

Community Health Assessment Overview

The Knox Health Planning Partnership is pleased to provide this comprehensive overview of our community's health status and needs: Knox County's 2021 Community Health Assessment.

Knox County's 2021 Community Health Assessment (CHA) is the result of a collaborative effort coordinated by the Knox Health Planning Partnership. It is intended to help community stakeholders better understand the health needs and priorities of Knox County residents.

Characterizing and understanding the prevalence of acute and chronic health conditions, access to care barriers, health disparities, and other health issues can help direct community resources to where they will have the biggest impact. Participating organizations will begin using the data reported in the [Knox County 2021 Community Health Assessment](#) to inform the development and implementation of strategic plans to meet the community's health needs.

We hope the [Knox County 2021 Community Health Assessment](#) 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 Community Health Assessment Process

The process followed by the Knox County 2021 Community Health Assessment reflected an adapted version of the Robert Wood Johnson Foundation's County Health Rankings and Roadmaps: Assess Needs and Resources process.¹ This process is designed to help stakeholders "understand current community strengths, resources, needs, and gaps," so that they can better focus their efforts and collaboration.

The Knox Health Planning Partnership contracted with Illuminology, a central Ohio based research firm, and the Center for Public Health Practice, within The Ohio State University College of Public Health, to assist with this work. The Knox Health Planning Partnership approved the process to be used in this health assessment. The primary phases of the Assess Needs and Resources process, as adapted for use in Knox County, included the following steps.

(1) Prepare to assess / generate questions. On December 17, 2020, community leaders, stakeholders, and employees from participating organizations gathered virtually to discuss their perspectives on emerging health issues in Knox County. Facilitated by Illuminology, this session provided an opportunity for community members to better understand the upcoming community health assessment process and to suggest indicators to be considered in the community health assessment. Illuminology used the information from this session to identify which indicators could be assessed via secondary sources and which indicators needed to be included as part of the primary data collection efforts. See Appendix A for more information about this session.

(2) Collect secondary data. Secondary data for this health assessment came from national sources (e.g., U.S. Department of Health and Human Services: *Healthy People 2030*; U.S. Census Bureau), state sources (e.g., Ohio Department of Health's Data Warehouse), and local sources (e.g., Knox Community Hospital). Rates and/or percentages were calculated when necessary. The Center for Public Health Practice located and recorded this information into a secondary data repository. All data sources are identified in the References section at the end of the report. 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 the Knox County 2021 Community Health Assessment, secondary data must have been collected or published in 2016 or later.

(3) Collect and analyze primary data from adult residents. A representative survey of Knox County adult residents was conducted (i.e., Knox County Health Survey). Fielded in multiple

¹ See <https://www.countyhealthrankings.org/take-action-to-improve-health/action-center/assess-needs-resources>

Knox County 2021 Community Health Assessment Overview

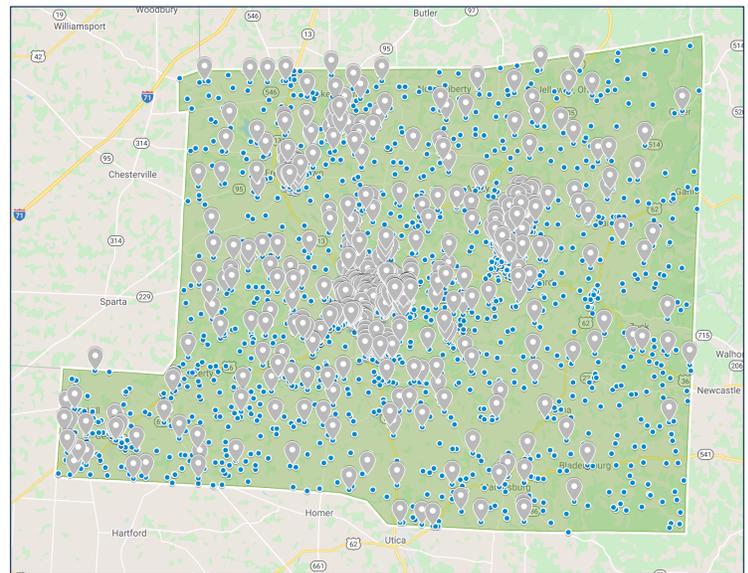
waves from March 8, 2021 through April 25, 2021, respondents completed a self-administered questionnaire, either on paper or online; see Appendix B.

A total of 2,800 addresses were randomly selected from the universe of residential addresses in Knox County. A notification letter was sent to each household, asking the adult in the household who most recently had a birthday to complete the survey online. About three weeks after the initial mailing, a hard copy of the survey was sent to households that had not yet completed the survey online. This mailing also included a cover letter, a Business Reply Mail envelope so respondents could complete the survey and mail it back at no cost to them, and (for some) a \$1 bill to encourage the household's participation.

In total, 519 Knox County adult residents completed the survey, or 19% of the total number of valid addresses (i.e., addresses that were not vacant or otherwise unable to be surveyed) that were invited to participate. With a random sample of this size, the margin of error is $\pm 4.3\%$ at the 95% confidence level.

Knox County Health Survey Households

(● = randomly selected; 📍 = completed)



Before analyzing responses to the survey, survey weights were computed; this step allows researchers to produce more accurate statistical estimates at the overall county level. First, a base weight was created that adjusted for unequal probabilities of selection into the survey (i.e., compensating for the number of adults in the household). Then, this base weight was adjusted so that respondents' demographic characteristics (i.e., age, gender, educational attainment, presence of children in the household, and whether they are residents of Mount Vernon or another part of the County) aligned with population benchmarks for Knox County. These population benchmarks were obtained from the U.S. Census Bureau's American Community Survey. This adjusted base weight was calculated via an iterative proportional fitting procedure within the STATA v15 software package; analyses of weighted data were conducted using complex survey [svy] commands within STATA v15.

(4) Collect and analyze community outreach data. Community input (mostly qualitative) was solicited in several forms. The rich insights provided by community members satisfy the qualitative component of the Public Health Accreditation Board (PHAB) standard 1.1.2.1a, "Qualitative data as well as quantitative data must be utilized. Qualitative data may address, for example, the community's perception of health, factors that contribute to higher health

risks and poorer health outcomes, or attitudes about health promotion and health improvement. Data collection methods include, for example, surveys, asset mapping, focus groups, town forums, and community listening sessions.” Kenyon College's Professor Shaun Golding and the students in his Sociology-Community Based Research course played a role in many of these data collection and analysis efforts. A huge thank you to Dr. Golding and his students! Their work is attributed where presented throughout.

- a) **Community poll.** The Knox Health Planning Partnership worked with Illuminology to design and deploy an informal, qualitative poll of community residents and stakeholders. The intent of this poll was to hear broad, high-level, open-ended community perspectives about the current state of health in Knox County. The poll was widely publicized via promotion on the Knox Public Health Facebook page. Overall, 44 individuals who reported living or working in Knox County responded to this poll between March 18, 2021 and April 12, 2021. See Appendix C for the questions asked as part of this poll.
- b) **Vaccine site surveys.** The Knox Health Planning Partnership worked with Dr. Golding to design and distribute paper surveys to Knox County residents getting vaccinated against COVID-19 at sites where Knox Public Health administered vaccines. The intent of the survey was to gauge the perceived overall health of the County and how health in the County could be improved. Several of these vaccination sites targeted teachers at the time the survey was distributed, so a teacher-specific version of the survey was distributed to measure teachers' perceptions of their students' health. Overall, about 285 residents, including about 150 teachers, completed the survey. See Appendix D for the survey questionnaires.
- c) **Community interviews.** The Knox Health Planning Partnership worked with Illuminology and Dr. Golding to design a community interview guide that covered a wide range of topics, including overall health, health care access, telehealth services, transportation, nutrition and physical activity, substance abuse, child health, COVID-19, and organizational collaboration. Kenyon College students enrolled in Dr. Golding's Sociology-Community Based Research course completed 18 one-on-one or small group interviews. Interviewees included community members who work in health care, leaders of local organizations, and other residents. The interview guide used for these interviews can be found in Appendix E.
- d) **Virtual focus groups.** The Knox Health Planning Partnership worked with Dr. Golding to design and conduct virtual focus groups via Facebook Messenger. Respondents to the community poll and vaccine site surveys were asked whether they would like to participate in the focus groups, and those who indicated they were interested were recruited to the focus groups. Eight participants were asked one question per day from April 19, 2021 to April 23, 2021; the questions focused on perceptions of general community health. See Appendix F for the questions asked as part of the virtual focus groups.

(5) Share results with the community. This report presents the analysis and synthesis of all secondary, primary, and community outreach data collected during this effort. This report will be posted on the Knox Public Health website (<https://www.Knoxhealth.com/>), will be used in subsequent community prioritization and planning efforts, and will be widely distributed to organizations that serve and represent residents in the County.

How to Read This Report

Key findings and *Healthy People 2030*. As shown on page 10, the Knox County 2021 Community Health Assessment is organized into multiple, distinct sections. Each section begins with a "story box" that highlights and summarizes the key research findings from the researchers' perspectives. For some indicators, Knox County is compared to the U.S. Department of Health and Human Services *Healthy People 2030* goal, indicated by dashed boxes containing the Knox County outline in light blue.

Community Voices. Comments and findings from the community outreach data are included in several sections. The results of the community poll are presented in tables with green headers. The findings from the vaccine site surveys, community interviews, and virtual focus groups are indented slightly and set off with a dashed border, and the text is purple.

Comparison to the Knox County 2018 Community Health Assessment. Where possible, results were compared to data from the Knox County 2018 Community Health Assessment, and denoted by a clock symbol: ⌚.¹ In addition, a table comparing 2018 data to 2021 can be found on page 85. The following differences between 2018 and 2021 data were noted.

Areas of improvement from 2018 to 2021. In 2021 compared to 2018:

- More respondents visited a doctor in the past year for a routine checkup
- More respondents had no barriers to consuming fruits and vegetables
- More respondents engaged in physical activity on 3 or more days of the past week
- More respondents engaged in physical activity on 5 or more days of the past week
- Fewer respondents engaged in physical activity on 0 days of the past week
- Fewer respondents were ever diagnosed with high blood cholesterol
- Fewer respondents were ever diagnosed with cancer

Areas of decline from 2018 to 2021. In 2021 compared to 2018:

- Fewer respondents visited a dentist or dental clinic in the past year
- More respondents had household insect issues
- More respondents had household mold issues
- More respondents had household radon issues

¹ The sampling frame in 2018 included adults age 19 and older, so all analyses comparing 2018 to 2021 include respondents age 19 and older in the 2021 data.

- More respondents had four or more poor mental health days in the previous month
- More respondents were ever diagnosed with asthma

Although decreased diagnoses of high blood cholesterol and cancer may seem like an improvement, this decline may be due to decreased screenings as a result of COVID-19.

Health disparities between populations or areas in the community. Many efforts were made to detect and understand "*the existence and extent of health disparities between and among specific populations in the community or areas in the community*" (the Public Health Accreditation Board (PHAB) standard 1.1.2.1c). Analyses explored statistically significant differences in results based on demographic factors such as age, gender, educational attainment, income, and residence inside versus outside of Mount Vernon. When these analyses suggested the presence of significant differences among specific populations, the report tables display a lightbulb symbol: . The following disparities were noted.

Disparities by Household Income. Those with higher household income were more likely to have traveled outside the County for health care, be current drinkers, and consider their neighborhoods extremely safe. They were less likely to be limited by health issues in their activities.

- Respondents with an annual household income of \$75,000 or more were more likely than respondents with an annual household income of less than \$75,000 to travel outside of Knox County to receive health care (72.4% vs. 55.4%).
- Respondents with an annual household income of \$100,000 or more were more likely than respondents with an annual household income of less than \$100,000 to have had at least one alcoholic drink in the past month (73.7% vs. 44.7%).
- Respondents with annual household income of \$100,000 or more were more likely than respondents with household income of less than \$100,000 to consider their neighborhood extremely safe (44.3% vs. 20.1%).
- Respondents with income of less than \$100,000 were more likely than respondents with income of \$100,000 or more to be limited in their activities (30.1% vs. 8.8%).

Disparities by Educational Attainment. There are several examples of the relationship between lower educational attainment and poorer health outcomes and behaviors.

- Respondents who had completed a bachelor's degree or higher were more likely than those who had completed less formal education to spend less than 30% of household income on housing (77.4% vs. 44.2%).
- The likelihood of experiencing an issue with insects in the household decreases as education increases (bachelor's degree or higher education: 9.8%; some college: 17.5%; high school degree / GED or less education: 30.5%).

- Respondents who had completed less formal education were more likely than those who had completed a bachelor's degree or higher to smoke at least some days (20.5% vs. 1.2%).
- Respondents who had completed less formal education were more likely than those who had completed a bachelor's degree or higher to have smoked cigarettes in the past year (19.7% vs. 1.1%).
- Respondents with a high school education or less were more likely than those who had completed more formal education to know someone with a drug abuse or addiction problem with methamphetamines (21.3% vs. 8.5%).
- Respondents who had completed a bachelor's degree or higher were more likely than respondents who had completed less formal education to consider their neighborhood extremely safe (37.6% vs. 21.7%).
- Respondents who had completed less formal education were more likely than respondents who had completed a bachelor's degree or higher to have had at least one ACE (52.3% vs. 31.2%).

Disparities by Age. Older adults tended to have higher chronic disease prevalence (as measured in the survey), have less social and emotional support, and be more limited in their activities. However, they had some positive health outcomes such as less substance abuse and better mental health outcomes.

- Respondents 65 and older were more likely than respondents younger than 65 to have been diagnosed with cancer (26.3% vs. 2.8%) and heart disease (24.4% vs. 2.0%).
- Respondents 45 and older were more likely than respondents younger than 45 to have been diagnosed with arthritis (49.9% vs. 8.0%), diabetes (20.5% vs. 3.6%), and COPD (6.2% vs. 0.0%).
- High blood pressure increases with age: 71.3% of those 65 or older reported high blood pressure, compared to 55.5% of those 55-64, 39.1% of those 45-54, 26.9% of those 35-44, and 16.1% of those 18-34.
- High blood cholesterol increases with age: 52.7% of those 65 or older reported high blood cholesterol, compared to 31.8% of those 55-64, 21.6% of those 45-54, 19.8% of those 35-44, and 10.2% of those 18-34.
- Respondents age 65 and older were more likely than respondents younger than 65 to be limited in their activities (52.7% vs. 18.9%).
- Respondents age 35 and older were more likely than respondents age 18-34 to travel outside of Knox County for health care (70.9% vs. 39.7%).
- Respondents younger than 55 were more likely than respondents 55 and older to smoke at least some days (23.1% vs. 7.8%).
- Respondents younger than 55 were more likely than respondents 55 and older to smoke cigarettes in the past year (22.0% vs. 7.1%).

- Respondents younger than 55 were more likely than respondents 55 and older to know someone with a drug abuse or addiction problem with prescription pain medication (24.0% vs. 4.8%) and methamphetamines (21.2% vs. 4.5%).
- Those younger than 45 were more likely than those 45 and older to have been diagnosed with an anxiety disorder (35.7% vs. 11.5%).
- Respondents younger than 45 were more likely than those 45 and older to report having had at least one poor mental health day in the past month (77.7% vs. 46.6%).
- Respondents younger than 35 reported having more poor mental health days on average in the past month than those 35 and older (12.7 vs. 7.9).
- Respondents younger than 35 were more likely than those 35 and older to report that they always get the social and emotional support they need (47.0% vs. 23.4%).

Disparities by gender. Males and females reported similar health behaviors, with a few notable exceptions. Females were more likely to have mental health diagnoses; males were more likely to be current drinkers and to have been diagnosed with heart disease.

- Females were more likely than males to have been diagnosed with a depressive disorder (27.9% vs. 11.4%) or an anxiety disorder (33.1% vs. 9.8%).
- Males were more likely than females to have had at least one alcoholic drink in the past month (57.7% vs. 40.3%).
- Males were more likely than females to have been diagnosed with heart disease (11.8% vs. 3.4%).

Disparities by location (Mount Vernon vs. outside Mount Vernon residence). Mount Vernon residents were more likely to know someone with an alcohol problem and were less likely to feel that their neighborhoods are extremely safe.

- Respondents who live in Mount Vernon were more likely than respondents who live elsewhere in Knox County to know someone with an alcohol abuse or addiction problem (38.9% vs. 27.2%)
- Respondents living outside of Mount Vernon were more likely than respondents living in Mount Vernon to consider their neighborhood extremely safe (32.8% vs. 17.5%).

The contributing causes of health challenges. Next, the Knox County community is also very interested in understanding "*the contributing causes of health challenges, for example, behavioral risk factors, environmental factors (including the built environment), socioeconomic factors, policies (e.g., zoning, taxation, education, transportation, insurance status, etc.), injury, maternal and child health issues, infectious and chronic disease, resource distribution (e.g., grocery stores), and the unique characteristics of the community that impact on health status. Multiple determinants of health, especially social determinants, must be included...*" (i.e., PHAB standard 1.1.2.1d). This standard is addressed in multiple waves throughout the report, and especially in the following sections: Social Determinants of Health, Behavioral Risk Factors, Maternal and Child Health, Mental and Social Health, and Death, Illness, and Injury.

Overall, the lack of availability of health care seems to be worthy of future discussion and action. Many residents travel outside the County for care (especially specialty care). Some may not be able to access care due to lack of health care coverage, lack of transportation, or other issues.

Sources for all secondary data included in this document are marked by an endnote and described in the report's References section. Caution should be used in drawing conclusions in cases where data are sparse (e.g., counts less than ten).

Primary data (i.e., from the Knox County Health Survey) are marked by the following endnote symbol: §. In some tables, the percentages may not sum to 100% due to rounding. In some cases, outlying values were winsorized (outlying values were replaced with the highest or lowest non-outlying value).

Effects of the COVID-19 pandemic. The COVID-19 pandemic reached the United States in January 2020, and the first case was confirmed in Ohio on March 9, 2020. The Ohio State of Emergency was declared on March 9th and a Stay at Home Order went into effect on March 23rd.

Survey respondents felt that COVID-19 was the most important health issue. Some survey respondents mentioned delaying health care due to the pandemic, and community leaders voiced that families with children faced particular challenges due to the pandemic. In addition, a significantly higher percentage of respondents had four or more poor mental health days in the previous month according to the 2021 survey (compared to 2018), which could have been a result of the pandemic. The community poll asked what major issues caused by COVID-19 community leaders should focus on addressing - these are noted in a COVID-19 section at the end of the Death, Illness, and Injury section. Generally, residents would like to see more trust in medical leaders, resident engagement in stopping the spread, less politicization of health issues, and a focus on vaccine distribution and opening up safely.

Table of Contents

For Information About...	...See Page
Community Profile <i>Statistical data about the population of Knox County, including age, gender, race, and household information</i>	11
Overall Health <i>Overall health, health limitations, and most important health issues</i>	15
Social Determinants of Health <i>Socio-economic factors that can affect one's health</i>	32
Behavioral Risk Factors <i>Behaviors that affect health, including alcohol and tobacco use, drug abuse, nutrition, and physical activity</i>	54
Mental and Social Health <i>Mental health issues, suicide, and abuse</i>	63
Maternal and Child Health <i>Health of mothers and children</i>	70
Death, Illness, and Injury <i>Leading causes of death, hospital visits, and hospital admissions; incidence rates of cancer, infectious diseases, and chronic conditions</i>	76
Trends over Time	85
Summary	86
Appendix A: Knox County CHA Kickoff Session	87
Appendix B: Knox County Survey Questionnaire	90
Appendix C: Knox County Community Poll	97
Appendix D: Knox County Vaccine Site Survey Questionnaires	99
Appendix E: Knox County Community Interview Guide	104
Appendix F: Knox County Virtual Focus Group Guide	108
Appendix G: Knox County Community Assets and Resources	110
References	112

Community Profile

This section describes the demographic and household characteristics of the population in Knox County, which is located in central Ohio.

Knox County was founded about 215 years ago and covers 530 square miles. Mount Vernon is the seat of this county.



