

2023 Abridged Community Health Assessment



**KNOX COUNTY
TENNESSEE**

HEALTH DEPARTMENT

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Letter to the Community

Every five years, the Knox County Health Department publishes a Community Health Assessment, which offers a detailed look at the state of health in Knox County. Since the last assessment in 2019/2020, the health of our community has been greatly impacted by a global pandemic. Instead of waiting until the next iteration in 2025, we conducted a mid-point assessment to determine the most significant health issues that Knox County residents say they are experiencing in this post-COVID world.

This Abridged Community Health Assessment highlights five priority health issues, determined through key informant interviews, focus groups, and surveys within the community. Using this information, relevant data was gathered to provide context and analysis. You will notice that there are newly ranked top health issues, such as affordable housing, that were not present during the 2020 assessment. Additionally, with assistance from the Howard H. Baker Jr. Center for Public Policy, this assessment features an economic component in order to highlight the relationship between health and the economy. A healthy community is a thriving community, and the included economic indicators help tell that story. In the report you will see how the Knoxville Metropolitan Statistical Area fares against its peer cities in each health issue, the economic impact of the issue, as well as some upstream solutions.

Identifying health priorities that affect Knox County residents aids in creating healthy communities in the future. We hope that this report will serve as a resource for our partners with planning and policymaking as we all strive for a healthier community.

Sincerely,



Kevin Parton

Knox County Health Department Senior Director



Executive Summary

To best improve health in a community, it is essential to understand the current health status. The Knox County Community Health Assessment, released every five years, provides reliable data to understand and improve population health in Knox County. The last iteration of this Assessment was compiled before the COVID-19 pandemic, and as such represented the pre-COVID-19 baseline for the community. As the next full Assessment will not be released until 2025, this Abridged Community Health Assessment provides a condensed glimpse into the priority health issues currently affecting Knox County residents.

This report will also discuss the relationship between health and the economy, to understand the impact they have on each other.

Methodology

The Knox County Health Department (KCHD) contracted with the University of Tennessee Social Work Office of Research and Public Service (SWORPS) to collect and analyze data on Knox County residents' perceptions of health issues in the county. Data collection was completed by SWORPS in 2022.

Several methods were used during the data collection process including a community survey, focus groups, and key informant interviews with Knox County residents. The survey instrument used was created in collaboration with the University of Tennessee and the Knox County Health Department. The community survey asked respondents to choose the most important health problems in Knox County and indicate their satisfaction with current efforts to address health issues on a 1-5 scale. Responses were gathered using telephone and web surveys (603) through a randomized sample. To capture an adequate representation of Knox County residents, demographic characteristics of the participants resembled census data.

Additionally, focus groups were conducted with Knox County residents to capture a better understanding of the priority health issues and opinions on how they can be addressed. Focus groups were strategically created to ensure minority groups of all four geographical areas of Knox County were represented. In total, 11 focus groups were conducted, including one in Spanish.

Further, 12 key informant interviews were conducted. Key informants are community leaders knowledgeable about the health of specific populations, such as children, those living in poverty and minority groups.

KCHD contracted with the Howard H. Baker Jr. Center for Public Policy to create an economic indicator report to evaluate the relationship between health and the economy. This relationship was examined through two lenses.



Firstly, the Baker Center identified a group of peer cities to compare against the Knoxville MSA on several metrics. **Those peer cities are:**



Secondly, this report sought to quantify the economic impact of chronic disease in the Knoxville Metropolitan Statistical Area (MSA) compared to the above-mentioned peer cities.

