatives aimed at reducing unnecessary and inappropriate antibiotic use throughout the hospital and outpatient locations. For example, use of the broad-spectrum antibiotic vancomycin in the pediatric intensive care unit was reduced from more than 70% of patients with community acquired infections in 2017 to less than 50% in 2018. At Urgent Care centers, prescriptions for narrow-spectrum antibiotics for 5 days or fewer increased from less than 10% of all oral prescriptions per patient encounters in 2016 to nearly 75% in 2018. In collaboration with Partners For Kids, stewards identified opportunities to reduce overall and broad-spectrum outpatient antibiotic use by performing a retrospective analysis of antibiotic prescribing patterns. This work led to a quality improvement initiative to properly diagnose streptococcal pharyngitis in a community practice seeing more than 20,000 children with pharyngitis annually. Overall, 50.1% of these patients were prescribed an antibiotic in 2016, 47% in 2018.Those receiving an antibiotic without a strep test dropped from 9.7% in 2016 to 7.8% in 2018.

Offer a separate consult service specific to infections in the immunocompromised host population which will be staffed by Infectious Disease physicians with special expertise

Immunocompromised individuals are at a significantly higher risk for contracting infectious diseases. The Infectious Diseases Division is continuing to work toward offering a consult service to specifically address the prevention and treatment of infections in the immunocompromised host and transplant populations. To prepare, they have developed a fourth-year fellowship in the Host Defense program to better prepare junior faculty to care for these individuals. Two of the graduated fellows have completed this program and now work alongside the program director as faculty members. This team provides pre-transplant infectious-diseases-related evaluations to help achieve best outcomes.

Further develop the Congenital/Perinatal Infectious Diseases program, including creating a business plan for a comprehensive screening program for babies with congenital cytomegalovirus infection

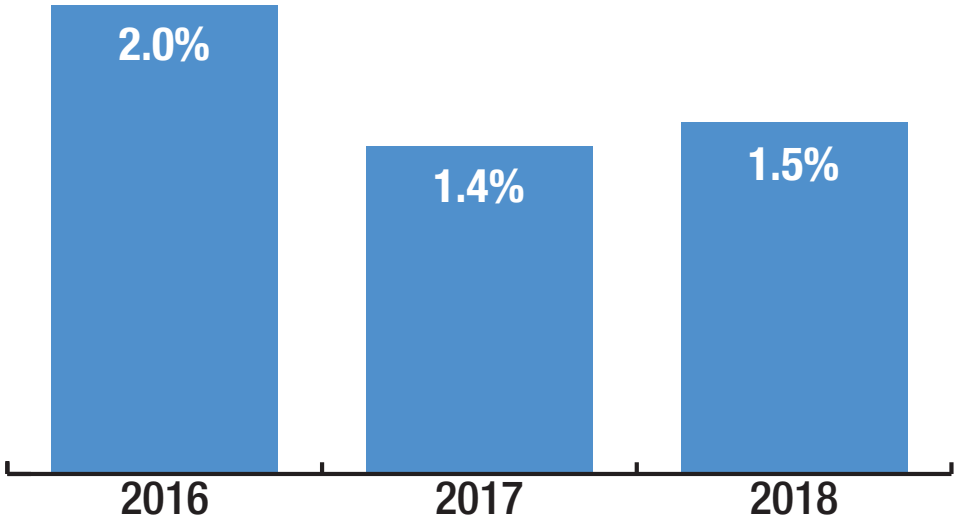
Infectious diseases continues to develop outpatient clinics to better care for the patient population at Nationwide Children's and in the community. A congenital/perinatal infection program has been developed to care for syphilis, CMV and herpes in the neonatal population. The program is working toward offering universal newborn screening for CMV in the Columbus area. Identified babies would be seen by a board-certified neonatal/infectious diseases physician.

Decrease preventable readmissions following discharge from the Infectious Disease Unit to less than 1%

Infectious Diseases providers receive reports on every readmission within seven days, asking the discharging physician to review and respond. Infectious diseases faculty discuss all of the division's early discharge cases during weekly patient review meetings.

While a significant reduction in preventable readmissions has been made, from 2% to 1.5%, the majority of patients readmitted return for reasons that are not preventable. In the instances where faculty believe readmission was preventable, they discuss what actions, such as providing better education on lab results or medical information, should be taken to prevent a repeat incident. Faculty members huddle with residents, nurses, pharmacists and others who were or would be involved with this or a similar patient, discuss the steps, get their input then implement actions they believe will prevent such a readmission in the future.