Resident Demographics¹

		Knox County	Ohio
Total Population	Total population	61,481	11,655,397
Gender	Male	48.6%	49.0%
	Female	51.4%	51.0%
Age	Under 5 years	5.9%	6.0%
	5-19 years	20.7%	19.1%
	20-64 years	55.6%	58.3%
	65 years and over	17.7%	16.7%
Race	White	96.4%	81.3%
	Black/African American	1.0%	12.4%
	American Indian/Alaskan Native	0.2%	0.2%
	Asian	0.5%	2.2%
	Native Hawaiian/Other Pacific Islander	0.0%	0.0%
	Some other race	0.1%	1.0%
	Two or more races	1.7%	2.9%
Ethnicity	Hispanic/Latino (any race)	1.5%	3.7%
	Not Hispanic/Latino (White alone)	95.4%	78.9%
Marital Status	Never married	32.4%*	28.8%*
	Now married (not currently separated)	47.6%*	53.7%*
	Divorced/separated	13.7%*	11.8%*
	Widowed	6.4%*	5.7%*

*Data are from 2019 *Denominator is population 15 years and over*

Resident Households¹

		Knox County	Ohio
Total Households	Number of households	23,248	4,676,358
Household Type	Households with one or more people under 18 years	32.0%	29.3%
	Households with one or more people 60 years and over	42.4%	39.8%
Family Households	Total family households	68.8%	63.2%
	<i>Married-couple family household</i>	81.4%*	72.6%*
	<i>Male householder, no spouse present, family household</i>	6.0%*	7.6%*
	<i>Female householder, no spouse present, family household</i>	12.6%*	19.9%*
Grandparents As Caregivers	Household with grandparents living with grandchildren	2.9%	3.2%
	<i>Household with grandparent responsible for own grandchildren under 18 years</i>	49.1%**	45.1%**
	<i>Household with grandparent not responsible for own grandchildren under 18 years</i>	50.9%**	54.9%**
Non-Family Households	Non-family households	31.2%	36.8%
Household Size	Average household size	2.5	2.4
	Average family size	3.0	3.0
Household Income	Less than \$10,000	6.4%	6.8%
	\$10,000 - \$14,999	3.5%	4.6%
	\$15,000 - \$24,999	9.9%	9.9%
	\$25,000 - \$34,999	8.5%	9.8%
	\$35,000 - \$49,999	15.0%	13.4%
	\$50,000 - \$74,999	20.4%	18.3%
	\$75,000 - \$99,999	15.3%	13.0%
	\$100,000 - \$149,999	14.3%	14.1%
	\$150,000 - \$199,999	4.5%	5.3%
\$200,000 or more	2.3%	4.9%	
Transportation	Households without a vehicle	8.1%	7.9%

Data are from 2019 *Denominator is total family households **Denominator is households with grandparents living with grandchildren

Residents - Disability Information¹

		Knox County	Ohio
Disability Status*	Total with a disability	13.6%	14.0%
	Under 18 years	3.1%	5.0%
	18 to 64 years	19.1%	11.9%
	65 years and over	33.2%	34.2%
Disability By Type**	Hearing difficulty	30.8%	27.0%
	Vision difficulty	19.9%	16.9%
	Cognitive difficulty	37.1%	39.1%
	Ambulatory difficulty	51.7%	50.6%
	Self-care difficulty	22.1%	18.6%
	Independent living difficulty	42.3%	34.8%

*Data are from 2019 *Denominator is civilian noninstitutionalized population in the specified age range **Denominator is civilian noninstitutionalized population with a disability*

A statistical portrait of the adult respondents who completed the 2021 Knox County Health Survey is shown below. These percentages have been weighted to match population benchmarks for age, gender, educational attainment, presence of children in the household, and Mount Vernon residence.

2021 Health Survey: Respondent Profiles⁵

		Knox County
Gender		(n=513)
	Male	48.1%
	Female	51.9%
Age		(n=508)
	18-34	29.0%
	35-44	14.0%
	45-54	16.0%
	55-64	18.0%
	65+	23.0%
Education		(n=515)
	High school diploma / GED or less	48.0%
	Associate’s degree / some college	31.7%
	Bachelor’s degree or more	20.3%
Household Size		(n=519)
	Average household size	2.6
Household Income		(n=495)
	Less than \$50,000	44.4%
	\$50,000 - \$74,999	22.1%
	\$75,000 - \$99,999	17.0%
	\$100,000 or more	16.6%
Children Under 18 (In Household)		(n=512)
	0 children	67.6%
	1-2 children	23.9%
	3 or more children	8.6%
Mount Vernon Resident		(n=519)
	Resident	51.0%
	Non-resident	49.0%

This section reviews how residents perceive their own overall health and what health-related limitations they face. In addition, this section presents residents' perceptions of the health of the community and important health issues in the community.

Key Findings - Overall Health

- About half (53%) of adults reported that their health was excellent or very good, which is about the same as 54% in 2018.
- Those with lower household income and less education were more likely to report poorer overall health.
- Residents' vision for a healthy Knox County involves active residents with access to health care and vibrant social spaces.
- Currently, COVID-19 is perceived as the most important health issue in Knox County; mental health and substance abuse are other important issues.
- Respondents from the community outreach efforts largely feel that the county population is healthy and the county has what is needed to promote health.

Perceptions Of Health Status[§]

	Knox County (n= 515)
Excellent	9.5%
Very good	43.5%
Good	34.9%
Fair	9.0%
Poor	3.1%



Respondents with a bachelor's degree or higher education were more likely than respondents with less formal education to report having excellent or very good health (72.5% vs. 47.9%).

Respondents with household income of \$75,000 or more were more likely than respondents with lower household income to report having excellent health (17.5% vs. 5.7%).



In 2021, about the same percentage of respondents age 19 and older reported health that was excellent or very good (52.5%), compared to 2018 (54%).

Overall Health

A little over a quarter (27%) of residents reported a physical, mental, or emotional problem which limits their activities; arthritis and back or neck problems were most common.

Limited in any activities[§]

	Knox County (n=503)
Physical, mental, or emotional problems limit activities	26.7%

Type of physical, mental, or emotional problem^{§*}

	Knox County (n=134)
Arthritis	19.1%
Back or neck problem	18.2%
Lung or breathing problem	13.4%
Knee problem	13.1%
Heart or vascular problem	11.0%
Depression or bipolar disorder	11.0%
Lack of mobility or slowness	10.4%
Anxiety or panic attacks	7.9%
Leg problems	7.8%
Shoulder problems	6.0%
Fatigue	5.6%
Advanced age	5.2%
Balance problems or dizziness	4.6%
Hip problems	4.1%
Pain or stiffness	4.0%
Weight problems	3.5%
Weakness or lack of stamina	2.9%
Foot or ankle problems	2.5%
Neurological problems or concussion	1.5%
Fibromyalgia	1.2%
Other	13.8%

**Among those who were limited in any activities. Percentages may sum to higher than 100%; multiple responses were accepted*



Respondents age 65 and older were more likely than respondents younger than 65 to be limited in their activities (52.7% vs. 18.9%).

Respondents with income of less than \$100,000 were more likely than respondents with income of \$100,000 or more to be limited in their activities (30.1% vs. 8.8%).



In 2021, a slightly higher percentage of respondents age 19 and older were limited in their activities (26.9%), compared to 2018 (22%).

Community Voices

Poll: Vision of a Healthy Knox County and Barriers to Vision

As part of the community poll, residents answered the question, "What does a healthy Knox County look like to you?" Their responses are displayed below.

Generally, they see a healthy Knox County as active, with residents who eat healthy, have access to health care, and take part in vibrant social spaces.

Residents' Vision of Knox County <i>What does a healthy Knox County look like to you?</i>	
Active Residents	<ul style="list-style-type: none">- People outdoors walking, running, riding bicycles, and not just sitting at home- People out in the community, enjoying the beautiful atmosphere together. There would be safe travels on the Kokosing bike trail. Picnics in Ariel park. Fishing, boating, and kayaking at Knox Lake- Kids active outdoors- People out enjoying our parks, bike trails and local businesses- More activity in our parks and on our bike paths.- People active- A more mobile...population/no obesity
Opportunities for physical activity	<ul style="list-style-type: none">- Fair access to health resources, (e.g., bike path, YMCA),- Easy access to safe spaces for play- Availability of bike paths throughout town and sidewalks on some majorly used roadways that don't have them like Apple Valley Drive, Howard-Danville Road, Danville-Amity Road, or others- Places to rent bikes all around downtown- Creating more dog friendly places because you are getting healthier if you are taking your dog out for a walk... Would love to see dog friendly restaurants even if it's just the patio...It would be fun to have a dog park at the square or just a block or two away

Overall Health

<p>Opportunities for physical activity (cont'd)</p>	<ul style="list-style-type: none"> - Set up ice skating somewhere for the winter. Get people out of their house and moving... covered patios, heated patios - Great public parks - Affordable physical fitness places with an exercise pool - Affordable and/or free avenues for people to exercise - Community exercise programs - Free fitness classes - Year round restrooms in city parks
<p>Active transportation</p>	<ul style="list-style-type: none"> - A walkable city - Walkable villages/cities - Creating more walking friendly areas - Most people drive because Knox County is so far spread out but give them a reason to park their car and walk around - Wider sidewalks - A Knox County where the streets and sidewalks are safe for people to participate in active transportation - Lots of alternative transportation, less reliance on fossil fuels, safe sidewalks - More incentives for renewable energy sources, cheaper licenses and fees for high mpg cars, more public transportation - Good access to sidewalks and bike trails
<p>Healthy food access (general)</p>	<ul style="list-style-type: none"> - Healthy accessible foods - Fair access to healthy food - Cheaper healthy food choices, instead of the healthy food with high costs - A Knox County where ALL individuals have access to HEALTHY foods - Affordable and/or free avenues for people to eat healthy better diets
<p>Opportunities for healthy food</p>	<ul style="list-style-type: none"> - Restaurants that serve a large variety of healthy food - A public vegetable garden - Community gardens - Fresh fruit and vegetables; kids having free breakfast and lunch in school - More natural food stores
<p>Health care access (general)</p>	<ul style="list-style-type: none"> - Fair access to health care - People having access to health care

Overall Health

<p>Health care access (general) (cont'd)</p>	<ul style="list-style-type: none"> - Free routine healthcare checkups and labs offered to all - Individuals have access to QUALITY care regardless of their insurance situation, and the healthy choice is the easy choice for all residents - Affordable Health care and prescriptions - Everyone taking the best care of themselves and their neighbors - Being able to get to Dr. appointments - Access for all of the community to health care, dental care and other services provided by the health department and community partners - Everyone having access to healthcare including vision, dental, mental health/ dental/alcohol treatment - Everyone take advantage of vaccinations for COVID, flu, shingles, measles, mumps etc. - Children able to access medical and dental care - Access to health care - Government provided healthcare for all - Variety of health services available to the resident - Vaccines - Services [for] the community
<p>Mental health services</p>	<ul style="list-style-type: none"> - More, better, and more accessible mental health services. Efforts to reach out to those who are isolated. - Mental health is taken seriously - More mental health providers for children - Mental health facilities that have a positive impact on our society - Mental health services that are not faith based or Medicaid required - Better psychological help for low income - Availability of mental health providers
<p>Other health resources</p>	<ul style="list-style-type: none"> - Drug and alcohol centers that make a difference - Parenting classes available for all parents, not just new - Diabetic education and nutrition education since the current is overwhelmed and you cannot get appointments with them
<p>Other public health issues</p>	<ul style="list-style-type: none"> - Acknowledging racism as a public health issue - Control on health pandemics - Live tobacco free
<p>Basic needs</p>	<ul style="list-style-type: none"> - Everyone's basic needs are met

Basic needs (cont'd)	<ul style="list-style-type: none"> - Safe and affordable homes - Homeless shelter for those in need - Clean water - Living wage - Education - Safety - Jobs / people out and working
Vibrant Social Spaces	<ul style="list-style-type: none"> - Fun Fridays, Brew Fests, sporting events, concerts, and great food all being enjoyed and appreciated by our diverse county - Vibrant social connections - Places for teens and children to go to have safe, healthy fun - I think people will get out and do more stuff in the warmer months but they need to do things in the colder months too. Maybe a winter festival downtown, more events like the fire and ice thing at Honey Run, winter craft market and set out some warming stations for the event. Not only would it help with depression but it would get people more active most times. Have like food truck Tuesdays at the square or any day but have it every week. More first Fridays and get more vendors and sponsors. More different types of festivals, like the MV Music and Arts Festival is fun and all but have like a Stem Fest or Comic Con or Beer Fest or Bicycle Festivities. Really anything that would attract people and market it well so people come. Ariel Foundation Park is trying to do things for the County but they can't be the only ones. Concerts, events, food truck fest, more

As part of the community poll, residents also answered the question, "Given your vision for a healthy Knox County, what do you think are the biggest barriers or issues that are keeping the County from getting there?" Their responses are displayed below.

In addition to specific barriers related to aspects of a healthy Knox County mentioned (such as barriers to activity, nutrition, health care, and social spaces), they mentioned cost / lack funding of community programs and problematic leadership as barriers.

<p>Barriers to a Healthy Knox County</p> <p><i>Given your vision for a healthy Knox County, what do you think are the biggest barriers or issues that are keeping the County from getting there?</i></p>	
<p>Barriers to active residents</p>	<ul style="list-style-type: none"> - [Lack of] bike and walking trails and accessible parks [that] would help the community get more exercise and enjoy the outdoors - [Lack of] Community pools, both indoor and outdoor with affordable entry fees - [Lack of] YMCA programs, also at affordable rates so community members can access often enough to improve their health - Incomplete and dangerous sidewalk areas - Communication! When are outdoor events, maps of parks, community parks not updated - Also crime and vandalism. We have Ariel Park that is so nice and people vandalized it like right when it opened. We need the police to be on the lookout for these things and cameras. - Sedentary lifestyles normalized and encouraged through video gaming and active sports becoming too competitive and selective at a young age - [Lack of] Educational opportunities for everyone (i.e. free) that instructs children, teens and adults on why healthy food choices matter
<p>Barriers to active transportation planning</p>	<ul style="list-style-type: none"> - People not willing to change from "how things are" to "how things can and should be" [in terms of implementing active transportation]
<p>Barriers to healthy food</p>	<ul style="list-style-type: none"> - Misconceptions about healthy and local food
<p>Barriers to health care access</p>	<ul style="list-style-type: none"> - Education and a long history of familial beliefs. It is also hard to offer services in a community that doesn't have the necessary resources and hard to attract people to work here - Some of our County residents live in rural areas without transportation - State and federal government needs to provide health care for all - Not enough specialists

Overall Health

	<ul style="list-style-type: none"> - Lack of providers especially dental and mental health - Education on public health matters
<p>Barriers to basic needs</p>	<ul style="list-style-type: none"> - Addictions, homelessness - No good paying jobs. Not being able to get to 2nd and 3rd shift jobs. [No] Transportation - Highways - Enough police - [Barriers to psychological help for low income residents] - Qualified educators and facilities
<p>Barriers to vibrant social spaces</p>	<ul style="list-style-type: none"> - Lack of community engagement in the things that make communities fun
<p>General barriers concerning multiple issues</p>	<ul style="list-style-type: none"> - Limited vision by those in positions of power. The same people year after year decide what happens here, what is funded. The projects they support and the community falls in line with are most often window dressing - I am sure finances are one of the biggest barriers. Getting buy in from larger corporations as well - Money is the biggest issue though. It costs a lot to add sidewalks and maybe we can't do it for awhile but we could have events that cost money to attend and get sidewalks put in in a couple of years - Funding! Grants need applied for. Entertaining eating establishments to locate in the community. Greater collaboration with for profit places to support lower income individuals, those that don't qualify for public assistance - The mentality of political leaders of this is how we've always done it. Why change? - Money and older people in command that aren't interested in doing the work for others or finding a way to do the work. Most just go it's not in the budget and move on but there're a couple people that might fight for the community and fundraise or use certain events as fundraisers for other projects or do better at marketing and promotion - Poverty, mental health - inability to cope with issues and stress in life - Low-income people are treated as second class citizens

Perception of Most Important Health Issues in Knox County

About a third (35%) of survey respondents feel that issues related to COVID-19 (e.g., the virus in general, dealing with restrictions due to the virus, getting residents vaccinated, residents not acting to stop the spread) are the most important health issues in Knox County. COVID-19 was followed by drug or alcohol addiction or abuse, mental health issues, and weight issues (e.g., obesity, lack of nutrition or exercise).

Resident Perception Of Most Important Health Issues^{S*}

	Knox County (n=426)
Issue related to COVID-19	35.2%
Drug or alcohol addiction or abuse	24.9%
Mental health issues	13.2%
Weight issues	12.1%
Lack of medical care access	7.9%
Lack of education or misinformation	3.7%
Smoking or secondhand smoke	3.0%
Poverty or financial issues	2.2%
Cardiovascular disease	2.1%
Cancer	2.1%
Diabetes	1.5%
Elder care or aging	1.0%
Other	13.6%

**Percentages may sum to higher than 100%; multiple responses were accepted*

Community Voices
Poll: Most Important Health Issues

The community poll asked a similar question: "Setting COVID-19 aside, what is the most important health issue in Knox County?" Mental health and substance abuse were reported as common issues (in line with the survey) followed by proper utilization of health care.

Most Important Health Issues <i>Setting COVID-19 aside, what is the most important health issue in Knox County?</i>	
Mental health	<ul style="list-style-type: none"> - Mental Health - Mental Illness - Anxiety - Self-care - Mental health assistance - [Mental health] reaches into every part of our lives. It's the root of abuse of all kinds - Seasonal depression or depression in general. People need to get out and enjoy things and the outside...Get people out and socialize to help with depression so they can feel better in general - Access to mental health - our teenaged population is experiencing anxiety and depression at a very, very high level and a good portion are self-medicating or self-soothing in unhealthy, dangerous ways including the "good kids" - People need vacation
Substance use/abuse	<ul style="list-style-type: none"> - Drugs/drug abuse/drug addiction - Addiction issues - Smoking - Alcohol use - People need help getting off drugs - Focusing on long term change so those at an economic disadvantage break cycles of drug and alcohol abuse
Health care utilization	<ul style="list-style-type: none"> - I think our hospital needs to somehow improve on the false negative reputation. We have always had good and

Overall Health

Health care utilization (cont'd)	<p>effective medical treatment and care from them yet so many make negative comments about them</p> <ul style="list-style-type: none"> - Maintain proper medical care - Healthcare including physicals, medications, dental, eye exams, mental health, drug, and alcohol treatment - Health care for those who need it
Social issues	<ul style="list-style-type: none"> - Poverty - Equitable access to basic needs - Addressing chronic food insecurity with HEALTHY food - Child abuse/neglect - Housing for the homeless or less fortunate
Education	<ul style="list-style-type: none"> - Health education - Lack of education on healthy lifestyles. - Public Education - Educating our community [on drug and alcohol abuse].
Specific health problems	<ul style="list-style-type: none"> - Heart health - Diabetes - Poor dental health
Other	<ul style="list-style-type: none"> - Obesity - A car-dependent, sedentary, overweight population - Healthy diet - Physical health - The water system - Not wearing a mask

Vaccine Site Surveys: Overview of Health in Knox County

Vaccine Site Surveys

Dr. Golding and his students provided the following summary of responses to the vaccine site surveys, reviewing general perceptions of health in Knox County, whether the County has what is needed to promote good health, and how these perceptions differ based on age. In addition, the summary explains teachers' opinions related to their students' health.

A large majority of both residents and teachers agree the County population is healthy. However, a slightly higher proportion of respondents disagree the county population is healthy, compared to the proportion disagreeing that the County has the infrastructure required to promote health [the following question]. This slight discrepancy reveals a prevalent belief that the county population could be more healthy if individuals made better health decisions. This theme is reflected

Overall Health

overwhelmingly in the elements that respondents listed when asked to list things that they associate with good health. Respondents focused primarily on personal factors such as diet and exercise.

By and large, this difference between personal and community level factors appears to depend on age. The average age of respondents who agree and those who disagree that the County is healthy is significantly different, with older residents being more likely to agree that the County is healthy than disagree.

Vaccine Site Surveys

Breakdown of responses

County Population is Healthy

	Knox County (n=286)
Strongly agree	10.1%
Agree	62.9%
No opinion	12.6%
Disagree	14.0%
Strongly disagree	0.3%

County Has Things to Promote Health

	Knox County (n=284)
Strongly agree	16.5%
Agree	72.2%
No opinion	7.4%
Disagree	3.9%
Strongly disagree	0.0%

I Associate Health With (open-ended response, first choice)

	Knox County (n=224)
Exercise	34.4%
Diet	29.9%
Personal wellness	9.8%
Quality healthcare	7.1%
Healthcare utilization	6.3%
Environment	5.4%
Healthcare access	4.0%
Positive attitude	3.1%

Vaccine Site Surveys

Dr. Golding and his students also reviewed the open-ended responses to the vaccine site survey question "How do you think Knox County could be a healthier place to live?" and how responses to that question differed by age and gender.

Residents

Despite the overwhelming belief in the County's health, open-ended responses to the question "How do you think Knox County could be a healthier place to live?" yielded over a hundred suggestions among teachers and residents. As predicted by the age biases noted above, younger respondents were more likely to make suggestions.

Many respondents think that Knox County needs healthier food options, but they also encourage the idea of teaching parents and children how to eat better. People want accessible and cheap gyms to go to. They also want more sports or activities that people can join in on outside to get exercise. They express that a lot of those things are lacking in the community. There were also quite a few people that wanted education to prevent drug abuse and resources to help those that struggle with drugs.

Men under the age of 60

Nine of the men under 60 think Knox County could be healthier with healthier food options, eight mentioned exercise, eight hope for more community sponsored programs, lessons, or classes, five think drug use must be reduced, five men think that there needs to be more affordable health options, more help for low income families, or more economic opportunities for the County, and three men under 60 see a need for more mental health support.

Women under the age of 60

For women under 60, the common themes of concern were mental health, healthy eating habits, affordable gyms, access to healthy foods, and more recreational outdoor activities.