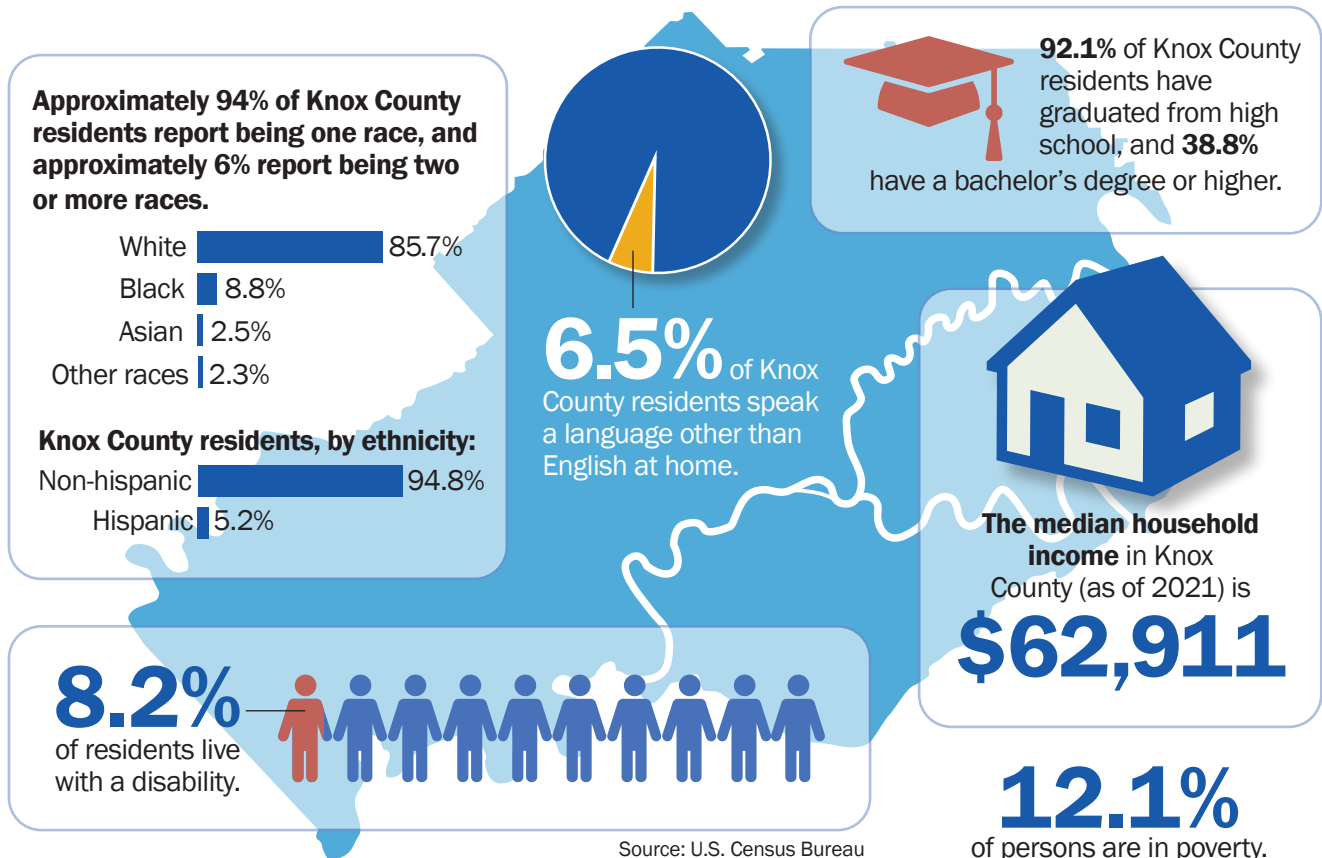
The Knoxville MSA consists of these counties.



Key findings from the report are included in the next section.¹

Community Profile

Based on 2022 census data, it is estimated that **494,574 people** live in Knox County. This is a **3.3% increase** since 2020.



Health and the Economy

Population health is dependent on more than just your physical state of health, it's also affected by where you live, learn, work, and play. Health and economic prosperity are linked, not only for individuals but also communities. Being financially secure allows individuals to make healthy choices and invest in their health more easily. On a community level, population health is crucial for economic development. The health of a community's labor force is a major consideration when businesses are deciding where to locate.