INPATIENT READMISSIONS WITHIN 7 DAYS



Continue to develop and advance infectious disease research initiatives through The Research Institute at Nationwide Children's

Infectious Diseases has been taking advantage of a collaborative environment between bench investigators and clinical researchers. The department has continued to make progress in a number of highly strategic areas related to infectious diseases that affect large numbers of children. The team has made advances in developing vaccines for otitis media, improving understanding of perinatal transmission of HCV and potential strategies for new vaccines and developing a live attenuated vaccine for RSV. Progress is being made in developing new therapies to treat bacterial biofilms, understanding the pathogenesis of congenital CMV infections, identifying new biomarkers to improve diagnosis and prognosis of pediatric pneumonia and developing new cell therapies to treat severe viral infections in immunocompromised hosts.

Obesity

2016 Implementation Strategy Initiatives:

To reduce or prevent pediatric obesity and to help children already facing this chronic condition, Nationwide Children's committed to:

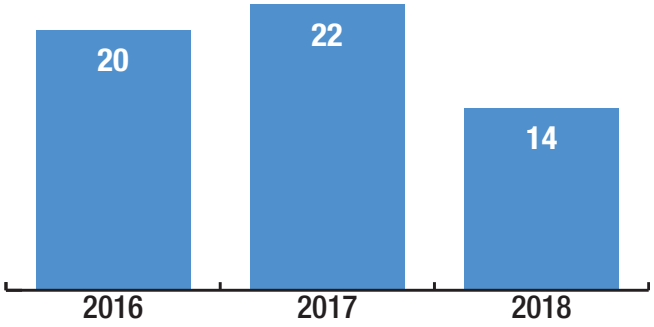
- Maintain adolescent bariatric surgery center accreditation with the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program
- Create new specialty sessions for specific obese populations
- Improve patient engagement and outcomes by increasing average treatment contacts to four or more visits in six months
- Expand the Primary Care Obesity Network
- Develop evidence-based interventions that will reduce disparities in the care of high-risk, vulnerable populations
- Increase community education and advocacy programs, initiatives and events

Children with obesity often have risk factors for other health complications, such as heart disease and diabetes. These can persist or worsen if they remain overweight or obese in adulthood, where extra weight is also linked to certain cancers. Nationwide Children's Center for Healthy Weight and Nutrition, a tertiary care obesity center, offers a comprehensive approach to weight management in children, including programs for prevention, treatment, education and more.

Maintain adolescent bariatric surgery center accreditation with the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program

In 2018, the Center for Healthy Weight and Nutrition received reaccreditation through the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program. The program accredits inpatient and outpatient bariatric surgery centers in the United States and Canada that have undergone an independent, voluntary, and rigorous peer evaluation in accordance with nationally recognized bariatric surgical standards. Bariatric surgery accreditation not only promotes uniform standard benchmarks, but also supports continuous quality improvement. The Center successfully met the requirements deemed necessary and has implemented three quality improvement projects: 1) Post-Operative Bariatric Surgery Registry to improve patient retention; 2) Increasing levonorgestrel intrauterine device (IUD) insertion at the time of bariatric surgery to reduce unplanned pregnancies; and 3) Implementing postoperative nausea and vomiting scale to further improve our patient outcomes.

BARIATRIC SURGICAL CASES



Create new specialty sessions for specific obese populations

The Center developed key partnerships as well as specialty sessions to help improve the care provided to patients. These specialty sessions include: Picky Eating Pathway; Play Strong, a partnership between the Center and Nationwide Children's Sports Medicine; and Slipped Capital Femoral Epiphysis (SCFE) pathway, in partnership with the Department of Orthopedics.

The Picky Eating Pathway was designed to help patients/families with food acceptance, reduce anxiety around new foods and build a positive mealtime experience for families. This pathway is conducted by an interdisciplinary team led by a psychologist. During the seven-month pilot, 25 children were enrolled.

The Play Strong Program aims to improve the physical activity habits of patients and their families through

the use of play, functional movement, corrective exercises, introduction to physical activities, identifying motivations and goal setting to produce long-term health benefits. The program is integrated into a 12-week group weight-management program within the Center, called the New U Program. Between 2016-2018, Play Strong impacted 453 individuals, three-quarters of whom participated in the New U Program.