Men over the age of 60

[Those that responded seemed] to want the County to promote all of the nice parks and trails available to increase exercise among residents. Community gardens were also suggested as a way to encourage exercise among older adults. In addition, the existing exercise facilities, such as the YMCA, can do a better job promoting health among all ages. The youth should keep active as well and have a wide array of options available for exercise and education. Last, some [men] believed there should be more doctors available to the public. In addition, one person felt the health department was akin to an "economic club" based on the level of difficulty they had trying to access it.

Women over the age of 60

The wide majority said that they were happy with Knox County or said that no changes to make it healthier were needed. Eleven provided responses related to healthy eating or weight management; suggestions included the promotion of farmers markets, more community gardens, and restaurants with healthy choices. Eight [women] suggested that there should be more or better opportunities for exercise in Knox County. Six people recommended better doctors, more specialists, and/or more health programs. Three people mentioned drug abuse and a need to provide more help or education. Only one person suggested providing more mental health services for families.

Community Interviews: Topics Affecting Overall Health

Dr. Golding and his students summarized several topics from the community interviews that affect overall health, including aging/eldercare, rurality anonymity/stigma, Amish/minority cultural care, and human resources/staffing issues. These topics explore the health and health care of specific populations as well as aspects of local organizations that may influence community health.

Aging/Eldercare

A lot of seniors in the County seem to care about dental health, especially the ability to get dentures. In addition, traumatic experiences that occur in childhood were identified as a factor that continues to affect the elderly, understood by one interviewee as a product of the lack of mental health services available for a long period of time; PTSD specifically was brought up in a few conversations with community health partners with regards to the local elderly population. [One] partner also mentioned that getting elderly individuals placed in homes and protecting them from fall risks and other issues are main priorities. Additionally, new health concerns have appeared or been exacerbated in this population due to the pandemic, such as vaccination efficacy and ensuring that elders who are homebound get the support they need from caregivers. Because of a shortage of caregivers in the County as identified by some interviewees, many elderly are discharged from the hospital but are unable to find caregivers when they get home. One partner suggested that STNA [State Tested Nursing Assistant] services need to be better funded:

"Our goal is just to get those individuals to age in place in their home and so we really focus in on, on fall risk and issues in their home that we'd be able to help with. And right now the biggest health concern we're focused on is COVID and getting those individuals vaccinated, and home bound individuals are kinda tricky right now, and so that is a health concern we have right now because they're not able to get out and get their vaccine. A lot of those individuals who are aging in place, they need support, they need caregiver support and there is a shortage of those individuals that can provide

those services. And so there are a lot of individuals who are coming out of the hospital that can, that can go back home if they had some help, and they need the help but they are unable to find them, an STNA for example to go into the home, which again, we don't provide that service but we contract with folks, and so there's been some big push in the budget for this year, for the state to see if there could be increased dollars that would go towards those services, to increase the wage of the STNAs so that we don't have a waitlist of seniors who are in need of those services but unable to get them. And so we worry about that for example, because if they're going out of the hospital and still need care like that but not enough to be in a facility or that sort of thing, or they want to be at home, it's concerning because they don't have someone to help with certain aspects of their care."

Another issue that has come up related to the pandemic is food insecurity and social isolation, which has led to a higher risk of physical and mental conditions, especially as they lose loved ones and mobility, lack transportation, and are asked not to gather for large social events. The aging population is often less tech savvy and more fearful of the Internet, which may make it more difficult for them to schedule vaccine appointments.

One overarching theme seems to be an unawareness of the resources that are available to seniors in the County. For example, many seniors believe that they can't get out unless they have friends who can drive them, and are unaware that they can call Knox Area Transit and get free transportation to and from a doctor's appointment. They can also get tokens for free fruits and vegetables through the United Way. Many seniors also get their food from a local food pantry. There is a senior resource day where seniors can learn more about all the resources that are available to them. There seems to be opportunities for improvement in communicating with the elderly population about such services.

Rurality Anonymity/Stigma

Knox County residents are heavily influenced by small-town culture when navigating health care. Interviewees expressed issues with the lack of trust and confidentiality that exists in small towns, especially as many residents born in the County remain here their entire lives. The notion of "everybody knows everybody" is a reality that many residents face, and when it comes to health issues, this can often cause embarrassment. Patients have expressed hesitation when it comes to OBGYN access, for example, as they are not comfortable with their doctor being someone they went to high school with. Small town traits like this interfere with peoples' willingness to seek medical help. One partner shared:

"So maybe you've been in Mount Vernon the whole time. You don't want to go to people that know other people. You know, I mean, maybe you have personal

experiences with these people because you grew up around here. You went to high school with these people, you know, that are now providing care. That I've heard as being a reason. I would never go there, do you know who runs there, when I was... You know, so it kind of goes back to a history of it is a small town, and everyone does kind of know everyone, for some part, and I think that's can impact everyone too."

Similarly, intergenerational stigma is a large issue, as family name might carry a certain reputation according to criminal history. Social workers have expressed that they'll see cases of children being immediately associated with their relative's actions, automatically judging the child on the basis of their name. This sort of embarrassment, especially in small towns, can drastically affect a child's experience and public reputation, all of which is out of their control. Family reputation is reinforced by local news, especially if certain names are frequently involved in criminal activity. There must be a way to separate the stigma from the child to give them a fair opportunity despite their family's history.

Social workers emphasize the importance of face to face interaction when it comes to social work and better communication between professionals and patients. When these stigmas carry into medical offices, they no doubt negatively influence the experience of everyone involved. While these characteristics of a small town cannot realistically be changed, Knox County officials have an opportunity to take advantage of the benefits of a small community that exist alongside the difficulties described.

Amish/Cultural Minority Care

A common theme/issue with the Amish population is that preventative care is not a priority for them. Most of them come into the clinic or hospital for issues that could have been prevented. It is hard to educate the Amish population because they insist on doing things their own way. The elders, and especially parents have a large say on the health of the community and children. Children do not have a say in the decision process.

An anecdote said that an 18 year old girl had salvageable teeth, but her mom convinced her to just take the teeth out. It is a common situation that this population would rather have their teeth taken out rather than take the measures to fix them. A lot of the Amish families qualify for the sliding fee and can get \$500 worth of work for only \$40, but they still opt to not get medical care. The issue is not money but rather their mentality and beliefs.

Human Resources/Staffing Issues

Overall, the points mentioned in the interviews regarding human resource and staffing issues were predominantly issues with funding. Many organizations wished that they had more funding to dedicate for additional services such as OBGYNs,

pediatricians, optometrists, and mental health specialists. Organizations also identified the lack of interest for new employees to work in small rural areas. One organization mentioned that they only had one full-time worker, but they did have a lot of volunteers. However, with such a small community, workers are often passed around to different organizations; an overarching theme in the narrative of local organizations is that it “feels like handing off their bad employee to the next one.” Currently, in order to attract more workers to the area, one organization is assisting with student debt. Despite these staffing issues, with additional funding, organizations voiced a desire to expand not only the services they offer, but also physically expand to be able to reach more individuals in the community.

Aside from funding, many organizations identified that even the interactions that organizations are having with clients isn't at an ideal state. When additional services are being offered, residents at first seem to be interested, but on the day of, not many attend the event or scheduled appointment. On the other hand, waitlists have become increasingly longer for residents seeking some services in the County. There was hope that with new agencies arriving in Knox County, organizations will begin to alter the way they currently interact with clients in order to compete. It seemed to serve as a reminder that without clients, many organizations wouldn't have a job opportunity. Lastly, one organization mentioned that there has been consistency when organizations make meetings. The same organization is always attending the meetings, but there are also organizations that will consistently never attend.

This section combines statistics on social and economic characteristics with insight from community members about how these characteristics influence community health. Health and health care, education, economic stability, and neighborhood and built environment are frequently assessed social determinants categories (per *Healthy People 2030*).

Key Findings - Social Determinants of Health

Health Care Access

- Lack of available health care is a major issue in the county, as evidenced by the survey and the secondary data and voiced by the community.
- Over 50% of residents travel outside the county for health care.
- Those who travel outside of the county most often travel to Franklin County / Columbus, and most often seek specialty care.
- The ratio of licensed practitioners to residents very low.
- Some residents lack health care coverage and/or transportation to health care services.
- Knox County does not meet the *Healthy People 2030* target for residents under 65 with health insurance.
- Preventative care is not a priority for many residents.
- COVID-19 caused many residents to delay care.
- Telehealth care may improve health care opportunities, but some residents may not have the devices or Internet needed for those services and/or prefer in-person health care.

Economic Stability

- About 40% of children in Knox County are below the 200% federal poverty level and nearly 20% are food insecure.
- Only about 5% of residents reported needing help meeting their basic needs in the past month.
- The median annual household income in Knox County is about the same as Ohio as a whole.

Neighborhood & Built Environment

- The community voiced that transportation systems are inadequate for some and there may be a lack of accessible recreation and exercise.
- Nearly all residents feel extremely or quite safe in their neighborhoods.

Education

- Knox County has slightly more residents with lower education levels than the state of Ohio as a whole: 49% high school education or less in Knox County and 43% in Ohio.

Health Insurance

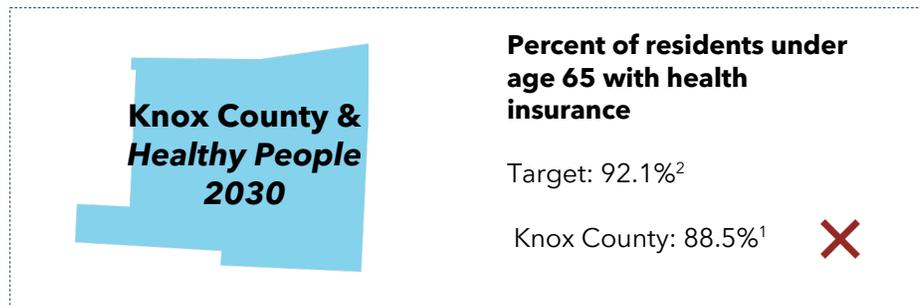
Getting health care can cause major financial strain. Some health care is unaffordable without health insurance, and health insurance itself can be very expensive.

As shown in the table below, most Knox County residents have health insurance.

Health Insurance Coverage By Age¹

		Knox County	Ohio
Total with insurance		90.4%	93.9%
With Health Insurance Coverage	Age 18 and under	86.1%	95.6%
	Working-age (19-64) persons	89.6%	91.6%
	Under age 65	88.5%	92.8%
	Age 65+	99.1%	99.5%
Total without insurance		9.6%	6.1%
Without Health Insurance Coverage	Age 18 and under	13.9%	4.4%
	Working-age (19-64) persons	10.4%	8.4%
	Under age 65	11.5%	7.2%
	Age 65+	0.9%	0.5%

Data are from 2019



Among Knox County residents with health insurance, employment-based insurance was the most common. Note that residents could have more than one type of health insurance. For example, someone with direct-purchase insurance may also have Medicare coverage.

Private Health Insurance Coverage¹

	Knox County	Ohio
Total with private health insurance	67.6%	69.1%
Private health insurance alone	53.0%	55.2%
Employment-based health insurance	57.3%	59.4%
<i>Employment-based health insurance alone</i>	47.8%	50.0%
Direct-purchase health insurance	12.9%	11.9%
<i>Direct-purchase health insurance alone</i>	4.6%	4.7%
TRICARE / military health coverage	1.6%	1.6%
<i>TRICARE / military health coverage alone</i>	0.6%	0.5%

Data are from 2019

Public Health Insurance Coverage¹

	Knox County	Ohio
Total with public health insurance	35.6%	37.2%
Public health insurance alone	19.9%	22.1%
Medicare coverage	19.4%	18.5%
<i>Medicare coverage alone</i>	6.3%	5.8%
Medicaid / means-tested public coverage	18.4%	20.6%
<i>Medicaid / means-tested public coverage alone</i>	13.5%	15.9%
VA health care	2.41%	2.3%
<i>VA health care alone</i>	0.2%	0.3%

Data are from 2019

Health Care

The ratio of Knox County physicians (both MDs and DOs) is 1 to every 960 Knox County residents. This is much lower than the 1 to 172 ratio in the state of Ohio as a whole. There are few licensed dependency counselors, psychiatrists, and psychologists in Knox County; this may negatively impact access to mental health treatment.

Licensed Practitioners*

	Knox County		Ohio	
	Count	Ratio**	Count	Ratio***
Licensed physicians: MDs & DOs ³	64	1:960	67,880	1:172
Licensed dentists ⁴	17	1:3,616	7,283	1:1,600
Licensed social workers ⁴	128	1:480	27,758	1:419
Licensed chemical dependency counselors ⁵	8	1:7,685	12,690	1:919
Licensed psychiatrists ³	5	1:12,296	1269	1:9,211
Licensed psychologists**** ⁶	5	1:12,296	3,535	1:3,297

*Data are from 2019-2020 *Ratios calculated with 2019 ACS 5 year population estimates **Ratio of practitioners to Knox County residents ***Ratio of practitioners to Ohio residents ****Does not include school psychologists or Certified Ohio Behavioral Analysts*

A majority of respondents (68%) visited a doctor for a routine checkup within the year before taking the survey.

Amount Of Time Since Last Visiting Doctor For A Routine Checkup[§]

	Knox County (n=517)
Within the past year	67.9%
Within the past 2 years	12.6%
Within the past 5 years	5.9%
5 or more years ago	9.2%
Never	1.3%
Don't know	3.1%

🕒 In 2018, 60% of respondents age 19 and older had visited a doctor in the past year for a routine checkup, which increased to 67.6% in 2021.

About 20% of respondents delayed getting some sort of necessary physical health care in the past year. The most common reason given for delaying health care was COVID-19 concerns (about 60%); cost and insurance reasons were the next most common answers given.

Delayed Getting Needed Physical Health Care In Past Year[§]

	Knox County (n=515)
Yes	20.1%
No	79.9%

About half of respondents (52%) visited a dentist within the year before taking the survey; nearly 20% have not visited the dentist for five or more years.

Amount Of Time Since Last Visiting Dentist For Any Reason[§]

	Knox County (n=507)
Within the past year	51.6%
Within the past 2 years	16.3%
Within the past 5 years	12.6%
5 or more years ago	8.4%
Never	9.4%
Don't know	1.8%

Over 40% of those who haven't visited the dentist in the past year did not visit because of cost.

Reason For Not Visiting Dentist In Past Year^{§*}

	Knox County (n=154)
Cost	41.8%
Have dentures	19.7%
Fear/Nervousness/Pain/Dislike going	18.9%
Other	38.5%

**Percentages may sum to higher than 100%; multiple responses were accepted*

Those who chose "other" were most likely to say that they did not visit the dentist in the past year because of COVID-19 concerns, it was not necessary, they did not have dental insurance, or they could not find the time to go.

- 🕒 In 2018, just over three-fifths (63%) of Knox County adults age 19 and older had visited a dentist or dental clinic in the past year, which decreased to 52.1% in 2021.

About 12% of respondents wanted or needed to see a mental or behavioral health professional but did not in the past 12 months; only 1% wanted or needed to seek substance abuse services but did not in the past 12 months.

Delayed Getting Other Health Care In Past Year[§]

	Knox County (average n=510)
Delayed needed mental health care	11.6%
Delayed needed substance abuse services	1.2%

Those who delayed mental health care did so mostly due to financial limitations, not already having a mental health care provider, and COVID-19 concerns.

Traveling for Health Care

A majority (61%) of respondents or their family members have travel outside of Knox County in order to receive some type of health care.

Travel Outside Of Knox County For Health Care[§]

	Knox County (n=516)
Yes	61.1%
No	38.9%



Respondents age 35 and older were more likely than respondents age 18-34 to travel outside of Knox County for health care (70.9% vs. 39.7%).

Respondents with an annual household income of \$75,000 or more were more likely than respondents with an annual household income of less than \$75,000 to travel outside of Knox County to receive health care (72.4% vs. 55.4%).



In 2018, 59% of respondents age 19 and older indicated that they had traveled outside of Knox County in the past year to receive health care services. This percentage is similar to the 61.6% of respondents age 19 or older who reported traveling outside the County for health care in 2021, although the question in 2021 measured whether they travel outside of Knox County for health care (and was not limited to the past year).

Of those who travel outside of Knox County for health care, about half (54%) of respondents go to Franklin County.

Where Traveled Outside Of Knox County for Health Care^{§*}

	Knox County (n=315)
Franklin County / Columbus / New Albany / Dublin / Gahanna	53.7%
Westerville	11.4%
Richland County / Mansfield	9.4%
Licking County / Newark	6.2%
Delaware County / Sunbury	4.5%
Other	19.7%

**Of those who ever traveled outside of Knox County for health care. Percentages may sum to higher than 100%; multiple responses were accepted*

Of those who have traveled outside of Knox County for health care, a majority of them (60%) have done so for specialty care in the past year. Less common reasons for seeking health care outside of Knox County in the past year include primary care (33%) and dental care (27%).

Type Of Health Care Received Outside Of Knox County in Past 12 Months^{§*}

	Knox County (n=315)
Specialty care	60.0%
Primary care	32.8%
Dental services	26.9%
Mental health / counseling	8.7%
Substance abuse/addiction	0.2%
Another service	16.8%
None of the above in the past 12 months	12.0%

**Of those who ever traveled outside of Knox County for health care. Percentages may sum to higher than 100%; multiple responses were accepted*

Those who chose "another service" most likely sought care of one of the following types: OB/GYN, vision, dermatology, or surgery.

Those who travel outside of Knox County for health care most commonly say that the availability of services (in general, availability of specialists, or availability of care for specific populations) would need to improve to keep them from traveling outside the County. Many respondents also said they would need to have highly rated, top quality care providers that can be trusted or would need access to a better hospital or medical facilities. Others said they would need to switch doctors or their doctor or facility would need to move to Knox for them to stay in the County for care.

Preventative Health Care

The US Preventative Services Task Force recommends colorectal cancer screening for adults age 50 to 75.⁷ Respondents age 50 and older were asked when they last had a colorectal cancer screening. Nearly a third (32%) of survey respondents age 50-75 had never had this type of screening.

Amount Of Time Since Having Last Colorectal Cancer Screening (Sigmoidoscopy or Colonoscopy) (Age 50-75)[§]

	Knox County (n=187)
Within the past year	14.9%
Within the past 2 years	8.8%
Within the past 3 years	10.9%
Within the past 5 years	11.7%
Within the past 10 years	12.6%
10 or more years ago	9.4%
Never	31.8%

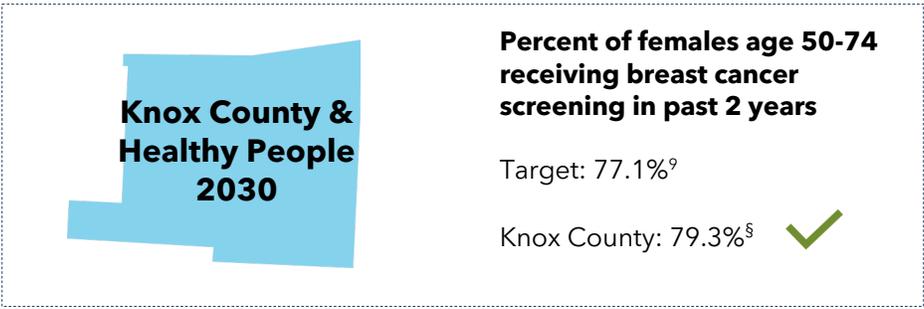
The American Cancer Society recommends that women should start having annual mammograms at age 45 and may opt to have mammograms every other year starting at age 55.⁸ The next table displays the amount of time since having their last mammogram for women 45 and older who completed the survey. A majority of these women (54%) have had a mammogram within the past year; about 6% of them have never had a mammogram.

Amount Of Time Since Having Last Mammogram (Women 45 and older)[§]

	Knox County (n=104)
Within the past year	53.5%
Within the past 2 years	19.3%
Within the past 3 years	5.9%
Within the past 5 years	8.8%
5 or more years ago	5.9%
Never	6.1%
Don't know	0.5%



In 2018, 65% of women age 40 and older had a mammogram in the past two years; in 2021, 72.8% of women age 45 and older had a mammogram in the past two years.



According to the Mayo Clinic, doctors normally recommend Pap tests every three years for women age 21 to 65.¹⁰ The next table displays the amount of time since having their last Pap test for women age 21 to 65 who completed the survey. A majority of these women (72%) have had a Pap test within the past three years, and only 8% have never had one in their lifetime.

Amount Of Time Since Having Last Pap Test (Women 21 to 65)[§]

	Knox County (n=225)
Within the past year	39.1%
Within the past 2 years	22.8%
Within the past 3 years	9.6%
Within the past 5 years	10.6%
5 or more years ago	9.8%
Never	8.2%

🕒 In 2021, 71.5% of women age 19 and older had a Pap test in the past three years, more than the 59% recorded in 2018.

The Internet may aid health care via access to telehealth visits or providing health care information. However, some residents do not have Internet access: about 87% of residents have a computer, and among those, only 92% have a broadband Internet subscription.