Health issues such as chronic disease, access to care, and substance misuse play a role in the health and efficiency of a labor force. In comparison to Knoxville's peer cities, Knoxville's general health falls in the middle. Knoxville compares favorably in terms of access to care and affordability of care. Unfortunately, Knoxville has disproportionately high rates of heart disease, cancer, smoking, and severe mental health challenges. These conditions have a significant impact



on quality of life, and are economically costly.

Overall, the data reviewed by the Baker Center show Knoxville to be on sound economic footing. Knoxville is approximately in the middle of its peer cities in terms of per capita personal income. However, the report suggests that poor health could be playing a role in preventing Knoxville's economy from reaching its full potential. Knoxville ranked at or near the bottom in terms of growth in number of firms, average job creation, and per capita business application rates.

While there is no simple solution to improving population health, focusing on health promotion and disease prevention can have positive long-term benefits. A physically and mentally healthy community is a more productive and flourishing community. This report will focus on the top five health priorities that Knox County residents have identified, the ways they intersect with the economy, and upstream solutions to improve the issues.

The Top 5 Community-Perceived Health Issues

Knox County residents were asked to rank health issues in Knox County. The top five issues identified were substance misuse, affordable housing, diabetes, tobacco use, and access to mental health care. Each of the health issues identified are either a health outcome or a driver of health.



A **health outcome** is the result of an intervention as it relates to health. It can also be an outcome of any healthy or unhealthy behavior.



A **driver of health**, sometimes referred to as a social determinant of health, is a nonmedical factor that influences health outcomes.²

The drivers of health can be broken down into four main categories: health behaviors, socioeconomic status, access to clinical care, and the physical environment.²

Four of the top five perceived health issues are drivers of health. Diabetes is both an outcome and driver of health. Addressing the drivers of health appropriately is critical for improving population health.

Throughout this report, **health outcomes** and **drivers of health** can be differentiated by the icons accompanying each entry, as seen at left.

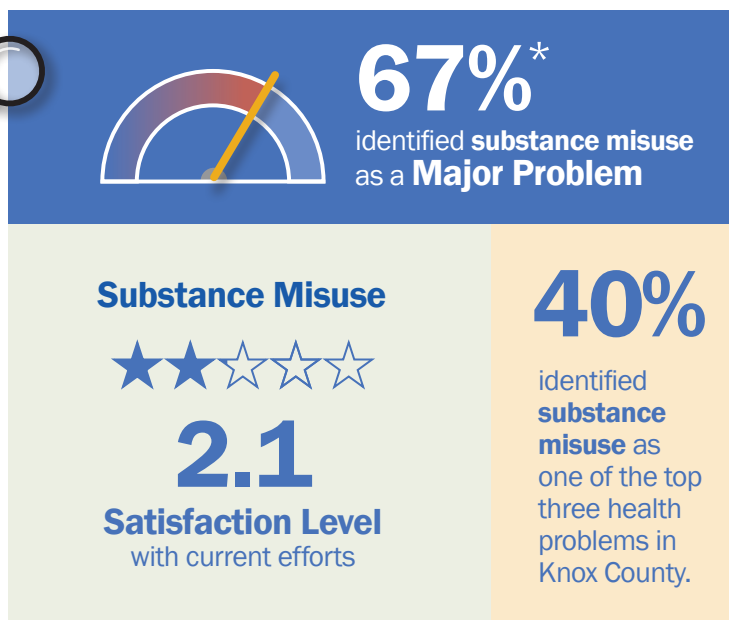
1. Substance Misuse

Define: Substance misuse was the No. 1 perceived health problem according to Knox County residents. The American Public Health Association defines substance misuse as the use of illegal drugs and inappropriate use of legal substances, such as alcohol and tobacco.³



Driver of Health: Substance misuse is a driver of health in the health behavior category. Excessive use of illicit drugs can change the brain in ways that make it hard to quit and can lead to a substance use disorder.