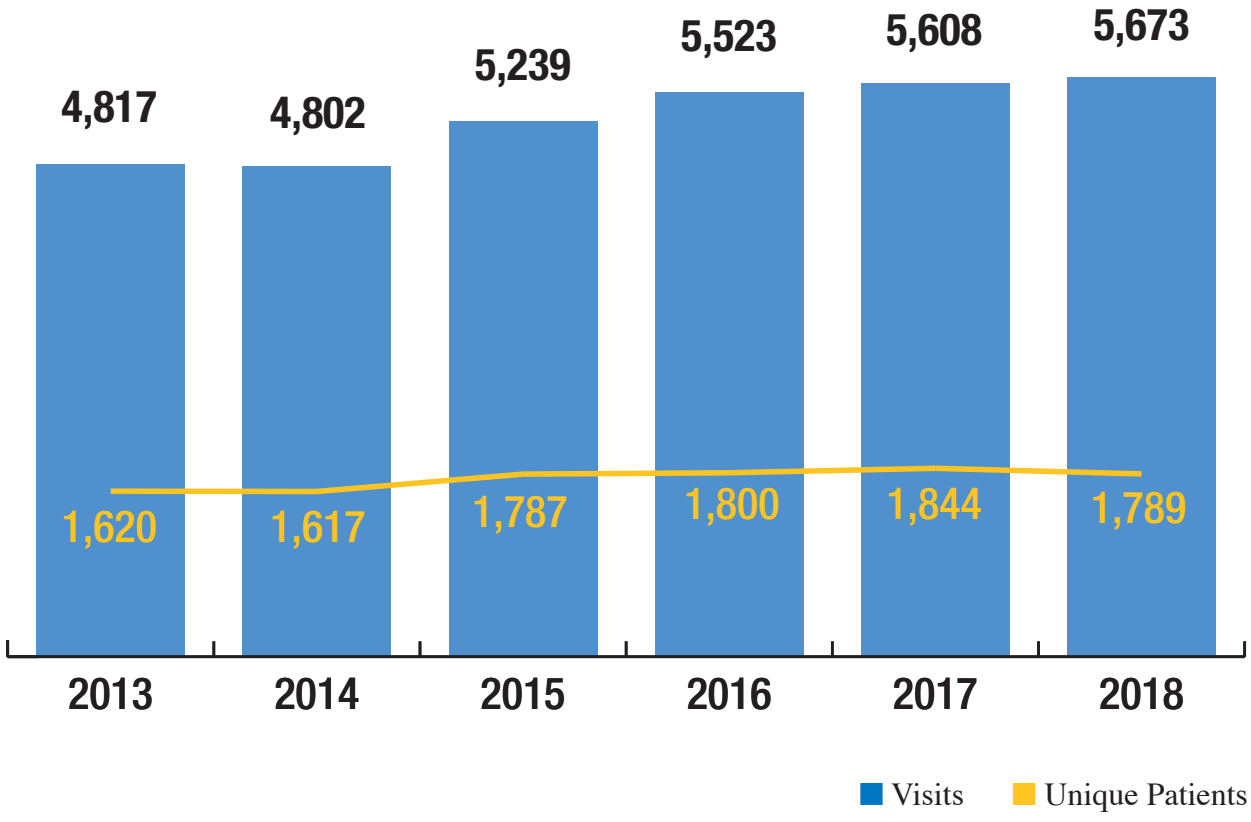
Obesity is often identified as a risk factor for serious and debilitating hip joint damage during childhood, specifically a condition called slipped capital femoral epiphysis (SCFE). SCFE is one of the most common reasons for hip replacement surgery in adolescence and early adulthood. The Center has established a partnership with the Orthopedics Department to implement a treatment pathway for this patient population to help improve outcomes following their SCFE procedure.

Since 2018, more than 30 patients have been seen within the Center following their SCFE procedure.

Improve patient engagement and outcomes by increasing average treatment contacts to four or more visits in six months

To enhance patient engagement and improve outcomes, the Center worked to increase patient contact to four or more visits within a six month time period. From January 2018 to January 2019, there was a 12% increase in the number of patients who achieved four or more visits in a six-month time period. The Center improved engagement by coordinating care, establishing continuity of care, improving scheduling and template management, and creating treatment pathways for patients.