Internet Access Availability¹

	Knox County	Ohio
Has a computer*	86.9%	89.1%
With dial-up Internet subscription alone**	0.7%	0.4%
With a broadband Internet subscription**	91.5%	81.2%
Without an Internet subscription**	7.8%	7.5%
No computer*	13.1%	10.9%

Data are from 2019 *Denominator is total number of households ** Denominator is total number of households with a computer

Education

Educational attainment and literacy affect health by shaping people’s employment opportunities, ultimately affecting their economic stability. Education can also positively impact psychological wellbeing.

As reviewed below, Knox County residents are a little less likely to continue their education beyond high school as Ohioans as a whole. Almost half (49%) of Knox County residents have only a high school education or less compared to 43% in Ohio. Also, 23% of Knox County residents have a bachelor’s degree or higher, compared to 28% in Ohio as a whole.

Educational Attainment¹

	Knox County	Ohio
Less than 9 th grade	4.0%	2.8%
9 th to 12 th grade (no diploma)	4.8%	6.8%
High school graduate / GED	39.8%	33.0%
Some college (no degree)	20.7%	20.4%
Associate’s degree	7.8%	8.7%
Bachelor’s degree	15.2%	17.6%
Graduate / professional degree	7.8%	10.7%

Data are from 2019

However, the current average four-year high school graduation rate in Knox County is 92.0%¹, which is slightly higher than the Ohio average of 91.3%.¹¹



Knox County & Healthy People 2030

High school graduation rate

Target: 90.7%¹²

Knox County: 92.0%¹¹ 

Regarding young children preparing to enter kindergarten in Knox County, 78% are considered to have “demonstrated readiness” or to be “approaching readiness,” meaning they entered with “sufficient skills, knowledge and abilities to engage with kindergarten-level instruction” or “needed supports to be able to engage with kindergarten-level instruction,”

¹ County numbers only take into account the following school districts, and do not factor in community schools: Mount Vernon City, Centerburg Local, Danville Local, East Knox Local, Fredericktown Local. The overall State numbers take into account all schools in Ohio, including community schools.

Social Determinants of Health

respectively. Almost all (>99%) Knox County third graders met the threshold needed in reading proficiency to move to fourth grade.

Kindergarten Readiness¹³

	Knox County	Ohio
Demonstrated or approaching readiness	77.6%	77.4%

Data are from 2019

Third Graders With Reading Proficiency¹⁴

	Knox County	Ohio
Reading proficiency - third graders who met threshold to move to fourth grade*	99.8%	99.0%

Data are from 2019 *Number and percent of third graders who met the promotion threshold, not accounting for exempt students. County numbers only take into account the following school districts, and do not factor in community schools: Mount Vernon City, Centerburg Local, Danville Local, East Knox Local, Fredericktown Local

Economic Stability

Economic stability plays an important role in health, with at least one study on this topic showing that those with greater income had greater life expectancy (Chetty et al., 2016).¹⁵

In Knox County, 40% of children are living below the 200% federal poverty level (FPL), which is about the same as the state of Ohio.

Income And Poverty¹

		Knox County	Ohio
Annual Household Income	Per capita income	\$26,390	\$31,552
	Median household income	\$57,749	\$56,602
	Mean household income	\$68,356	\$76,958
Poverty Status Of Those <18 Years Old	Below 100% FPL	19.8%	19.2%
	100% - 199% FPL	19.7%	20.7%
	At or above 200% FPL	60.4%	60.1%

Data are from 2019

In Knox County 51% spend less than a third of monthly household income on shelter, while 27% spend between one-third and half. About 8% spend more than half their income on shelter. Additionally, 5% have recently had trouble meeting their daily needs for food, shelter, clothing, and utilities.

Household Income Spent On Housing[§]

	Knox County (n=507)
Less than 30%	51.0%
30% to 50%	27.3%
Higher than 50%	7.9%
Don't know	13.8%



Respondents who had completed a bachelor's degree or higher were more likely than respondents who had completed less formal education to spend less than 30% of household income on housing (77.4% vs. 44.2%).

Needed Help Meeting Daily Needs in Past Month[§]

	Knox County (n=516)
Needed help with food, shelter, clothing, or utilities	4.7%

Economic instability is linked to food insecurity. People who are food insecure do not get adequate food or have disrupted eating patterns due to lack of money and other resources.¹⁶ In Knox County, 13% of all residents are food insecure, and 19% of children in Knox County are estimated to be food insecure. These percentages are similar to the percentages for Ohio as a whole.

Food Access

		Knox County	Ohio
Food Insecure Persons¹⁷	Total residents	13.0%	13.9%
	Children	19.2%	18.9%
Food Stamp Households¹	Total households	11.0%	13.1%
	With one or more people 60 years and over	32.2%*	30.9%*
	With children under 18 years	42.1%*	69.1%*

*Data are from 2018-2019 *Denominator is total households receiving food stamps*

Some researchers use the food environment index when assessing access to nutritious foods. This index of factors that contribute to a healthy food environment ranges from 0 (worst) to 10 (best). Knox County's food environment index score of 7.9 is better than Ohio's score (6.7).¹⁸

Social Determinants of Health

Another economic indicator that may influence the health of the community is the unemployment rate. The unemployment rate in Knox County in 2019 (4%) was slightly lower than the unemployment rate in Ohio (5%), using the Ohio Department of Job and Family Services' unemployment definition as those people, 16 years of age and over, who were "actively seeking work, waiting to be called back to a job from which they were laid off, or waiting to report within 30 days to a new payroll job." Those who have stopped looking for a new job (and who have therefore removed themselves from the civilian labor force) are not included in this statistic.

Employment Status¹

		Knox County	Ohio
Unemployment Rate*	Annual average unemployment rate	4.4%	5.3%
	In labor force**	61.2%	63.3%
	<i>Civilian labor force***</i>	99.9%	99.9%
Employment Rate Of Labor Force	Employed*	95.6%	94.7%
	Unemployed*	4.4%	5.3%
	<i>Armed forces***</i>	0.1%	0.1%
	Not in labor force**	38.8%	36.7%

Data are from 2019 *Denominator is civilian labor force **Denominator is total area population 16 years and over ***Denominator is total labor force

The leading industry in Knox County is management, business, science, and arts, with 34% employed in that industry. Ohio has the same leading industry, with a slightly higher percentage (37%).

Leading Industries In Knox County^{1*}

		Knox County	Ohio
Employment Occupations	Management, business, science, and arts	33.8%	37.0%
	Sales and office	20.3%	21.4%
	Production, transportation, and material moving	19.3%	17.0%
	Service	16.8%	17.2%
	Natural resources, construction, and maintenance	9.7%	7.5%

Data are from 2019 *Denominator is civilian employed population 16 years and over

Readers who wish to learn more about the current state of jobs and public assistance (veterans' services, SNAP, etc.) in Knox County are encouraged to access the Ohio Department of Job and Family Services' "QuickView" report, at <http://jfs.ohio.gov/County/QuickView/Index.stm>.

Neighborhood & Built Environment

Neighborhood and built environment refer to what extent individuals feel safe in their community and how the environment influences their quality of life. Crime is one aspect of this, while housing, recreation, and transportation are other important factors. In terms of housing, in Knox County 12.4% of respondents reported that they personally knew someone who was homeless in the past year - this seems like a cause for concern.

There were three homicides in Knox County in 2019. The count of homicides is too low to compute a reliable rate, therefore it is undetermined whether the *Healthy People 2030* target of 5.5/100,000¹⁹ is met.

Crime²⁰

	Knox County		Ohio	
	Count	Rate*	Count	Rate*
Homicides	3	**	726	6.6

Data are from 2019 *Rate per 100,000 population, age-adjusted **Rates based on counts of less than ten are considered unreliable

A majority of respondents consider their neighborhood to be quite or extremely safe (82%). However, 3% consider their neighborhood not safe at all.

Perception Of Neighborhood Safety From Crime[§]

	Knox County (n=515)
Extremely safe	25.0%
Quite safe	57.3%
Slightly safe	15.2%
Not safe at all	2.5%



Respondents who had completed a bachelor’s degree or higher were more likely than respondents who had completed less formal education to consider their neighborhood extremely safe (37.6% vs. 21.7%).

Respondents with annual household income of \$100,000 or more were more likely than respondents with household income of less than \$100,000 to consider their neighborhood extremely safe (44.3% vs. 20.1%).

Respondents living outside of Mount Vernon were more likely than respondents living in Mount Vernon to consider their neighborhood extremely safe (32.8% vs. 17.5%).

Social Determinants of Health

In terms of household environmental health, insects are a concern for almost a quarter of respondents (22%) and mold is a concern for nearly a tenth (9%).

Household Environmental Health^s

		Knox County (n=519)
Issues Experienced in Past 12 Months	Insects (mosquitos, ticks, flies)	22.2%
	Mold	9.3%
	Radon	5.4%
	Litter/trash	4.5%
	Lead paint	1.8%

-  The likelihood of experiencing an issue with insects decreases as education increases (bachelor's degree or higher education: 9.8%; some college: 17.5%; high school degree / GED or less education: 30.5%).
-  Insect issues among respondents age 19 and older increased from 2018 (8%) to 2021 (22.4%), as did mold issues (4% in 2018 and 9.4% in 2021) and radon issues (2% in 2018 to 5.5% in 2021). Lead paint remained about the same (1% in 2018 vs. 1.8% in 2021).

Community Interviews: Social Determinants of Health

Dr. Golding and his students provided the following review of responses to the community interviews which describe issues related to social determinants of health: healthcare access, preventative care/delaying care, transportation to appointments/services, transportation to health care services, personal versus community-based health, and the environment in Knox County.

Healthcare Access

Overall, there is an identified lack of services in some areas of the County. [One organization] identified that the eastern part of the County lacks services generally, and areas closer to Columbus can go to Columbus for treatment. Residents of Knox County also may seek treatment in Columbus due to insufficient providers in the County. Dental care, particularly dental surgery and children’s dental, psychiatry, and maternal care are segments of healthcare lacking sufficient providers and patients often must seek care in Columbus. Several groups interviewed pointed out that needing to travel to Columbus can create barriers to care because of the need for transportation and travel time. Scheduling within the County can be difficult too, as some facilities might not have hours accommodating enough for the working class, or individuals might not be able to leave work and/or find childcare.

Within the County, there was a common understanding that many individuals are largely unaware of what services exist or are available to them. [One partner] explained that there can be improvement in seeking out healthcare once patients gain an understanding of how to use the system:

"a lot of times people don't know that they're available to them. So I think that once they get that education, and we get them in our doors, and we're able to kind of help them understand what's available, and why it's important that those are driving positive changes in their behavior."

Healthcare not being a priority for individuals in their everyday life was identified as another factor preventing utilization of healthcare facilities. [One partner] explains that

"a lot of it is generational, also where, you know, it's not been a priority to take care of their health, or it's not a priority to call and cancel your appointment."

She says the Health Center makes an effort to re-educate:

"a lot of it is just trying to change behavior, and to re-educate about why it's important to make sure that you come to your appointments and all that and to do that, you know, where it's not so much a punishment as an educational opportunity to kind of share why that's so important."

Additionally, [one organization] sees that mothers, especially those in unsafe situations, do not put their health as a priority, or put their children's health at a higher priority. [The organization] can provide an opportunity to connect with healthcare services and insurance companies.

Insurance and the cost of care is an additional barrier. Having federally qualified healthcare in the area is a significant resource for low income individuals. The interviewee for [one organization] explained that

"the Community Health Center has just been a godsend. And it is just really, it has just fit into the segment of people who had no health care."

The Health Center has a sliding fee system based on income which can decrease the burden of health care. However, the same sliding fee system does not exist somewhere like the hospital, so people need to meet with financial counselors there. Additionally, not all providers take every insurance, so sometimes those with Medicare and Medicaid can't find providers where they are covered.

Preventative Care/Delaying Care

Nearly half of community partner organizations work with populations who they describe as infrequent utilizers of healthcare, and have built some type of programming or approach to their services that tries to remedy this. One interviewee said about its clients,

"You know, they're not worried about whether they're going to the dentist every six months, they're not worried about if they're doing yearly wellness checks for their children."

[Another partner] observed that many of the residents interacted with by law enforcement have let health problems, often mental health included, snowball.

As one partner observed, care seeking behavior is carried out by those with sound mental health, and given the frequent struggles with mental health exhibited in the County, there is often a delay in seeking medical care that several community organizations have to deal with among their clientele:

"Yeah, I'd say those (mental and physical health) almost go hand in hand. Because if somebody's not feeling well, mentally, and emotionally, they're not going to go seek help physically, because they don't have that drive or, you know, that even like the endorphins in your brain is not there. If you're not, you know, taking care of yourself physically, as well as mentally."

The cost of medical attention can be prohibitive, particularly when one lacks health insurance, and so too can a lack of easy transportation, which is an especially high barrier for those with mobility problems that several partners mention and try to remedy.

Staff at [one organization interviewed] perceive a slow change in some patients who seem comfortable utilizing their services with greater frequency and regularity:

"I've noticed, since it has been the [new] funding, that that train of thought has changed from just stop in when you're sick kind of deal or just to get your sports physical, to more you know, your provider, your health care provider, this is your home, you know, for you to be treated for your children to be treated for your diabetes, you know, that sort of thing. So I definitely think that that has changed. And I feel like the people that we...serve and that see the provider here that they think of it that way now it's more of you know, okay, I've got an appointment in three months, or I've got appointment in a month. And if it's just to continue to keep getting that medication you need so be it. But I think that there's just more of a thought more of an openness and

willingness to continue and get that continuity of care, you know, with that one provider and doing more prevention.”

Staff from [one organization] have found that flagging patients experiencing several small problems, rather than waiting for a catastrophe, is helping them to better address medical needs before they become acute or life threatening.

Despite this “whole person” approach and growing coordination between support organizations to put out fires before they start, there are additional barriers to regular preventative care, and in particular, dental care. Dental care remains a service that many residents seek only in emergency scenarios, even after [one organization] added dental care to its portfolio. Several organizations cite a general lack of knowledge about the County’s low cost or free sources of treatment that ends up delaying care. Others, however, cite a shortage of providers, or in other cases, providers taking new patients or with a particular type of health insurance. Or as the focus groups with the public reveal, others may be kept away by the fact that appointments would have to interrupt an inflexible work schedule during business hours, or because of past experiences with local providers that required several hours of waiting for a short consultation. Thus, the act of seeking preventative care is in some ways a privilege most available to those with the means to schedule in advance, travel to, wait at, and pay for an appointment during the work day, which is not a privilege afforded by all types of Knox County residents. Lastly, see [Overall Health section] for a broader explanation of stigma as a reason that residents may not seek care in a small community offering little anonymity to long-time local residents.

Transportation to Appointments/Services

Overall, there are many issues surrounding transportation in Knox County even though the Knox Area Transit (KAT) system exists. Specifically, due to the unpredictability and limited route of the KAT, people without the resources to transport themselves cannot adequately rely on transportation to necessary appointments and services. Thus, this poses a unique challenge to certain groups of people who might need access to public transportation. For instance, seniors are particularly disadvantaged since several of them can’t drive because they are too old or use a walker or wheelchair. The unreliability and lack of public transportation thus becomes a serious issue if elderly individuals need to reach healthcare appointments on time or to get medicine from pharmacies. Furthermore, public transportation is vital for people who can’t afford gas money or a car and for people who currently have no driver’s license or a suspended license. This issue is complicated by the observation that there are many barriers for people who are trying to get their driver’s license reinstated. Hence, if you don’t have the material and economic means to travel in and around Knox County for healthcare needs, it is difficult to fulfill those needs with the current transportation options. Nevertheless, it was mentioned that the

advent of virtual and telehealth appointments has been able to alleviate some of the aforementioned issues regarding transportation to appointments and services, but these barriers still exist.

Mental Health Treatment

In terms of mental health treatment, there are a number of general patterns that show up through the interviews. A focus on the role of jails and hospitals is articulated by [one partner, who] emphasizes that the state of Ohio has exacerbated the County's responsibility to attend to mental health clients due to the closure of state hospitals and the pushing of prisons into the community. In terms of treatment, [the partner] stressed the County's collaboration as a means of providing services as well as the County's compliance with mandated jail standards that require mental health services. [A couple of partners] stated that treatment is not always accessible and mentioned that people seek mental health treatment outside of the County, often in Columbus and Akron. They mentioned that it is sometimes difficult to even find services there. The sheriff raises the issue of privacy in the context of seeking outside treatment, as people may not want to be seen by individuals that they know. The Office of Community Partnerships articulated some progress in the expansion of mental health care access, but emphasized the barriers presented by accessibility and affordability.

"We have been fortunate to have expanded what's available here in Knox County but it's still not enough. And same with mental health. I think the issue of accessible and affordable care is an issue."

[Another partner] identified the problem of funding being directed towards physical ailments rather than mental health.

The third theme in this code is the connection between mental health treatment and other issues, such as physical health problems and substance abuse. [One partner] drew a connection between mental and physical health, describing the ways that someone might not be able to take care of themselves physically or seek health due to underlying mental health problems. They also identified substance abuse in connection with mental health, positing that COVID-19 has increased these issues, as well as an increase in general anxiety due to difficult circumstances. Many of the interviews also connected mental health treatment with substance abuse problems and treatment. [One interviewee] mentioned the County's effort to offer drug rehabilitation. [One] interview mentions the expansion of addiction services, including residential treatment and rehab programs. The final theme in this code is mental health treatment through an online format. [One interview] describes mental health treatment over Zoom but articulates its inadequacies in its implementation. Public health measures such as social distancing and isolation seem to exacerbate mental health issues, and people prefer human connection in their treatment. [Another

partner] identifies the role of telemedicine as at least some way people might be provided access to mental health treatment. [An additional partner] marks this change as well, recognizing the accessibility of treatment through the Internet and phone.

Individual Choice/Decisions vs. Education-Structure-Community

Throughout the interviews, a common theme was the varying approaches in framing health issues. The most common frame identified was that health, in the end, comes down to individual choice to make use of the available services. In this framework, interviewees still identified barriers to accessing services, such as transportation and drug use. Additionally, addiction seems to be identified as an individual choice under this understanding. In the second, less common framework, other structural issues are seen as the major barrier for not using available resources, rather than an individual choice, although education may be technically available. This framing supposes that the barriers identified are the main issue stopping people from getting help. One partner said:

"Unfortunately we deal with a segment of the population who just do not want help. They refuse maybe housing assistance or job placement assistance because they would rather be a drug user than go with the program. There are people who refuse the winter sanctuary or homeless shelters because most of those facilities require them to at least attempt to get off of using drugs and so people just do not want to do that. They would rather live in the woods, in a garage, in a storage facility, to freely use drugs rather than try and get assistance. They are people who will not use medication for mental health issues because they don't like the side effects or it makes them feel not well physically so they continue their usage. There are plenty of people who quit using because nobody is keeping them on the regiment of constantly taking their medication. They are on their own and they, for whatever reason, can't function on their own without someone there to constantly direct them."

Environment

Overall, those who were interviewed did not have very much to say about the environment and environmental issues in Knox County. Some ideas that were brought up were concerns about access to food and access to places to exercise safely. Another concern that was raised was about the "climate" in Ohio, which the respondent described as being "extreme hot and cold." This weather negatively affects the homeless population in the County. The final concern raised by respondents with regards to the environment was the "aging housing" in the area, which may cause lead-based paint to become an issue in the future. Other respondents said that they were satisfied with the environment in Knox County. One respondent referenced the "public trails" in the County, which they described as "amazing." Another respondent praised the water and air quality of the County.

Virtual Focus Groups: Social Determinants of Health

Dr. Golding and his students provided the following summary of responses to the virtual focus groups which describes perspectives on healthcare and public health.

Healthcare

- As with the interviews conducted with social service organizations, these members of the public cite a severe shortage of mental health options, particularly during evening and weekend hours.
- While most participants report general satisfaction with their ability to have their families' healthcare needs addressed in Knox County, they cite providers' refusal of some insurance coverage as a reason that they, and others they know, sometimes must seek care outside the County. (Specifically optometry coverage for foster children).
- Some participants cite the limited number of employers offering insurance plans that stress preventative healthcare.
- Several participants express frustration with the convenience of seeing local health providers, citing long waits for appointments and at appointments.

Public Health

- In contrast to the Social Service organization interviews, more than one participant mentioned the County's lack of services for cultural and linguistic minorities, who are slowly settling in the area as Columbus continues to grow outward. They cite a lack of translation services and public health outreach available for these groups.
- Most participants perceive that public health in Knox County is supported by adequate infrastructure and cite the programs and services of the Health Department as key local assets. Their only critique is that they perceive the general public is unaware of the services available to them at the Health Department and other social service organizations.
- One contingent of participants attributes health primarily to individual decisions, while a vocal majority of the participants see health as a combination of personal and community factors. This second group of participants calls for greater efforts to educate the public about health practices, and healthcare utilization, to interrupt intergenerational health behaviors that reproduce poor health outcomes in the County's young people.
- Several participants cited access to healthy foods as a problem in the County. One mentioned the growth of restaurants and food trucks focused on fast and affordable comfort food, but not restaurants serving affordable, fresh, healthy food. Two participants noted that not all food served in county schools lives up to healthy standards, which means that when healthy options are available, they go to waste.
- Most participants responded that their environment strongly impacts their health and others' health, and several advocated for improvements to public infrastructure

so that a wider cross section of the County can utilize outdoor amenities, like more accessible sidewalks, safe biking lanes, etc.