Results:



*Discussed in both focus groups and key informant interviews.

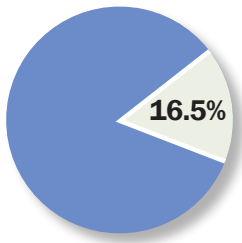
Respondents indicated several barriers to accessing substance misuse treatments or resources.

“There are resources out there, but people don’t know what the resources are. They’re not connected together. They’re not getting the information to the people they need to.”

“Insurance is a big barrier, so whether you don’t have insurance at all or their insurance limits the treatment they’re able to receive, that’s a huge barrier. ...”

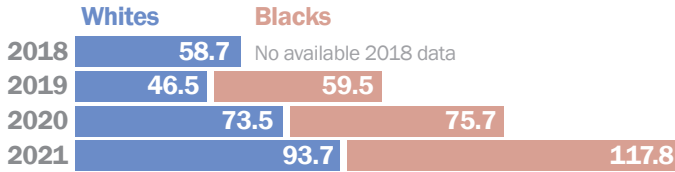
“There’s just more need, too, for accessible beds in recovery and treatment centers. It seems like when somebody’s trying to get in there’s always a wait.”

Substance Misuse Data



Nationally, **46.3 million people** aged 12 and older (or 16.5% of the population) have had a substance use disorder in the past year.⁴

Knox County overdose death rate, per 100,000⁵



As noted in the data collected from the University of Tennessee SWORPS:

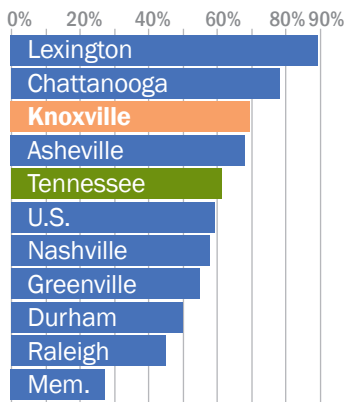


Pain reliever misuse rate and methamphetamine usage is higher than national and state averages.

Pain reliever misuse, past 12 months



Methamphetamine usage, past 12 months



Source: National Drug Survey on Drug Use and Health, 2016-2018

Opioid prescriptions have decreased over the past several years, with few individuals misusing them. In the bar graphs above, pain reliever misuse rate (4.2%) remains higher than most peer cities. Methamphetamine usage (70%) is nearly 17% higher than pain reliever misuse.

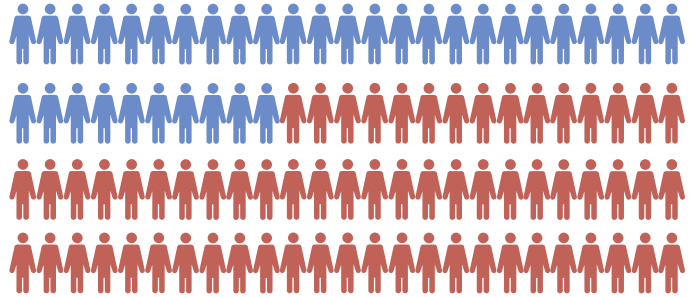
Opioid prescriptions for every 100 persons in Tennessee, 2016-2020⁶



Naloxone deployment.⁷

Naloxone was deployed in Knox County by first responders a total of 7,786 times from January 1, 2017 to December 31, 2021.

An emerging trend for Knox County, is the use of multiple substances, not only prescription drugs.⁸



Polypharmacy, was involved in **65%** of drug-related deaths in Knox County in 2022. This is when more than one drug is responsible for death.⁸

Economic Impact



Substance misuse can play a large role in the overall economic prosperity of an area. On an individual level, substance misuse can lead to numerous negative health outcomes with long-lasting effects. On a community level, substance misuse can impact the health of a labor force. **Economically speaking, substance misuse costs the United States \$232 billion in health care costs and \$740 billion overall.**³