HEALTHY WEIGHT VISITS AND UNIQUE PATIENTS

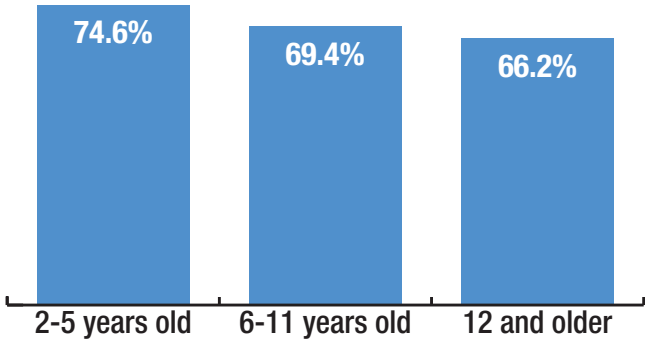


Expand the Primary Care Obesity Network

Nationwide Children's has integrated obesity care into primary care clinics to increase access and improve outcomes. In 2012, Nationwide Children's established the Primary Care Obesity Network (PCON), a network of 11 primary care offices in central Ohio linked to the Center for Healthy Weight and Nutrition. The goal of PCON is to implement evidence-based and effective obesity care by establishing a sustainable multi-sector collaboration between primary care practices, a tertiary care obesity center and community organizations to address childhood obesity in central Ohio. The network is the first of its kind in Ohio. Additionally, PCON creates clinic-community linkages by establishing patient-centered medical neighborhoods (PCMN) that recognize and support the care of the patient within and outside the health care system.

Between 2016 to 2018, the Center team trained providers at 13 school-based clinics and five practices, bringing the total number of PCON practices to 39. This model of provider training and community engagement has been highlighted by the American Academy of Pediatrics Institute of Childhood Weight and by the National Collaborative on Childhood Obesity Research (NCCOR), a partnership of the National Institutes of Health, Robert Wood Johnson Foundation, Centers for Disease Control and Prevention (CDC) and the United States Department of Agriculture (USDA). Importantly, for promoting prevention, the Center, through its work on PCON, has served as an integrator among the community and the clinical practices. Between 2016 to 2018, the network established or sustained relationships with over 20 community organizations, businesses and public health departments. Children involved in PCON clinics demonstrate improvement in diet and physical activity behaviors. Approximately 70% of children seen in PCON practices for obesity or being overweight, decreased or maintained their body mass index, with greater declines in younger children.

PERCENT OF PCON PATIENTS WHO HAVE LOST OR MAINTAINED BMI, BY AGE



Develop evidence-based interventions that will reduce disparities in the care of high-risk, vulnerable populations

To address the disparities that exist with childhood obesity, the Center implemented a culturally sensitive lifestyle intervention targeting the Latino population. Delivered by a bilingual dietitian, the program provided education to 331 low-income Latino children and their families. Initially, 12.5% were aware of how to read food labels. Upon completion of the program, 87.5% were able to read food labels, nearly an 800% increase. All participants were able to find produce, whole grain foods and low-fat meats that fit within their budget. As part of this effort, staff created an interactive dietitian-led grocery store tour in both English and Spanish to help families shop healthy while saving money. Over two years, videos of the tours have been accessed via the Nationwide Children's website almost 6,000 times.

Increase community education and advocacy programs, initiatives and events

Community outreach efforts help increase awareness and provide education and resources on healthy lifestyles. The Center for Healthy Weight and Nutrition participated in 46 community events (county fairs, school functions, Columbus Marathon, farmers markets and health fairs) reaching more than 524,130 children and caregivers from 2016 to 2018. The Center focused specifically on reaching out to minority populations through participation in the Butanese Festival, the Asian Festival, the Latino Festival and the African American Male Wellness Walk.

To highlight the "Food is Health" initiative of the Mid-Ohio Foodbank, Nationwide Children's was one of four health systems in central Ohio that supported the Mid-Ohio Foodbank campaign through a congressional visit in Washington, D.C. and a media campaign. This initiative seeks to improve food availability, food access, food quality and food use to those food insecure families across central Ohio.

Further, the Center encouraged school-age children to develop healthy eating and physical activity habits in a fun and interactive environment through its Fitness and Nutrition (F.A.N.) Club afterschool program. In 2018, F.A.N. Club expanded to include a seven-week summer program at two sites in central Ohio and one site in Toledo, Ohio. Within the three sites, F.A.N. Club impacted between 80-150 students each week.

In 2017, the Center hosted the Early Childhood Wellness and Nutrition Symposium. Leaders in education, childcare, health and community sectors focused on programs that improve child nutrition outcomes through multisector integration. More than 100 professionals from 22 organizations working with young children in Ohio attended the symposium, shared their ideas and experiences and explored new opportunities to collaborate toward improving the nutrition and health of young children. Efforts focused on early childhood nutrition research, utilizing effective interventions as well as policy and environmental changes to impact childhood nutrition.

Conclusion

In conclusion, Nationwide Children's Hospital has made significant improvements in patients' health in Franklin County. Advancements in health outcomes will continue to be a priority to improve the health of our community.

When your child needs a hospital, everything matters.