This section describes behaviors of Knox County residents that may impact their health outcomes: substance use, nutrition, and physical activity.

Key Findings - Behavioral Risk Factors

Substance Use

- The community voiced concerns about drug and alcohol abuse and the negative impact of substance abuse on families and children as well as the community at large.
- About one-tenth (11%) of Knox County residents are current smokers.
- 49% reported drinking alcohol in the past month, and among them 36% of residents reported binge drinking.
- 36% of Knox County residents personally know someone in their community who has an abuse or addiction problem with heroin, methamphetamines, alcohol, or prescription pain medicine.

Nutrition & Physical Activity

- 37% of Knox County adult residents are obese.
- Most residents reported not having barriers to consuming fruits and vegetables.
- Nearly 85% of residents reported participating in physical activity at least once during the past 7 days. On average, they participated in physical activity on about 3.6 days.
- The community voiced that healthy foods may be difficult to obtain and/or prepare, which may contribute to unhealthy eating habits and obesity.

Knox County is currently meeting the *Healthy People 2030* goal for binge drinkers and is very close to meeting the goal for obese individuals.

Substance Use

Substance use can have major negative impacts on physical health and mental and social health. This section reports patterns of substance abuse in Knox County.

About 17% of Knox County adults reported being current smokers (smoking every day or some days).

Cigarette Smoking Frequency^s

	Knox County (n=511)
Every day	11.2%
Some days	5.3%
Not at all	83.5%



Respondents younger than 55 were more likely than respondents 55 and older to smoke at least some days (23.1% vs. 7.8%).

Respondents who had completed less formal education were more likely than respondents who had completed a bachelor’s degree or higher to smoke at least some days (20.5% vs. 1.1%).

About 16% of Knox County adults reported smoking cigarettes in the past year and about 6% reported using other tobacco/nicotine products in the past year. Only about 2% reported smoking e-cigarettes.

Tobacco Use^s

	Knox County (n=519)	
Used In The Past Year	Cigarettes	15.8%
	E-cigarettes	1.7%
	Other tobacco/nicotine products	6.3%



Respondents younger than 55 were more likely than respondents 55 and older to smoke cigarettes in the past year (22.0% vs. 7.1%).

Behavioral Risk Factors

Respondents who had completed less formal education were more likely than respondents who had completed a bachelor’s degree or higher to smoke cigarettes in the past year (19.7% vs. 1.1%).



In 2018, 19% of respondents age 19 and older reported smoking cigarettes in the past year compared to 15.0% in 2021.

In 2018, a similar percentage respondents age 19 and older reported using e-cigarettes in the past year compared to 2021 (2%).

Almost half (49%) of Knox County adults reported having at least one alcoholic drink in the past month; among those who drank, the average number of days on which they reported drinking was 9.3 days. Among those who drank, about 36% of Knox County adults reported binge drinking (i.e., five or more drinks on one occasion for men, four or more drinks on one occasion for women) at least once in the past month; among those who binge drank, the average number of days on which they reported binge drinking was 4.8 days.

Alcohol Use^s

	Knox County
Had one or more drinks in past month	(n=514) 48.8%
Binge drinkers	(n=251) 36.3%



Males were more likely than females to have had at least one alcoholic drink in the past month (57.7% vs. 40.3%).

Respondents with an annual household income of \$100,000 or more were more likely than respondents with an annual household income of less than \$100,000 to have had at least one alcoholic drink in the past month (73.7% vs. 44.7%).



In 2018, 52% of respondents age 19 and older reported having had at least one alcoholic drink in the past month compared to 48.3% in 2021.

In 2018, 17% of respondents age 19 and older reported binge drinking in the past month compared to 17.7% in 2021.



Knox County & Healthy People 2030*

Percent of adults 21 and older who binge drank in the past 30 days

Target: 25.4%¹

Knox County: 17.9%[§] ✓

*According to Healthy People 2030, a current cigarette smoker is someone who has smoked at least 100 cigarettes in their lifetime and now smokes at least some days; the Knox County survey asked about daily cigarette use, but not lifetime use. The percent of current smokers in Knox County (16.5%) does not meet the Healthy People 2030 target of 5.0%.²

The table below shows the counts of fatal motor vehicle crashes. The count of motor vehicle deaths is too low to compute a reliable rate, so it's undetermined whether the *Healthy People 2030* target of 10.1/100,000³ is met.

Motor Vehicle Activity⁴

	Knox County		Ohio	
	Count	Rate*	Count	Rate*
Motor vehicle deaths ⁴	6	**	1,179	10.4
Alcohol-related motor vehicle deaths ⁴	3	**	314	2.8
Motor vehicle OVI activity ^{5***}	415	846.6	75,228	804.0

Data are from 2017-2019 *Rate per 100,000 population age 16 and over from 2019 ACS 5 year population estimates **Rates based on counts of less than ten are considered unreliable ***Includes Calls for service: Reckless/OVI

A little over one-third (36%) of respondents know someone in their community who has a drug abuse or addiction problem with alcohol, illegal drugs, and/or prescription pain medication.

Know Anyone With A Drug Abuse Or Addiction Problem[§]

	Knox County (average n=485)
Alcohol	33.2%
Heroin	9.8%
Prescription pain medication	16.3%
Methamphetamines	14.5%
At least one of the above	35.5%

Behavioral Risk Factors



Respondents who live in Mount Vernon were more likely than respondents who live elsewhere in Knox County to know someone with an alcohol abuse or addiction problem (38.9% vs. 27.2%).

Respondents younger than 55 were more likely than respondents 55 and older to know someone with a drug abuse or addiction problem with prescription pain medication (24.0% vs. 4.8%) and methamphetamines (21.2% vs. 4.5%).

Respondents with a high school education or less were more likely than respondents who had completed more formal education to know someone with a drug abuse or addiction problem with methamphetamines (21.3% vs. 8.5%).

Knox County has low counts of deaths from unintentional drug overdose from opiates (including prescription opiates), fentanyl and analogues, other synthetic narcotics, and other unspecified drugs as seen in the table below. Note that these statistics do not indicate the overall prevalence of drug use or abuse among adults in Knox County; rather, it only measures the extent to which such use results in death.

Deaths From Unintentional Drug Overdose^{6*}

	Knox County		Ohio	
	Count	Rate*	Count	Rate*
Opiates	6	**	3,372	30.8
Heroin	1	**	520	4.7
Fentanyl and analogues	6	**	3,070	28.1
Benzodiazepines	1	**	371	3.3
Cocaine	2	**	1,206	10.7
Alcohol (all types)	1	**	579	5.1
Methadone	0	**	68	0.6
Hallucinogens	0	**	108	1.0
Barbiturates	0	**	10	0.1
Other opioids	1	**	370	3.3
Other narcotics	0	**	66	0.6
Prescription opiates	6	**	3,296	30.1
Other synthetic narcotics	6	**	3,074	28.2
Other unspecified drugs	6	**	2,095	18.9
Psychostimulants	2	**	827	7.8

Data are from 2019 *Rate per 100,000 population, age-adjusted **Rates based on counts of less than ten are considered unreliable

EMS providers administered Naloxone (Narcan) 142 times in Knox County and 45,322 times in Ohio in 2020.⁷ Only 85% of transporting Ohio EMS Agencies reported Naloxone

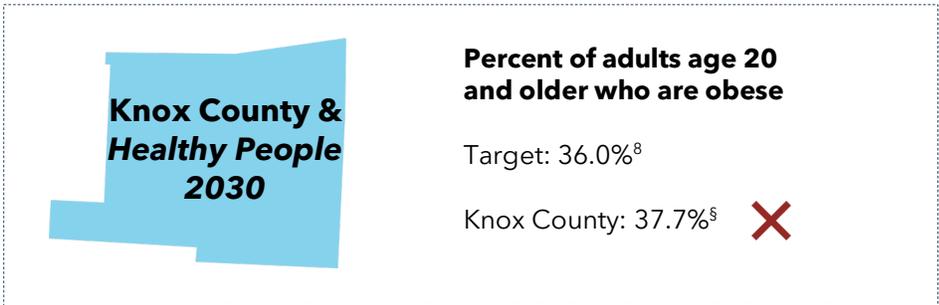
administrations; the actual counts are likely higher than reported here.

Weight, Nutrition and Physical Activity

According to Body Mass Index (BMI) measurements, 32% of Knox County adult respondents are overweight and 37% of respondents are obese.

Adult Body Mass Index[§]

	Knox County (n=506)
Underweight (BMI < 18.5)	4.7%
Normal weight (BMI = 18.5 - 24.9)	25.6%
Overweight (BMI= 25 - 29.9)	32.4%
Obese (BMI > 29.9)	37.3%



BMI is just one measure of physical health. Age, sex, ethnicity, and muscle mass can influence the way BMI correlates with actual levels of body fat.⁹ For example, a trained athlete may have a higher BMI due to increased muscle mass and may be deemed healthy by other measurements. Other ways to measure health are shown next, in the form of diet and physical activity.

About 11% percent of Knox County adults reported barriers to consuming fruits and vegetables. The most common barrier was cost (8%), followed by disliking the taste (2%). Other barriers mentioned by participants included dietary restrictions, difficulty keeping produce fresh long enough, and lack of access. Fortunately, almost all reported having no barriers to consuming fruits and vegetables (89%).

Barriers To Consuming Fruits and Vegetables^s

	Knox County (n=519)
Too expensive	8.1%
Don't like the taste	1.6%
Other	2.2%
No barriers	89.0%

🕒 In 2018, 79% of respondents age 19 and older reported that there were no barriers that kept them from consuming fruits and vegetables; this increased to 88.9% in 2021.

The vast majority (84.1%) of Knox County adults said they participated in physical activity for at least 30 minutes at least once during the past 7 days. On average, Knox County adults participated in physical activity on 3.6 days. For comparison, the U.S. Department of Health recommends adults spend at least 2.5 hours per week (about 10 hours a month) doing moderate-intensity aerobic activity.¹⁰

🕒 In 2018, 51% of respondents age 19 and older engaged in physical activity for at least 30 minutes on 3 or more days the past week; this increased to 65.1% in 2021.

In 2018, 30% of respondents age 19 and older engaged in physical activity for at least 30 minutes on 5 or more days the past week; this increased to 38.4% in 2021.

In 2018, 29% of respondents age 19 and older engaged in physical activity for at least 30 minutes on 0 days the past week; this decreased to 16.1% in 2021.

Community Interviews: Behavioral Risk Factors

Dr. Golding and his students provided the following review of responses to the community interviews which describe issues related substance abuse and obesity/diet/nutrition/food choices.

Substance Abuse

[According to community partners] when it comes to hard drugs, methamphetamines are the most commonly abused in Knox County, followed by heroin. It is crucial to note, however, that alcoholism and alcohol abuse is perhaps more prevalent but often disregarded because it is not criminalized in the same way. Family history of alcoholism is prevalent in the area and can impact children and adolescents, many of whom are exposed to alcohol at an earlier age as a result. The same is true of other substances as well. Substance abuse has a pronounced impact on children and families in the County. Adults who suffer from addiction tend to be more neglectful parents, often contributing to the number of children that are placed in foster care.

Furthermore, addiction during pregnancy presents a unique set of problems wherein children face developmental setbacks and neonatal drug withdrawal as a result of fetal drug exposure.

Generally, substance abuse is seen as a drain on community resources both with regard to the medical component of overdose and treatment as well as incarceration. There is also some resistance to Suboxone and Methadone clinics because they can be perceived as enabling addicts to continue using. Public attitudes about substance abuse place blame on the individuals which fosters a culture of resistance to helping those that are struggling with addiction.

There is also a great deal of comorbidity in Knox County wherein individuals who struggle with substance abuse also suffer from mental health problems or health issues, which can have adverse effects in the individual and negatively impact their ability to seek treatment or assistance. This is the case in certain homeless shelters which will not admit individuals who have drugs in their system. This phenomenon, paired with public attitudes about treatment and addiction, as well as lack of easily accessible treatment options and support systems, makes substance abuse a pressing problem in Knox County.

Obesity/Diet/Nutrition/Food Choices

Overall, the most common problems in Knox County regarding diet, nutrition, and food choices are obesity and access to healthy foods. Obesity is usually associated with diabetes, blood pressure, and hypertension. Unfortunately, households often eat unhealthy foods because they are affordable and easy to pack. Some community members referred to towns in Knox County as “food deserts” due to the lack of healthy food options available nearby. In addition, obesity can be connected to other problems, such as substance abuse and mental health issues. This can pose further challenges when accessing healthy foods and can also increase obesity rates. Another common issue raised is the lack of resources needed to make effective dietary changes. As [one interviewee] mentioned, there is a difference in knowing you are overweight and having the ability to do something about it. For example, many residents do not know how to cook healthier foods, nor do they have the time and resources to buy and prepare nutritious foods. However, Knox County offers many programs to help people get access to healthier foods. Programs such as the prescription program, Get Healthy Knox, and Crunch Obesity have worked to provide food vouchers for people to buy local fruits and vegetables, which supports farmers as well. There are other programs that partner with local restaurants to prepare healthy premade meals for community members that are approved by dieticians. These programs are often funded through federal grants. One challenge these programs have faced in the past is the general dislike of the healthy foods that are provided in the meal preparations. Generational differences are another reason why there has

Behavioral Risk Factors

been some push back against these programs. For example, [one partner] mentioned that for generations, people in Knox County have grown up on “fried chicken and mashed potatoes” and may have a harder time with changing their diet. Therefore, it is important to start exposing kids to healthy foods at younger ages so future generations can ideally eat healthier. The pandemic has impacted nutrition and food choices within the community. For example, several kids rely on school lunches for their meals, but these are no longer accessible with online school. Additionally, older citizens and people with disabilities may need help opening their meal prep containers and using silverware which has also been hard to address with social distancing and no-contact food drop off.

The 2021 Community Health Assessment also measured mental and social health, an important component of overall health.

Key Findings - Mental and Social Health

- About one in five respondents in Knox County have been diagnosed with a depressive disorder, and about 22% have been diagnosed with an anxiety disorder.
- About 60% of respondents reported at least one poor mental health day in the past month.
- About 65% of respondents feel they get the social or emotional support they need usually or always.
- About a half of survey respondents reported having at least one Adverse Childhood Experience, and those individuals were more likely to experience worse overall health, increased substance abuse, increased diagnoses of mental health disorders, and more poor mental health days.
- As was mentioned in Social Determinants of Health, better access to mental health services could improve mental health in the County.

According to the survey, 20% of Knox County adult respondents have been diagnosed with a depressive disorder and 22% have been diagnosed with an anxiety disorder. In Ohio as a whole, the percentage of adults who were ever told they had depression was also 20%.¹

Diagnoses Of Mental Health Conditions[§]

		Knox County (average n=491)
Ever Been Told That You Had...	A depressive disorder	20.1%
	An anxiety disorder	22.2%



Females were more likely than males to have been diagnosed with a depressive disorder (27.9% vs. 11.4%) or an anxiety disorder (33.1% vs. 9.8%) .

Respondents younger than 45 were more likely than respondents 45 and older to have been diagnosed with an anxiety disorder (35.7% vs. 11.5%). Organizations such as the Mayo Clinic are making efforts to reduce stigma - one positive interpretation of this difference is that perhaps these efforts are effective and more younger people who need help with mental health feel comfortable seeking out help.

Mental and Social Health

A majority of respondents (60%) indicated that they had at least one poor mental health day in the past month (e.g., stress, depression, problems with emotions); among them, the average number of poor mental health days reported was 9.7 days.

Poor Mental Health Days In The Past 30 Days^s

	Knox County
Percent who had poor mental health day(s)	(n=499) 59.7%
Days of poor mental health (average)*	(n=298) 9.7

*Among those who had at least one poor mental health day

 Respondents younger than 45 were more likely than respondents 45 and older to report having had at least one poor mental health day in the past month (77.7% vs. 46.6%).

Respondents younger than 35 reported having more poor mental health days on average in the past month than respondents 35 and older (12.7 vs. 7.9), among those who had at least one poor mental health day in the past month.

 In 2018, 28% of adults 19 and older rated their mental health as not good on four or more days in the previous month; this increased to 40.1% in 2021.

Knox County and the state of Ohio had the same suicide rate in 2019 (15/100,000). Additionally, 8% of Knox County adults reported that they had experienced thoughts of suicide in the past 30 days.

Suicide²

	Knox County		Ohio	
	Count	Rate*	Count	Rate*
Suicides	10	14.7	1,809	15.2

Data are from 2019 *Rate per 100,000 population, age-adjusted



Suicide rate

Target: 12.8/100,000³

Knox County: 14.7/100,000² ✗

A majority of respondents (68%) feel they always or usually get the social and emotional support they need.

Social And Emotional Support[§]

		Knox County (n=512)
How Often Respondents Get The Social And Emotional Support They Need	Always	30.7%
	Usually	37.4%
	Sometimes	20.3%
	Rarely	6.8%
	Never	4.8%



Respondents younger than 35 were more likely than respondents 35 and older to report that they always get the social and emotional support they need (47.0% vs. 23.4%).

Adverse Childhood Experiences (ACES)

Adverse Childhood Experiences are potentially traumatic experiences that children go through or witness before they turn 18. These events can have negative effects on health, increasing risks of serious health problems including toxic stress, which affects brain development. The CDC estimates “the economic and social cost to families, communities, and society to total hundreds of billions of dollars every year.”⁴ Each measure in the table below represents one ACE. About half (47.7%) of survey respondents reported having at least one ACE. About one in ten (11.0%) reported having four or more ACEs.

Adverse Childhood Experiences⁵

		Knox County adults who answered “yes” (n=519)
As a child, did you live with someone who...	Was depressed, mentally ill, or suicidal	17.5%
	Was a problem drinker or alcoholic	20.6%
	Used illegal street drugs or abused prescription medications	8.2%
	Served time or was sentenced to serve time in a prison, jail, or other correctional facility	4.5%
As a child...	Did your parents become separated or divorced	25.9%
	Were your parents not married	5.1%
As a child, did your parents or adults in your home...	Slap, hit, kick, punch, or beat each other up	7.1%
	Hit, beat, kick, or physically hurt you in any way	7.8%
	Swear at you, insult you, or put you down	17.2%
As a child, did anyone 5 years older than you or an adult...	Touch you sexually	5.7%
	Try to make you touch them sexually	3.2%
	Force you to have sex	1.5%
As a child, did...	Your family not look out for each other, feel close to each other, or support each other	7.9%
	You not have enough to eat, have to wear dirty clothes, and have no one to protect you	2.0%

 Respondents who had completed less formal education were more likely than respondents who had completed a bachelor’s degree or higher to have had at least one ACE (52.3% vs. 31.2%).

🕒 In 2018, 13% of adults 19 and older experienced four or more ACEs; this decreased to 11.1% in 2021.

The Centers for Disease Control and Prevention (CDC) connects Adverse Childhood Experiences to many other risks (Figure 1). The likelihood of experiencing negative impacts from ACEs is believed to increase with the number of adverse experiences.⁵

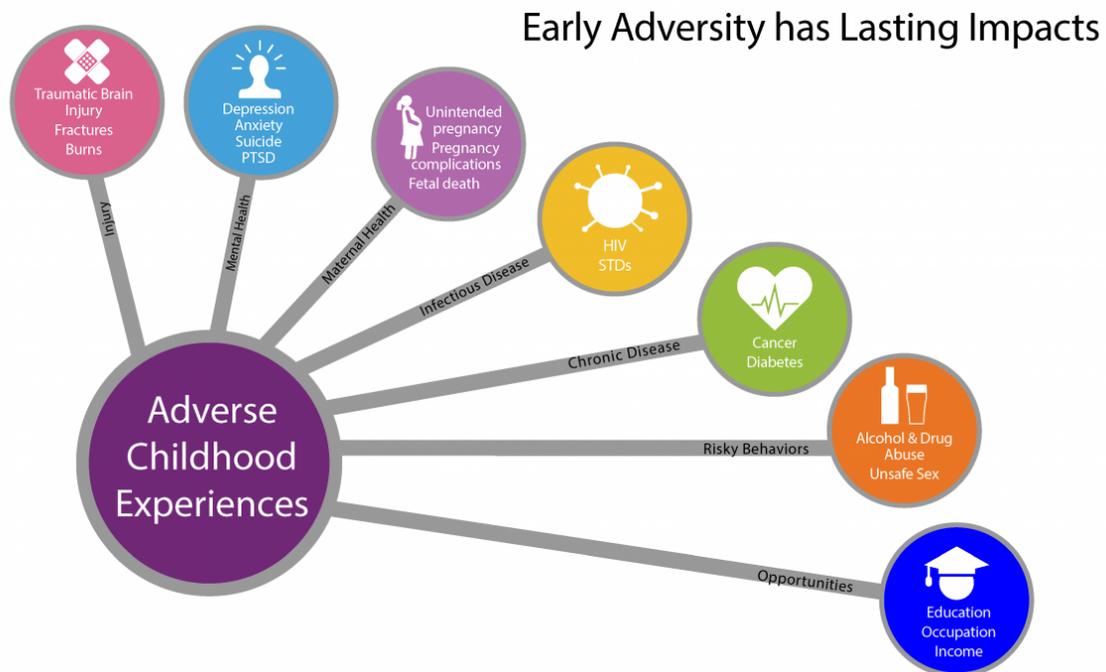


Figure 1 "Association between ACEs and Negative Outcomes"; Source: National Center for Injury Prevention and Control, Division of Violence Prevention

According to the 2021 Community Health Assessment, ACEs were linked to worse overall health, increased substance abuse, increased diagnoses of mental health disorders, and more poor mental health days.

Differences in Health Outcomes by No ACES vs. At Least One ACE[§]

	No ACES	At least one ACE
Very good or excellent mental health	63.3%	41.8%
Current drinker	42.3%	55.8%
Binge drinker	26.3%	44.5%
Current smoker	8.4%	25.4%
Diagnosed with anxiety disorder	11.6%	33.6%
Diagnosed with depressive disorder	9.7%	31.0%
Average number of poor mental health days (in past 30)	3.6	8.2

The following table presents domestic violence incidents in 2018. Total incidents include DVI charge, other charge, and no charge.

Domestic Violence^{6*}

	Knox County		Ohio	
	Count	Rate	Count	Rate
Domestic violence incidents	239	N/A	75,466	N/A

Data are from 2018 N/A= not available or cannot be calculated

The following table presents the number of child abuse reports in 2019. Note: this may not be accurate to the total counts of child abuse, which may be underreported.

Child Abuse^{7*}

	Knox County		Ohio	
	Count	Percent**	Count	Percent**
Total child abuse reports	572		101,293	
Physical abuse	133	23%	30,264	30%
Neglect	138	24%	25,827	26%
Sexual abuse	43	8%	9,137	9%
Emotional maltreatment	11	2%	1,203	1%
Family in need of services/dependency/other	63	11%	17,001	17%
Multiple allegations of abuse/neglect	184	32%	17,861	18%

*Data are from 2019 *Percent rounded to nearest whole number by source **Denominator is total child abuse reports*

A little over one-fifth (21.7%) of respondents indicated that they personally knew someone in Knox County who was a victim of domestic violence or child abuse.

Community Interviews: Mental Health

Dr. Golding and his students provided the following review of responses to the community interviews which describe issues related mental health.

Mental Health

Mental health is one of the most pressing issues found throughout Knox County and other rural areas, especially since the outbreak of COVID-19. Over the past year Knox County has seen a real increase in mental health and substance abuse issues. There are barriers to providing proper access to mental health resources in communities where mental health struggles are stigmatized. According to many members of the community, mental health and suicide prevention is something that is not handled well in this area, and often not talked about at all.

There are many reasons people suffer from mental health issues. Often, in rural areas, mental health becomes a dual diagnosis with substance abuse. It's quite likely that people suffering from mental health aren't getting the proper help they need, resulting in drug use as a coping mechanism. This cycle generates even more issues for people who struggle with addiction. Additionally, a lot of people who suffer from severe mental health like PTSD, depression and anxiety, usually find that it can be triggered by childhood trauma or a current undesirable situation. Domestic abuse and drug use are often cyclical patterns within families that are a product of an unhealthy environment.

The effects of poor mental health on children, often foster kids, have become very apparent especially in Knox County. In one survey done with high school students, 57 percent of them reported feeling anxious more than four days a week. This is an incredibly high number for that age group. Many mental health problems presented in children are often marked by family violence, substance abuse, or separated or divorced parents. Among the adult population, there are more diagnoses of bipolar disorder (Type 1 and 2) and PTSD. There is also a smaller number of participants with schizophrenia or schizoaffective disorders and personality disorders.

Mental health issues appear to be attributed to the lack of access to proper services that either don't exist or are not accessible to the general population. In the County, there is often a waitlist for mental health counseling. Providers are not accepting new patients at the moment because their caseloads are so full. There seems to be difficulty connecting clients to adequate services.

This section reviews maternal and child health in Knox County.

Key Findings - Maternal and Child Health

- Knox County is currently not meeting the *Healthy People 2030* goal for preterm births or teen pregnancies.
- The community voiced that child health would benefit from more after-school programs, more mental health resources for children, and familial support for parents.
- Community partners also mentioned the negative impact of parents' poor mental health and substance abuse on children and pointed out that COVID-19 posed particular challenges for families with children.

The table below presents data on pregnancy, birth, and infant health. The count of total infant deaths is too low to compute a reliable rate, therefore it is undetermined whether the *Healthy People 2030* target of 5.0/1,000¹ is met.

Infant Mortality²

		Knox County		Ohio	
		Count		Count	
Total Births		715		134,560	
		Count*	Rate**	Count	Rate**
Total		5	***	929	6.9
White		5	***	518	5.1
Black		0	***	356	14.3
American Indian		0	***	3	***
Infant Mortality Rate					
Asian / Other Pacific Islander		0	***	21	4.4
Unknown Race		0	***	31	8.8
Hispanic		0	***	45	5.8
Non-Hispanic		5	***	883	6.9
		Count	Percent	Count	Percent

Maternal and Child Health

Low Birth Weight	Low birth weight babies (<2500 grams)	40	5.6%	9,499	7.1%
	Very low birth weight babies (<1500 grams)	5	0.7%	2,049	1.5%
Preterm Births	Preterm births (<37 weeks)	72	10.1%	14,136	10.5%
Tobacco Use	Cigarette use during 3 rd trimester	80	11.2%	12,916	9.6%

Data are from 2019 *Race and ethnicity do not sum to total because they are separate measures **Rate per 1,000 using live birth data ***Rates based on counts of less than 10 are unreliable



In 2016, the overall rate of teen pregnancy in Knox County was 19/1,000. Most of these pregnancies occurred in teenagers age 18-19 (56/1,000). This same pattern was observed in the state of Ohio.

Teen Pregnancies⁴

	Knox County		Ohio	
	Count	Rate*	Count	Rate*
Total	84	19.4	14,647	19.9
10 to 14 years	0	0.0	233	0.6
15 to 17 years	21	17.1	4,410	19.5
18 to 19 years	63	55.6	10,004	67.4
15 to 19 years	84	35.5	14,414	38.5

Data are from 2016 *Rate per 1,000 females in the specified age range



Pregnancies among females age 15-19

Target: 31.4/1,000⁵

Knox County: 35.5/1,000⁴ ✗

The main issues parents faced in the past year were inadequate resources for parents available and difficulty finding affordable child care (each experienced by about 10% of parents). The COVID-19 pandemic may have exacerbated these issues.

Parenting Issues Faced In Past Year^s

	Knox County (n= 147)
Inadequate resources for parents available	11.6%
Difficulty finding affordable child care	9.2%
Difficulty finding medical care for children/teens	6.2%
Difficulty transporting children/teens to school/activities	4.3%
Do not know where children/teens can discuss personal issues	7.6%
Other	5.9%

Among those who had another issue, some of the issues that arose were bullying, difficulty with cooperation among medical providers, difficulty finding psychiatric service appointments, parenting after the suicide of a spouse, and experiences with an autistic child.

A majority of parents discussed bullying, mental health, substance use, and body image with their children in the past year; about 40% discussed sexual topics.

Discussions With Child Between 12 and 17 In Past Year^s

	Knox County (n=77)
Bullying (cyber, indirect, physical, verbal)	70.3%
Depression, anxiety, suicide	65.3%
Negative effects of alcohol, tobacco, illegal drugs, or misusing prescription drugs	63.7%
Body Image	61.4%
Abstinence and how to refuse sex	38.8%
Birth control/condoms/safer sex/STD prevention	38.6%

Vaccine Site Surveys: Teachers' perspectives

Dr. Golding and his students provided the following summary of teachers' opinions related to their students' health.

[An age] disparity bears out in teacher responses. While teachers' years of experience in their school is not strongly correlated with their ranking of student health factors, it's noteworthy that on the topics of students' mental health, emotional development, and social settings, the direction of the correlation with years of experience is negative, while on the issues of built and environment and physical health, the correlation is positive. This suggests that newer teachers are more likely to observe their student's mental and emotional health and family/social environments as topics of high concern, compared to teachers with more experience.

Vaccine Site Surveys

Breakdown of responses

Community Where I Teach Is Healthy

	Knox County (n=151)
Strongly agree	6.0%
Agree	67.5%
No opinion	12.6%
Disagree	13.9%
Strongly disagree	0.0%

My School Has Adequate Health Programs

	Knox County (n=150)
Strongly agree	10.0%
Agree	60.0%
No opinion	11.3%
Disagree	17.3%
Strongly disagree	1.3%

Vaccine Site Surveys

Dr. Golding and his students provided the following teachers' responses to the question "What could the school do to promote health among Knox County children and families?"

Teachers who have been working in the County for less than ten years had a lot to say about the health and wellbeing of their students. Unlike those who have been working in the County longer, teachers who have been in the district for less than ten years were much more likely to provide suggestions to the open ended questions in the survey. In the open ended section of the survey, teachers provided a variety of suggestions for what the school, or Knox Health, could do to help the health of their students and the community.

The most common suggestion provided by teachers is to grow the programs and services provided to students and families. Almost all of the teachers' suggestions include requests for more programs in and out of school that promote students and their families' health. Some of these suggestions are for an increase in affordable sports activities and other outdoor activities in the community. Others urge the school to hire more counselors to help students with their mental health, which many teachers say is struggling. Another common trend in this data is that the teachers are concerned about the student's home lives, and urge the reader to increase the amount of social programs provided to families. Finally, something that the teachers are concerned about is the lack of healthy foods provided by the school, and by the student's parents. They note lack of access to healthy foods and suggest that the health department could distribute fruits and vegetables to low income neighborhoods in the County.

Community Interviews: Children and adolescents

Dr. Golding and his students provided the following review of community interview responses related to children and adolescents.

Children and Adolescents

Despite the multiple overlapping organizations and resources supporting Knox County's low income families and children, organizations recognize several enduring and emerging problems affecting the County's children, and particularly those from low socioeconomic households. Mental health crises and substance abuse by parents sends rippling impacts to children, who experience traumatic childhoods from abuse or neglect, and are thus highly vulnerable to early experimentation with substances themselves. An increasing proportion of the County's children are diverted to the foster care system or living with grandparents, which further complicates the avenues through which these highly vulnerable children access essential services. Despite social workers being added to each of the County's schools, children with even severe behavioral problems do not have easy access to psychological treatment or mental health services. They often end up on the radar of local law enforcement, who is poorly equipped to handle them.

Several partner organizations report evidence of untreated childhood trauma influencing their adult clientele, speaking to a shortcoming of mental health treatment at every age group, and not just for children. One shared this story:

"It's interesting, because we're working with a couple yesterday. And this fella is probably 60-65 years old. And he started talking about his childhood, and how abusive his mother was. And the fact that his mother committed suicide over his birthday. And that was 50 years ago. And he broke into tears, and he never grieved. That whole loss, and that whole experience. Yeah, his childhood experiences."

The COVID-19 pandemic has put school aged children in particularly vulnerable situations and several organizations have pivoted to better serve their needs. The glaring shortcoming is ensuring that household isolation has not worsened disparities that existed before the pandemic but were moderated by schooling. For example, without regular attendance at school to offer socialization and regular meals, children are left more vulnerable to the influence of social media and problematic home lives.

Several partner organizations report feeling unsure if their target populations are fully aware of the services available to them, including developmental therapies for children, that might mean the difference between an individual living a normal life, versus a life marked by physical or cognitive deficits.

This section presents the leading causes of death, illness, and injury for residents of Knox County.

Key Findings - Death, Illness, and Injury

- Heart disease is the leading cause of mortality in Knox County.
- Among cancer diagnoses, breast and prostate have the highest incidence rates.
- 41% of adult respondents have been diagnosed with high blood pressure, 27% with high cholesterol, and 20% with asthma.
- In terms of COVID-19, the community voiced that the main issues leaders should be concerned with are community trust in leadership, stopping the spread, vaccinations, opening up safely, and workforce/economic impacts.

The following information reflects data from Knox Community Hospital. In 2020, there were about 21,000 visits to the emergency department for this hospital.¹

Knox Community Hospital provided the top reasons for emergency department visits (in the format description (Internal Classification of Diseases code)).¹ The most common diagnoses were COVID-19 and chest pain.

- COVID-19 (U071)
- Other chest pain (R0789)
- Chest pain, unspecified (R079)
- Urinary tract infection, site not specified (N390)
- Unspecified abdominal pain (R109)
- Acute upper respiratory infection, unspecified (J069)
- Viral infection, unspecified (B349)
- Syncope and collapse (R55)
- Pneumonia, unspecified organism (J189)
- Procedure and treatment not carried out due to patient leaving prior to being seen by health care provider (Z5321)
- Chronic obstructive pulmonary disease with (acute) exacerbation (J441)
- Calculus of ureter (N201)
- Nausea with vomiting, unspecified (R112)
- Constipation, unspecified (K5900)
- Essential (primary) hypertension (I10)
- Major depressive disorder, single episode, unspecified (F329)

Death, Illness, and Injury

- Anxiety disorder, unspecified (F419)
- Dizziness and giddiness (R42)
- Acute bronchitis, unspecified (J209)
- Influenza due to unidentified influenza virus with other respiratory manifestations (J111)

Knox Community Hospital provided the top reasons for non-emergency department hospital admissions (in the format description (Internal Classification of Diseases code)).¹ The most common diagnoses were chest pain, COVID-19, and pneumonia.

- Other chest pain (R0789)
- COVID-19 (U071)
- Pneumonia, unspecified organism (J189)
- Non-ST elevation (NSTEMI) myocardial infarction (I214)
- Chronic obstructive pulmonary disease with (acute) exacerbation (J441)
- Chest pain, unspecified (R079)
- Syncope and collapse (R55)
- Hypertensive heart disease with heart failure (I110)
- Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease (I130)
- Sepsis, unspecified organism (A419)
- Paroxysmal atrial fibrillation (I480)
- Acute cystitis without hematuria (N3000)
- Acute kidney failure, unspecified (N179)
- Chronic obstructive pulmonary disease with (acute) lower respiratory infection (J440)
- Weakness (R531)
- Cellulitis of left lower limb (L03116)
- Unspecified atrial fibrillation (I4891)
- Pneumonitis due to inhalation of food and vomit (J690)
- Atherosclerotic heart disease of native coronary artery with unstable angina pectoris (I25110)
- Urinary tract infection, site not specified (N390)

Turning to the top causes of death in Knox County, heart disease is most common, followed by cancer.

Mortality - Leading Causes^{2*}

Description	Knox County		Ohio	
	Count	Rate*	Count	Rate*
Total Deaths	565	682.5	123,717	827.1
Diseases of the heart (I00-I09, I11, I113, I20-I51)	159	183.4	29,160	188.8
Malignant neoplasms (C00-C97)	116	137.8	25,170	163

Death, Illness, and Injury

Description	Knox County		Ohio	
	Count	Rate*	Count	Rate*
Chronic Lower Respiratory Diseases (J40-J47)	39	44.5	7,170	45.9
Alzheimer's disease (G30)	36	41.8	5,234	33.6
Accidents (unintentional injuries) (V01-X59, Y85-Y86)	32	48.3	8,287	67.7
Cerebrovascular Disease (I60-I69)	30	33.7	6,504	42.2
Diabetes mellitus (E10-E14)	15	**	3,873	25.4
Essential hypertension and hypertensive renal disease (I10, I12, I15)	10	**	1,395	8.9
Influenza and pneumonia (J09-J18)	10	**	1,930	12.6
Intentional self-harm (Suicide) (U03, X60-X84, Y87.0)	10	**	1,806	15.1

Data are from 2019 *Rate per 100,000 population, age-adjusted **Rates are unreliable

With regard to cancer incidence rates, breast cancer (female) and prostate cancer (male) had the highest incidence rates in Knox County.

Cancer Incidence Rates - Top Cancers^{3*}

	Knox County		Ohio	
	Count	Rate*	Count	Rate*
Breast (female)	49	129.1	N/A	127.4
Prostate (male)	44	115.0	N/A	103.0
Lung and bronchus	54	68.8	N/A	68.5
Colon and rectum	33	45.0	N/A	41.5
Bladder	17	21.3	N/A	22.0

Data are from 2012-2016 *Rate per 100,000 population, average annual numbers, age-adjusted; rates are sex specific for cancer of the breast and prostate N/A=comparable data are not available

Lung and bronchus cancers have the highest mortality rate in Knox County. The counts of breast cancer and prostate cancer are too low to compute a reliable rate, therefore it is undetermined whether the *Healthy People 2030* targets of 15.3/100,000⁴ and 16.9/100,000⁵ (respectively) are met.

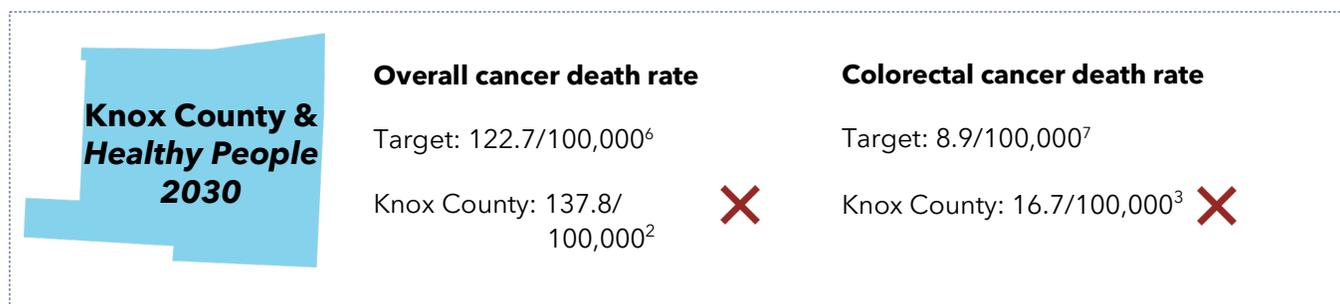
Cancer Mortality Rates - Top Cancers^{3*}

	Knox County		Ohio	
	Count	Rate*	Count	Rate*
Lung and bronchus	40	50.4	N/A	50.3
Prostate (male)	7	**	N/A	19.2

Death, Illness, and Injury

	Knox County		Ohio	
	Count	Rate*	Count	Rate*
Breast (female)	9	**	N/A	22.4
Colon and rectum	13	16.7	N/A	15.7
Pancreas	11	13.7	N/A	11.0

Data are from 2012-2016 *Rate per 100,000 population, average annual numbers, age-adjusted; rates are sex specific for cancer of the breast and prostate **Rates based on counts of less than 10 are unreliable. N/A=comparable data are not available



The most common reportable infectious disease diagnosis in Knox County is chlamydia infection, followed by Hepatitis C and gonorrhea. The counts of Hepatitis A, acute Hepatitis B, and acute Hepatitis C are too low to compute a reliable rate, therefore it is undetermined whether the *Healthy People 2030* targets of 0.4/100,000⁸, 0.9/100,000⁹, and 0.8/100,000¹⁰ (respectively) are met.

Infectious Disease Incidence

Description	Knox County		Ohio	
	Count	Rate*	Count	Rate*
Chlamydia ¹¹	179	187.7	63,350	543.4
AIDS/HIV (persons living with a diagnosis of HIV infection) ^{12**}	N/A	77.4	24,894	210.1
Gonorrhea ¹³	32	52.2	25,219	216.3
Hepatitis A (Acute) ¹⁴	6	****	1,838	15.7
Hepatitis B (Acute) ¹⁵	0	****	309	2.7
Hepatitis B (Total) ^{15***}	4	****	2,672	22.9
Hepatitis C (Acute) ¹⁶	0	****	468	4.0
Hepatitis C (Total) ^{16***}	69	112.6	18,500	158.7
Influenza ¹⁷	47	N/A	N/A	N/A

Data are from 2018-2019 *Rate per 100,000 population **Knox County data is reported as part of Ohio HIV Prevention Planning Region 2, which includes Ashland, Crawford, Erie, Huron, Knox, Marion Richland, Seneca, and Wyandot Counties. ***Total includes both acute and chronic ****Rates based on counts of less than 10 are unreliable

Death, Illness, and Injury

In 2020, according to Knox Public Health, there were 156 cases of chlamydia, 39 cases of gonorrhea, 11 cases of Hepatitis A, 20 cases of Hepatitis B, and 30 cases of Hepatitis C.¹⁸

Turning to chronic health conditions, 41% of adult Knox County respondents have at some point been told by a health professional that they have high blood pressure, 32% have been diagnosed with arthritis, and 27% were diagnosed with high blood cholesterol.

Diagnoses Of Chronic Health Conditions

		Knox County [§] (average n=489)	Ohio ¹⁹
Ever Been Told That You Had...	High blood pressure	40.8%	34.5%
	High blood cholesterol	26.7%	N/A
	Diabetes	13.8%	12.2%
	Asthma	19.7%	13.4%
	Coronary heart disease	7.3%	7.9%
	Cancer	8.3%	7.2%*
	Arthritis	31.7%	30.8%
	COPD/emphysema	3.6%	8.5%

*Ohio data are from 2018 *Other cancer besides skin cancer*



Males were more likely than females to have been diagnosed with heart disease (11.8% vs. 3.4%).

Older adults have more chronic health conditions:

Respondents 65 and older are more likely than respondents younger than 65 to have been diagnosed with cancer (26.3% vs. 2.8%) and heart disease (24.4% vs. 2.0%).

Respondents 45 and older are more likely than respondents younger than 45 to have been diagnosed with arthritis (49.9% vs. 8.0%), diabetes (20.5% vs. 3.6%), and COPD (6.2% vs. 0.0%).

High blood pressure increases with age: 71.3% of those 65 or older reported high blood pressure, compared to 55.5% of those 55-64, 39.1% of those 45-54, 26.9% of those 35-44, and 16.1% of those 18-34.

High blood cholesterol increases with age: 52.7% of those 65 or older reported high blood cholesterol, compared to 31.8% of those 55-64, 21.6% of those 45-54, 19.8% of those 35-44, and 10.2% of those 18-34.

Death, Illness, and Injury

- ⌚ Percentages of respondents age 19 and older reporting diagnoses has increased for high blood pressure, 41.2% compared to 35% in 2018; diabetes, 13.9% compared to 11% in 2018; asthma, 19.9% compared to 11% in 2018; and coronary heart disease, 7.4% compared to 5% in 2018. Percentages of respondents reporting diagnoses has decreased for high blood cholesterol, 27.0% compared to 34% in 2018; cancer, 8.4% compared to 14% in 2018; and arthritis, 32.0% compared to 35% in 2018.

Community Voices Community poll: COVID-19

As part of the community poll, residents and stakeholders were asked about the major issues caused by COVID-19 that leaders should focus on. The most common responses related to community trust in leadership, stopping the spread, vaccinations, opening up safely, and workforce/economic impacts.

Major Issues Caused by COVID-19 <i>Looking to the near and far future, what are the major issues caused by COVID-19 that community leaders should focus on addressing?</i>	
Community trust in medical leaders/residents doing their part to stop spread/politicization of health issues	<ul style="list-style-type: none">- Again what to do about those who won't wear masks- Major issues: Believing that a mask prevents COVID from spreading- Stopping the mental manipulation of our residents & inducing panic- Keeping politics out - let the professionals deal with the issues. Panic doesn't work- Community leaders should focus on combatting the spreading of misinformation by a large segment of our population- Lack of trust for the Medical Leaders- Fear of government/science- The public maintaining mask wearing, social distancing, hand washing- Tell people to keep wearing mask in the stores- Cleanliness, respect for others space- Stop the fear mongering. Keeping people controlled, compliant and frightened is detrimental to our community- Fear - when will it be okay to gather with family, should we always wear masks in public going forward? Politics aside, I just want to be sure I'm protecting my family/coworkers- The inability of many in the community to understand science and how a medical/science issue became political statement- Following State guidelines, watching restaurants/delis in the safe food preparation

	<ul style="list-style-type: none"> - Educating everyone on what has been learned about the virus to date - Caring about one another, love and respect
<p>Vaccinations</p>	<ul style="list-style-type: none"> - Preventative health - Protecting the elderly & people with medical conditions, by providing the opportunity to receive a vaccine, if they wish to receive it - Encouraging COVID vaccinations - Vaccines for all - Getting more people vaccinated - not the actual process of putting shots in arms which I think has gone well but convincing that 40% that do not plan to get vaccinated to get vaccinated. This especially means health care workers that are in contact with a broad range of people throughout a day - Opening up COVID vaccinations during the evenings and weekends so those that work can more easily get vaccinated - Vaccine to all ages - Vaccinations - Help people understand that most need the vaccine.
<p>"Opening up" safely</p>	<ul style="list-style-type: none"> - COVID has had such a detrimental impact on the community. We need to begin focusing on events open to those who have been fully vaccinated so that people who have been closed off during the pandemic can re-engage in the community - Opening things up! Especially the Park Programs for children - Getting kids back in schools and educated properly. - Right now big gatherings still can't take place and it'll be awhile before that's able to happen. Have events as spread out as possible. First Friday would only shut down the square and one street, maybe make that a couple streets along with the square that way vendors, events, and people can spread out. More outdoor events. Have a concert at the square but also play the music through speakers in other parts of downtown so they don't all have to gather in one spot. Widen sidewalks so people can be more spaced out walking different places. Close streets on weekends downtown so restaurants can use those road areas as additional seating and are able to space out better

<p>"Opening up" safely (cont'd)</p>	<ul style="list-style-type: none"> - Opening back up sport team activities for all ages - Community leaders should focus on moving toward and achieving "business as normal" in community members daily lives
<p>Workforce/economic impacts</p>	<ul style="list-style-type: none"> - Human resource issues in businesses Economic impact on individuals & businesses - Economic health of local employers so they can continue to employ local people - A master plan for job recovery - Getting small businesses that are struggling back on their feet. How do you do that? Maybe, reduced or no taxes for a period of time. Maybe, the County could help small businesses with rent if there any COVID relief funds in the coffers - Jobs Economy...Local businesses - Helping the small business that were hurt by the shut down!!!
<p>Mental health</p>	<ul style="list-style-type: none"> - Increases in PTSD or anxiety disorders - Mental health/anxiety fears - Mental health. Depression. Addiction and bad habits taking root - Mental health - Drug addiction
<p>Abuse/neglect</p>	<ul style="list-style-type: none"> - Increases in child abuse, domestic violence, and ACES - Abuse and neglect - Family violence
<p>Resource access</p>	<ul style="list-style-type: none"> - Public transportation - Internet connectivity and access to rural residents - Healthcare: assistance with medical bills - Transportation - Offering services to people who do not have health ins. - Food insecurity
<p>Other</p>	<ul style="list-style-type: none"> - Trash. Clean the trash. Work crew from jail..something! - A whole new approach to elderly care, perhaps? The longer a person can live in their own home, through mobile health care coming to them, maybe senior living centers may not be as crowded. But I am guessing here - I certainly haven't researched enough to give a qualified answer - Long-term health effects following a COVID diagnosis - Long term effects...

Trends Over Time

This section of this report presents an overview of changes in health indicators over time in Knox County. The health indicator cell is **green** if community health improved over time, **orange** if community health declined over time, and white if there was little change.* The number of observations for each measure in 2018 was not presented; therefore, a conservative 90% item response rate (n=353) was assumed.

Health Indicator	2018	2021 (Average number of observations =492)
Visited doctor in past year for routine checkup	60%	68%
Women 19+ who had a Pap test (past 3 years)**	59%	72%
Smoked cigarettes in past year	19%	15%
Had no barriers to consuming fruits and vegetables	79%	89%
Current drinker	52%	48%
Engaged in physical activity on 3 or more days of past week	51%	65%
Engaged in physical activity on 5 or more days of past week	30%	38%
Engaged in physical activity on 0 days of past week	29%	16%
Experienced 4 or more ACES	13%	11%
Ever diagnosed with high blood cholesterol	34%	27%
Ever diagnosed with cancer	14%	8%
Ever diagnosed with arthritis	35%	32%
Overall health excellent or very good	54%	53%
Limited in activities due to physical/mental/emotional problems	22%	27%
Visited a dentist/dental clinic in past year	63%	52%
Used e-cigarettes in past year	2%	2%
Binge drinker	17%	18%
Household insect issues	8%	22%
Household mold issue	4%	9%
Household radon issue	2%	6%
Household lead paint issue	1%	2%
Four or more poor mental health days in previous month	28%	40%
Ever diagnosed with high blood pressure	35%	41%
Ever diagnosed with diabetes	11%	14%
Ever diagnosed with asthma	11%	20%
Ever diagnosed with coronary heart disease	5%	7%

*To test whether the difference between the 2018 and 2021 percentages was statistically significant, a 2-sample proportions test was computed for each health indicator. This analytic procedure calculates the difference between the 2018 and 2021 percentages, considers the total number of observations in each sample, and then computes a z statistic. When the z statistic was statistically significant (p<.05), which suggests the difference between the two percentages is not due to chance alone, a green or orange color was used to mark the cell.

**Because we were not able to estimate the number of respondents in 2018 for this measure, the statistical significance of the difference was not computed.

Summary

The Knox County 2021 Community Health Assessment provides a comprehensive overview of the community's health status, illuminating areas of strength as well as areas in which there could be improvement.

Consistent with Public Health Accreditation Board requirements and IRS regulations, the Knox Health Planning Partnership will use this report to inform the development and implementation of strategies to address these findings. It is intended that a wide range of stakeholders will also use this report for their own planning efforts.

Subsequent planning documents and reports will be shared with community stakeholders and with the public. For example, Appendix G of this report includes a preliminary list of community assets and resources that could possibly be mobilized and leveraged to address the priority health issues identified by this process. This list will be reviewed and (if necessary) revised by the Knox Health Planning Partnership and its partners after the health department's Community Health Improvement Plan is formulated.

Knox Health Planning Partnership will provide annual updates to this assessment as new data becomes available. Users of the Knox County 2021 Community Health Assessment are encouraged to send feedback and comments that can help improve the usefulness of this information when future editions are developed. Questions and comments about the Knox County 2021 Community Health Assessment may be directed to:

Carmen Barbuto, MPA, Knox Public Health

740-392-2200 ext. 2239 | cbarbuto@knoxhealth.com

Karen Hines, PhD, Illuminology

614-447-3176 | karen@illuminology.net

Kelly Bragg, MPH, The Ohio State University's Center for Public Health Practice

614-292-1893 | bragg.99@osu.edu

Appendix A: Knox County CHA Kickoff Session

The following pages show a debriefing of the Knox County CHA Kickoff Session.



5258 Bethel Reed Park
Columbus, OH 43220

Knox County 2021 Community Health Assessment **Kick-off / Orientation Meeting**

On Thursday December 17, 2020, Dr. Orié Kristel, Dr. Amanda Scott, and Dr. Karen Hines from Illuminology facilitated a two-hour virtual meeting attended by county residents and stakeholders. Overall, the 21 people in attendance represented a wide variety of organizations that work to improve the health of county residents, including Knox Community Hospital, Knox Public Health, the Knox County Foundation and many others (please see list at the end of this memo).

During this session, the community members received a brief orientation to the community health assessment process. They then worked together in three small groups to discuss and answer a series of questions, with the last question being this: *What do you believe are the three most important issues that should be considered in our upcoming community health assessment and planning work?*

After those small group conversations finished, the Dr. Kristel led a large group report-out to capture the community's thinking and suggestions regarding the last question mentioned above. The results of that conversation, along with information recorded by each small group (using worksheets provided by the facilitator), are shown below. The ★ symbol is used when multiple small groups mentioned the same or similar issue.

- **CHA survey respondents - large, representative sample, community buy-in ★**
 - Make people feel like they're part of the CHA.
 - Include the Amish Community - may require footwork, non-electronic methods of outreach.
 - Include people who are hard to reach (in general).
 - Include lower socioeconomic groups, people outside of Mount Vernon, with diversity of race, age, and gender.
 - Consider component for people without addresses (e.g., homeless people).
 - Potentially incentivize people to participate.
 - Include people from group homes or other group facilities.
 - Make sure sample is large enough to be statistically significant.
 - Be strategic in incorporating every population - fully representative of Knox County.

- **CHA survey questions - measure what matters, allow some comparison to past ★**
 - Dialogue about what stakeholders are interested in - agree on what questions to include.
 - Ensure that results are useful.
 - Evaluate whether previous questions need to be asked again for trend tracking or whether it would be more valuable to revise the questions. If issues are stable, don't ask the questions every time.

- Be mindful of how the 2021 results will be affected by the COVID-19 mindset.
- Explore how health needs change as the community members age.
- **Mental health**
 - Need to ensure that services are available at the locations and times needed.
 - Battle the stigma of mental health services.
 - Educate parents.
 - Promote wellness.
 - Concern that residents don't know what acting "right", with respect, looks like.
- **Carrying pandemic changes forward**
 - Due to COVID, the need for public healthcare is much more of a part of everyone's lives
 - How can organizations deliver services during the pandemic and post-pandemic through innovation?
 - How can organizations promote ongoing thoughts and ideas so all see themselves as stakeholders in public health?
- **Data on transportation**
 - Understand transportation access within the community and limits to access, especially outside of the normal workday.
- **Supports for kids and families**
 - Families need access to childcare and essential supports needed to create a healthy community.

The results of this session will inform the primary and secondary data collection efforts that are part of the overall Knox County 2021 CHA process.

Agencies that were represented at the Knox County 2021 CHA Kickoff meeting included:

- Knox County Job & Family Services
- Knox Public Health
- Knox Community Hospital
- Knox County Chamber of Commerce
- Knox County Board of Developmental Disabilities
- Knox County Commissioners
- YMCA of Mount Vernon
- Knox County Family & Children First Council
- Knox County Foundation
- Knox County Head Start
- Knox County Juvenile/Probate Court
- Parent Support Initiative
- Kenyon's Office for Community Partnerships
- New Directions

Appendix B: Knox County Survey Questionnaire

The following pages show the Knox County CHA Survey Questionnaire.

KNOX COUNTY HEALTH SURVEY

This survey should be completed by the adult aged 18 or over at this address who **MOST RECENTLY** had a birthday.
All responses will remain confidential, so please answer honestly.

HEALTH IN KNOX COUNTY

1. In your opinion, what is the most important health issue affecting the people who live in Knox County? [Write response below]

YOUR OVERALL HEALTH

These questions ask about your overall, physical, and mental health.

2. Would you say that in general your health is: [Circle one answer]

Excellent	Very good	Good	Fair	Poor
-----------	-----------	------	------	------

3. Thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health **not** good? [Write a number] _____

4. How often do you get the social and emotional support you need? [Circle one answer]

Always	Usually	Sometimes	Rarely	Never
--------	---------	-----------	--------	-------

5. During the past 12 months have you experienced thoughts of suicide? [Circle one answer]

Yes	No
-----	----

6. Has a doctor, nurse, or other health professional EVER told you that you had...

[For each question, circle one answer]

Asthma?	Yes	No
Cancer?	Yes	No
Arthritis?	Yes	No
Diabetes?	Yes	No
High blood pressure?	Yes	No
High blood cholesterol?	Yes	No
Coronary heart disease?	Yes	No
COPD or emphysema?	Yes	No
An anxiety disorder?	Yes	No
A depressive disorder?	Yes	No

7. Are you limited in any way in any activities because of physical, mental, or emotional problems? [Circle one answer]

Yes	No [Skip to Q9]
-----	-----------------

{PLEASE TURN OVER AND COMPLETE THE BACK}

Unique ID

8. What physical, mental, or emotional problems limit your activities? [Write response below]

HEALTH CARE AND CHECKUPS

These questions ask about different kinds of health care you may have received recently.

9. How long has it been since you last visited a dentist or a dental clinic for any reason? Include visits to dental specialists, such as orthodontists. [Circle one answer]

Within the past 6 months (anytime less than 6 months ago) [Skip to Q11]	Within the past year (at least 6 months but less than 12 months ago) [Skip to Q11]	Within the past 2 years (at least 1 year but less than 2 years ago)	Within the past 5 years (at least 2 years but less than 5 years ago)	5 or more years ago	Never	Don't know [Skip to Q11]
--	---	--	---	---------------------	-------	------------------------------------

10. What is the main reason you have not visited the dentist in the past year? [Check all that apply]

Fear, nervousness, pain, dislike going
 Cost

Have dentures
 Other:

11. About how long has it been since you last visited a doctor for a routine checkup? A routine checkup is a general physical exam, not an exam for a specific injury, illness or condition. [Circle one answer]

Within the past year (anytime less than 12 months ago)	Within the past 2 years (at least 1 year but less than 2 years ago)	Within the past 5 years (at least 2 years but less than 5 years ago)	5 or more years ago	Never	Don't know
---	--	---	---------------------	-------	------------

12. In the past 12 months, did you delay getting needed physical health care? [Check one answer]

Yes (please specify reason why):

No

13. In the past 12 months, did you delay getting needed mental health care? [Check one answer]

Yes (please specify reason why):

No

14. In the past 12 months, did you delay getting needed substance abuse services?

Yes (please specify reason why):

[Check one answer]

No

15. Do you or your family members go outside of Knox County for any sort of health care needs? [Check one answer]

Yes (please specify location outside of Knox County):

No [Skip to Q18]

16. In the past 12 months, have you or your family members chosen to go outside of Knox County for any of these health care services? [Check all that apply]

- No/Not applicable
- Specialty care
- Primary care (family doctor)
- Dental services
- Mental health/counseling services
- Substance abuse/addiction services
- Another service:

17. What would need to change for you and your family members to get all of your health care within Knox County instead of going outside of the County? [Write response below]

NOTE: If you are 49 years of age or younger, please go to Question 19.

18. The next question is about colorectal cancer screening. Sigmoidoscopy and colonoscopy are exams in which a tube is inserted in the rectum to view the colon for signs of cancer or other health problems. How long has it been since you had a sigmoidoscopy or colonoscopy? This does not include a colorectal screening done at home. [Circle one answer]

Within the past year (anytime less than 12 months ago)	Within the past 2 years (at least 1 year but less than 2 years ago)	Within the past 3 years (at least 2 years but less than 3 years ago)	Within the past 5 years (at least 3 years but less than 5 years ago)	Within the past 10 years (at least 5 years but less than 10 years ago)	10 or more years ago	Never
---	--	---	---	---	----------------------	-------

NOTE: If you are male, please go to Question 21.

19. A Pap smear is a test for cancer of the cervix. How long has it been since you had your last Pap smear? [Circle one answer]

Within the past year (anytime less than 12 months ago)	Within the past 2 years (at least 1 year but less than 2 years ago)	Within the past 3 years (at least 2 years but less than 3 years ago)	Within the past 5 years (at least 3 years but less than 5 years ago)	5 or more years ago	Never	Don't know
---	--	---	---	---------------------	-------	------------

NOTE: If you are 44 years of age or younger, please go to Question 21.

20. A mammogram is an x-ray of each breast to look for breast cancer. When was your last mammogram? [Circle one answer]

Within the past year (anytime less than 12 months ago)	Within the past 2 years (at least 1 year but less than 2 years ago)	Within the past 3 years (at least 2 years but less than 3 years ago)	Within the past 5 years (at least 3 years but less than 5 years ago)	5 or more years ago	Never	Don't know
---	--	---	---	---------------------	-------	------------

{PLEASE TURN OVER AND COMPLETE THE BACK}

OTHER BEHAVIORS AND EXPERIENCES

These questions ask about a variety of other health behaviors and life experiences.

21. Did any of the following happen to you as a child (under the age of 18)? [Check all that apply]

- Lived with someone who was depressed, mentally ill or suicidal
- Lived with someone who was a problem drinker or alcoholic
- Lived with someone who used illegal street drugs, or who abused prescription medications
- Lived with someone who served time or was sentenced to serve time in a prison, jail, or other correctional facility
- Your parents became separated or were divorced
- Your parents were not married
- Your parents or adults in your home slapped, hit, kicked, punched or beat each other up
- A parent or adult in your home hit, beat, kicked, or physically hurt you in any way (not including spanking)
- A parent or adult in your home swore at you, insulted you, or put you down
- Someone at least 5 years older than you or an adult touched you sexually
- Someone at least 5 years older than you or an adult tried to make you touch them sexually
- Someone at least 5 years older than you or an adult forced you to have sex
- Your family did not look out for each other, feel close to each other, or support each other
- You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you
- None of the above has happened to me

NOTE: If you do not have any children under 18, please go to Question 24.

22. Which of the following parenting issues have you faced within the past year? [Check all that apply]

- Difficulty finding affordable child care
- Difficulty finding medical care for children/teens
- Difficulty transporting children/teens to school or other activities
- Do not know where children/teens can go to discuss personal questions or issues
- Inadequate resources for parents available
- Other:

23. What did you discuss with your 12 to 17 year old in the past year? [Check all that apply]

- I do not have a child 12 to 17 years old
- Abstinence and how to refuse sex (age appropriate)
- Birth control/condoms/safer sex/STD prevention (age appropriate)
- Body image
- Bullying (cyber, indirect, physical, verbal)
- Depression, anxiety, suicide
- Negative effects of alcohol, tobacco, illegal drugs, or misusing prescription drugs
- None of the above

24. During the last 7 days, how many days did you engage in some type of exercise or physical activity for at least 30 minutes? [Write a number] _____

25. What are your barriers in consuming fruits and vegetables? [Check all that apply]

Too expensive I have no barriers in consuming fruits and vegetables
 I do not like the taste Other:

26. Do you smoke nicotine tobacco cigarettes (not including marijuana cigarettes) every day, some days, or not at all? [Circle one answer]

Every day	Some days	Not at all
-----------	-----------	------------

27. Which forms of tobacco listed below have you used in the past year? [Circle all that apply]

Cigarettes	E-cigarettes	Other tobacco/nicotine products	No tobacco products
------------	--------------	---------------------------------	---------------------

28. During the past 30 days, how many days did you have at least one drink of any alcohol beverage such as beer, wine, a malt beverage or liquor?

[Write a number] _____

29. Considering all types of alcoholic beverages, how many times during the past 30 days did you have (for males) 5 or more drinks on an occasion, or (for females) 4 or more drinks on an occasion?

[Write a number] _____

30. Do you personally know anyone in Knox County who has an abuse or addiction problem with...

[For each, circle one answer]

Heroin?	Yes	No
Methamphetamines?	Yes	No
Prescription pain medication?	Yes	No
Alcohol?	Yes	No

31. People who are homeless don't have a regular and adequate place to live and sleep. Instead, people who are homeless might live at a friend or family member's home, in a car, in a motel or hotel, outside, in a homeless shelter, or some other place. Do you personally know anyone in Knox County who was homeless in the past year? [Circle one answer]

Yes	No
-----	----

32. Do you personally know someone in Knox County who is a victim of domestic violence or child abuse? [Circle one answer]

Yes	No
-----	----

33. In the past 30 days, have you needed help meeting your general daily needs such as food, clothing, shelter, or paying utility bills? [Circle one answer]

Yes	No
-----	----

{PLEASE TURN OVER AND COMPLETE THE BACK}

34. What percent of your household income goes to your housing? [Circle one answer]

Less than 30%	30-50%	Higher than 50%	Don't know
---------------	--------	-----------------	------------

35. How safe from crime do you consider your neighborhood to be? [Circle one answer]

Extremely safe	Quite safe	Slightly safe	Not at all safe
----------------	------------	---------------	-----------------

36. The following problems are sometimes associated with poor health. In or around your household, which of the following do you think have threatened you or your family's health in the past year? [Circle all that apply]

Lead paint	Mold	Radon	Insects (mosquitos, ticks, flies)	Litter / trash	None of these
------------	------	-------	-----------------------------------	----------------	---------------

OTHER QUESTIONS

These questions are for statistical purposes only. All responses will remain confidential.

37. Which of the following best describes your gender? [Circle one answer]

Male	Female	Transgender	Non-binary	I prefer not to classify myself
------	--------	-------------	------------	---------------------------------

38. What is your age? [Write a number] _____

39. How much do you weigh without your shoes on? [Write a number] _____ pounds

40. How tall are you without your shoes on? [Write two numbers] _____ feet / _____ inches

41. Including yourself, how many people live in your household? [Write a number] _____

42. And how many of these people are under age 18? [Write a number] _____

43. What is the highest level of education you have completed? [Circle one answer]

Less than 12 th grade (no diploma)	High school degree / GED	Some college (no degree)	Associate's degree	Bachelor's degree	Graduate or professional degree
---	--------------------------	--------------------------	--------------------	-------------------	---------------------------------

44. Which of the following categories includes the total income of everyone living in your home in 2020, before taxes? [Circle one answer]

Less than \$24,999	Between \$25,000 and \$49,999	Between \$50,000 and \$74,999	Between \$75,000 and \$99,999	\$100,000 or more
--------------------	-------------------------------	-------------------------------	-------------------------------	-------------------

If you are concerned about mental health, substance use, or other concerns for yourself or someone close to you, please call 2-1-1 to reach a 24/7 Crisis Hotline & Information Center.

{YOU ARE FINISHED! PLEASE USE THE ENVELOPE PROVIDED TO RETURN THIS SURVEY. THANK YOU!}

Appendix C: Knox County Community Poll

The next page shows the Knox County Community Poll.

Knox County Community Health Assessment Community Poll

Link to poll: <http://s.alchemer.com/s3/Knox-County-Community-Poll>

The Knox Health Planning Partnership thanks you for taking a few minutes to share your opinions!

[ONE QUESTION PER PAGE]

1. What does a healthy Knox County look like to you?
2. Given your vision for a healthy Knox County, what do you think are the biggest barriers or issues that are keeping the County from getting there?
3. Looking to the near and far future, what are the major issues caused by COVID-19 that community leaders should focus on addressing?
4. Setting COVID-19 aside, what is the most important health issue in Knox County?
5. The next few questions are about you. Do you live in Knox County, Ohio, or do you live in a different county?
 - I live in Knox County, Ohio
 - I live in a different county
6. Do you work in Knox County, Ohio, do you work in a different county, or are you not currently working?
 - I work in Knox County, Ohio
 - I work in a different county [SKIP TO 8]
 - I'm not currently working [SKIP TO 8]
7. Please type the name of your organization in the space below.
8. Would you like to be contacted about participating in future focus groups? (Focus groups will be virtual or over a messaging type system to follow COVID safety protocols.)
 - Yes
 - No [SKIP TO END]
9. Please provide your contact information so that we can contact you about participating in future focus groups.
 - Name:
 - Phone:
 - Email:
10. Thank you so much for answering our questions. Have a great day!

Appendix D: Knox County Vaccine Site Survey Questionnaires

The following pages show the Knox County Vaccine Site Survey Questionnaires.



We need your input! The Knox Health Planning Partnership is a non-profit group comprised of over 30 different agencies in the county, including Knox Public Health. KHPP brings together health service agencies, non-profit agencies, local businesses, educational institutions, elected officials, and community members to develop strategies to improve health in our county. KHPP's mission is to improve the health and quality of life by mobilizing partnerships and taking strategic action in Knox County with the overall goal of making healthy happen in Knox County for all our residents.

Your participation is NOT REQUIRED, and your responses will remain ANONYMOUS. If you wish to participate in further research (focus groups type setting) please fill out the information at the bottom of the survey.

2021 Community Health Assessment Supplemental Survey

Age:

Gender:

Years lived in Knox County:

Circle the response that most closely relates to how you feel about the following statements

The county is home to a healthy population. Strongly Agree Agree No Opinion Disagree
Strongly Disagree

The county has the things needed to promote good health. Strongly Agree Agree
No Opinion Disagree Strongly Disagree

I would associate good health with.... (Please list)

- 1.
- 2.
- 3.

How do you think Knox County could be *more* healthy?

TURN OVER PLEASE

General Public

I would like to be contacted about participating in future focus groups (focus groups will be virtual or over a messaging type system to follow COVID safety protocols)

Name:

Phone:

Email:

Teachers



We need your input! The Knox Health Planning Partnership is a non-profit group comprised of over 30 different agencies in the county, including Knox Public Health. KHPP brings together health service agencies, non-profit agencies, local businesses, educational institutions, elected officials, and community members to develop strategies to improve health in our county. KHPP's mission is to improve the health and quality of life by mobilizing partnerships and taking strategic action in Knox County with the overall goal of making healthy happen in Knox County for all our residents.

Your participation is NOT REQUIRED, and your responses will remain ANONYMOUS. If you wish to participate in further research (focus groups type setting) please fill out the information at the bottom of the survey.

2021 Community Health Assessment Supplemental Survey

Age:

Gender:

Years lived in Knox County:

Circle the response that most closely relates to how you feel about the following statements

The county is home to a healthy population. Strongly Agree Agree No Opinion Disagree
Strongly Disagree

The county has the things needed to promote good health. Strongly Agree Agree
No Opinion Disagree Strongly Disagree

I would associate good health with.... (Please list)

- 1.
- 2.
- 3.

How do you think Knox County could be *more* healthy?

(TURN OVER PLEASE)

Teachers

As teachers, you have a unique perspective on our county youth and we value your opinions on what issues they face and how we can better serve our school-aged residents. Please answer the following from your perspective as a Knox County teacher (and thank you for all work you do! We appreciate you!)

Number of years worked in Knox County:

The community I teach in has a healthy population. Strongly Agree Agree
No Opinion Disagree Strongly Disagree

Our school has adequate programs to promote health among Knox County children and families. Strongly Agree Agree No Opinion Disagree Strongly Disagree

Rate your level of concern with the following issues as they relate to your recent and current students, 1=Least Concern, 5=Most Concern

Students' physical health - 1 2 3 4 5

Students emotional development - 1 2 3 4 5

Students' mental health - 1 2 3 4 5

The family/social environments in which my students live & recreate - 1 2 3 4 5

The built/physical environment in which my students live & commute to school - 1 2 3 4 5

What could the school do to promote health among Knox County children and families?

I would like to be contacted about participating in future focus groups (focus groups will be virtual or over a messaging type system to follow COVID safety protocols)

Name:

Phone:

Email:

Appendix E: Knox County Community Interview Guide

The next pages show the Knox County Community Interview Guide.

Knox County Community Health Assessment Community Interview Guide

Some questions may not be applicable based on the role of the interviewee in the community; only ask those questions which seem applicable.

For community of interest, insert group depending on who is being interviewed.

MOST IMPORTANT HEALTH ISSUES

1. What do you think are the most important health issues among [the community of interest]?

OVERALL PHYSICAL AND MENTAL HEALTH

2. What physical health issues do you see present among [the community of interest]?
 - a. What chronic physical conditions do you see as problematic among the among [the community of interest]?
 - i. (Probe on high blood pressure and high cholesterol, if applicable)
 - b. (If applicable) Would you say that most of [the community of interest] tend to get the recommended vaccines, including the flu vaccine, or are there issues with vaccinations?
3. What mental health issues do you see present in [the community of interest]?
 - a. What chronic mental health conditions do you see as problematic in [the community of interest]?
 - i. (Probe on anxiety disorder and bipolar disorder, if applicable)
 - b. What kind of downstream effects do these mental health issues have on the community as a whole?

HEALTH CARE ACCESS

4. What health care access issues do you see in [the community of interest]?
 - a. What are causes for residents delaying or not seeking health care?
 - b. Do community members commonly seek health care outside of Knox County?
 - i. Why?
 - ii. What type of care do they seek?
 - iii. Where do they go?

- c. (Probe on emergency treatment, urgent care, pharmacy, and X-rays, if applicable)
- d. (Probe on rehab / inpatient care facilities, if applicable)
- e. (Probe on psychiatric stabilization facilities / beds, if applicable)
- f. (Probe on first responders (sheriff's department, fire, & EMS), if applicable)

TELEHEALTH SERVICES

- 5. Has your organization ever tried to provide physical health, mental health, or support services over the Internet, such as telehealth video visits?
- 6. In general, does it seem to you that [the community of interest] could benefit from physical health, mental health, or support services over the Internet? Why?
- 7. What barriers exist to [the community of interest] accessing physical health, mental health, or support services over the Internet?

TRANSPORTATION

- 8. What transportation barriers or issues do you see in [the community of interest]?
- 9. Are there types of transportation you think residents of the community would use if those types were available? If yes, what types?
- 10. Do community members have difficulty accessing health care because of transportation barriers? Please explain.

NUTRITION AND PHYSICAL ACTIVITY

- 11. What nutritional issues do you see in [the community of interest]?
- 12. How much of a problem is access to healthy foods in [the community of interest]?
 - a. From your perspective, do most community members eat an adequate amount of fruit and vegetables?
 - i. If not, why not?
 - b. What nutritional issues do you see with children, specifically?
- 13. What issues with physical activity do you see in [the community of interest]?

SUBSTANCE ABUSE

- 14. What do you see as the biggest substance abuse issues in [the community of interest]?
 - a. (Probe on CBD oil, smokeless tobacco, heroin, and methamphetamines, if applicable)

- b. What downstream effects do these substance abuse issues have on the community as a whole?
- c. What issues with substance abuse amongst pregnant women and neonatal addiction do you see in [the community of interest]?

CHILD HEALTH

- 15. What do you see as the biggest mental or physical health issues amongst children (those under 18) in [the community of interest]?
- 16. Next I'd like to talk about potential adverse childhood experiences, such as parents with mental illness, parents with substance abuse problems, parents getting separated or divorced, parents getting incarcerated, and psychological, physical, or sexual abuse of children. What do you see as the adverse experiences that are the biggest issues for children in the community as a whole? (Probe to understand why.)
- 17. Do you see any issues with foster care in [the community of interest]?
 - a. Do you see a need for more foster care in the community?

COVID-19

- 18. What do you see as the biggest issues Covid-19 has caused among [the community of interest]?
- 19. Looking ahead to the future, what issues caused by Covid-19 do you think will continue to cause problems among [the community of interest]?
 - a. What about the community as a whole?

ORGANIZATIONAL COLLABORATION

- 20. Do you feel that local organizations could work better together? If so, how?

GENERAL HEALTH

- 21. Are there any other aspects of health that are a concern for the community that we haven't talked about yet?

Appendix F: Knox County Virtual Focus Group Guide

The next page shows the Knox County Virtual Focus Group Guide.

Knox Health Planning Partnership Virtual Focus Group

Welcome to our first ever Knox County Health virtual focus group! We will pose one question each day over the course of the work week, for a total of five questions. We're still waiting for a few participants to accept the page invite, so we'll commence with the first question on Monday morning 4/19.

Day 1 Question: Do you primarily view health and wellbeing as personal responsibilities or as community responsibilities?

Day 2 Question: How do you feel about the current status of: 1) community health, and 2) healthcare in Knox County?

Day 3 Question: Do you see your health as being affected by your physical environment?

Day 4 Question: What type of healthcare services are you most reliant on? (No need to be specific!) Is anything missing here in Knox County?

Day 5 Question: If there was one thing in your community you could change that would positively impact your health, what would it be?

Closing Message:

Thanks for participating! Please feel free over the weekend to update and/or respond to previous questions as you wish.

Appendix G: Knox County Community Assets and Resources

Knox County assets and resources that can be mobilized to address health issues:

Category	Knox County Assets/Resources
Access to Care	<ul style="list-style-type: none"> • American Health Network • Centerburg Senior Services • CVS Pharmacy • Danville Family Dentistry • Family Urgent Care • Fosters Downtown Pharmacy • Interchurch • Kenyon College Health Center • Kno-Ho-Co Ashland Community Action Commission - Mount Vernon • Knox Area Transit • Knox Community Hospital • Knox Community Hospital Pediatrics • Knox Community Hospital Physician Services • Knox County Board of Developmental Disabilities • Knox County Community Health Center • Knox County Dentistry • Knox County Health Department • Knox Metropolitan Housing Authority • Mid-Ohio Corporate Care • Salvation Army of Mount Vernon • Sanctuary Community Action- Danville, OH • Simona Moore CNP • Starting Point • Station Break Senior Center • Winter Sanctuary Homeless Shelter
Mental Health & Addiction	<ul style="list-style-type: none"> • Alcoholics Anonymous (AA) • Behavioral Healthcare Partners (MHR) - Mount Vernon • Celebrate Recovery - Green Valley Southern Baptist Church • Crisis Text Line • Groups Recover Together - Knox County • Hospice of Knox County • Kenyon College - Health and Counseling Center • Knox Community Hospital • Knox Community Hospital Urgent Care • Knox County Community Health Center • Knox County Job & Family Services • Knox County Sheriff's Office • Knox Substance Abuse Action Team • Mental Health & Recovery for Licking & Knox Counties • Mount Vernon Police Department • Narcotics Anonymous (NA) • New Directions Domestic Abuse Shelter and Rape Crisis Center

Appendix G: Knox County Community Assets and Resources

Category	Knox County Assets/Resources
	<ul style="list-style-type: none"> • Riverside Recovery Services • The Freedom Center • The Main Place • TouchPointe
Chronic Disease	<ul style="list-style-type: none"> • Ariel-Foundation Park - Mount Vernon City Parks • Centerburg Senior Services, Inc. • Fredericktown Community Foundation • Kenyon College - Health and Counseling Center • Knox Community Hospital • Knox County Board of Developmental Disabilities • Knox County Head Start • Knox County Health Department • Knox County Health Department - Knox County Community Health Center • Knox County Health Department - Get Healthy Knox County Coalition • Mount Vernon City Schools • 4H • Sanctuary Community Action • Station Break Senior Center • The Main Place • United Way of Knox County • YMCA of Mount Vernon
Other	<ul style="list-style-type: none"> • OSU Extension - Knox County

Community Profile

¹ U.S. Census Bureau, American Community Survey 5 Year Estimates (2019)

Social Determinants of Health

¹ U.S. Census Bureau, American Community Survey 5 Year Estimates (2019)

² Healthy People 2030 objective AHS-01, U.S. Department of Health

³ Medical Board of Ohio, Active License Roster (2020)

⁴ Ohio Department of Administrative Services (2020)

⁵ Ohio Chemical Dependency Professionals Board (2020)

⁶ Ohio Board of Psychology (2019)

⁷ <https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening>

⁸ American Cancer Society (2017) "Breast Cancer Screening Guidelines"

⁹ Healthy People 2030 objective C-05 U.S. Department of Health

¹⁰ Mayo Clinic Staff (2019) "Pap smear: Overview"

¹¹ Ohio Department of Education, District Graduation Rates (2019)

¹² Healthy People 2030 objective AH-08, U.S. Department of Health

¹³ Ohio Department of Education, Kindergarten Readiness Assessment (2019)

¹⁴ Ohio Department of Education, Third Grade Reading Guarantee (2019)

¹⁵ Chetty, R., Stepner, M., Abraham, S., Lin, S., Scuderi, B., Turner, N., Bergeron, A. & Cutler, D. (2016). The association between income and life expectancy in the United States, 2001-2014. *Jama*, 315(16), 1750-1766.

¹⁶ Nord, M., Coleman-Jensen, A., Andrews, M., & Carlson, S. (2010). Household Food Security in the United States. ERR-108, USDA. *Economic Research Service*.

¹⁷ Feeding America, Map the Meal Gap (2018)

¹⁸ 2020 County Health Rankings, Food Environment Index

¹⁹ Healthy People 2030 objective IVP-09, U.S. Department of Health

²⁰ Ohio Department of Health, Ohio Public Health Information Warehouse (2019)

Behavioral Risk Factors

¹ Healthy People 2030 objective SU-10 U.S. Department of Health

² Healthy People 2030 objective TU-02, U.S. Department of Health

³ Healthy People 2030 objective IVP-06, U.S. Department of Health

⁴ Ohio Department of Public Safety, 2017 Crash Facts for All Counties

⁵ Ohio State Highway Patrol Operational Report (2019)

⁶ Ohio Department of Health, Ohio Public Health Information Warehouse (2019)

⁷ Naloxone Administration by Ohio EMS Providers By County, Ohio (2020)

⁸ Healthy People 2030 objective NWS-03 U.S. Department of Health

⁹ Centers for Disease Control "Body Mass Index: Considerations for Practitioners" (2011)

¹⁰ U.S. Department of Health, Physical Activity Guidelines for Americans 2nd Edition (2018)

Mental And Social Health

- ¹ Ohio 2018 Behavioral Risk Factor Surveillance System Annual Report
- ² Ohio Department of Health, Ohio Public Health Information Warehouse (2019)
- ³ Healthy People 2030 objective MHMD-01 U.S. Department of Health
- ⁴ Centers for Disease Control: Violence Prevention “Preventing Adverse Childhood Experiences”
- ⁵ Child Trends. (2019). *Adverse experiences*.
<https://www.childtrends.org/?indicators=adverse-experiences>
- ⁶ Domestic Violence Report, Ohio Bureau of Criminal Identification and Investigation, 2018
- ⁷ Public Children Services Association of Ohio, 2019 Factbook, Knox County Profile

Maternal and Child Health

- ¹ Healthy People 2030 objective MICH-02, U.S. Department of Health
- ² Ohio Department of Health, Ohio Public Health Information Warehouse (2019)
- ³ Healthy People 2030 objective MICH-07, U.S. Department of Health
- ⁴ Ohio Department of Health, Bureau of Vital Statistics (2016)
- ⁵ Healthy People 2030 objective FP-03, U.S. Department of Health

Death, Illness, And Injury

- ¹ Knox Community Hospital (2020)
- ² Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2019 on CDC WONDER Online Database, released in 2020
- ³ Knox County 2019 Cancer Profile, Ohio Department of Health
- ⁴ Healthy People 2030 objective C-04 U.S. Department of Health
- ⁵ Healthy People 2030 objective C-08, U.S. Department of Health
- ⁶ Healthy People 2030 objective C-01, U.S. Department of Health
- ⁷ Healthy People 2030 objective C-06 U.S. Department of Health
- ⁸ Healthy People 2030 objective IID-10 U.S. Department of Health
- ⁹ Healthy People 2030 objective IID-11 U.S. Department of Health
- ¹⁰ Healthy People 2030 objective IID-12 U.S. Department of Health
- ¹¹ Ohio Chlamydia Cases, Ohio Department of Health (2018)
- ¹² Ohio HIV Surveillance Data Tables, Ohio Department of Health (2019)
- ¹³ Ohio Gonorrhea Cases, Ohio Department of Health (2018)
- ¹⁴ Annual Summary of Infectious Diseases - Ohio Department of Health (2018)
- ¹⁵ Ohio Hepatitis B Cases, Ohio Department of Health (2018)
- ¹⁶ Ohio Hepatitis C Cases, Ohio Department of Health (2018)
- ¹⁷ Knox Public Health (2019)
- ¹⁸ Knox Public Health (2020)
- ¹⁹ Ohio 2018 Behavioral Risk Factor Surveillance System Annual Report