Upstream Solutions

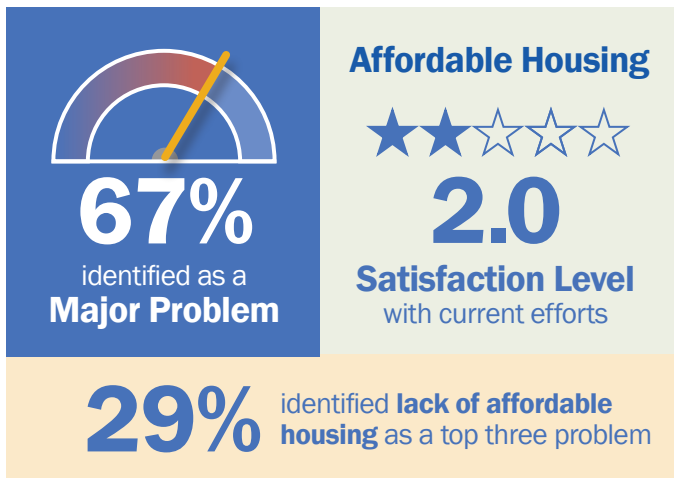
- Addressing the major social determinants of health such as equitable access to health care, education, mental health services, and the physical environment of an individual can aid in combating substance misuse.
- Encouraging protective factors in relation to substance misuse can be an essential piece in tackling this health priority. Some important protective factors include family support or strong coping skills.
- Aligned with the Healthy People 2030 objectives, some direct solutions include increasing referrals after someone visits the emergency department due to substance misuse, and increasing the rate of those with an opioid disorder who receive medication for addiction treatment.⁹

2. Affordable Housing

Define: According to the U.S. Department of Housing and Urban Development (HUD), affordable housing is defined as housing in which the occupant is paying no more than 30% of their gross income for housing costs, including utilities.¹⁰

Driver of Health: Access to affordable housing is a major driver of health. The lack of affordable housing can affect both the physical and mental health of an individual. If most of a household income is spent on housing it can affect other important aspects of life including the ability to afford healthy food, transportation, health care, and an increase in health and safety risks.¹¹ It is also important to note that the lack of affordable housing is one of the main contributors to homelessness.¹²

Results: Survey respondents aged 25-34 considered the lack of affordable housing as the No. 1 problem. Much of the discussion in both focus groups and key informant interviews centered on young adults who are employed yet unable to find affordable housing, specifically noting that the wages they are making are not in line with the current cost of rent.



“I’m a young adult. I’m in my mid-twenties and actually just recently, about two and a half months ago, my rent went up in my apartment and I had to take on a roommate to kind of alleviate some of the stresses. And I don’t have a bad job. I don’t have an amazing job either, but there needs to be some sort of rent control because my rent shouldn’t have went [sic] up \$280 in two months.”

“Where are you going to be able to buy a \$250,000 house on \$14-\$15 per hour? You’re not. You’re forced to rent a house from somebody that’s just a little less than a mortgage that you could afford and it’s probably not a very good house. ... It’s just a bad situation all around.”

Additionally, many participants noted the difficulties that those with disabilities face when trying to find affordable, Americans with Disabilities Act (ADA)-compliant housing.

Discussion also focused on the long waitlist for subsidized housing, and how certain populations still face discrimination.

Economic Impact

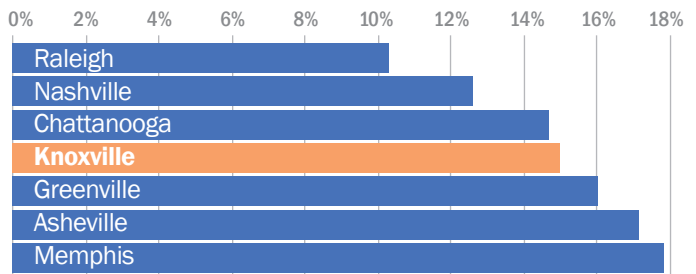


According to the Department of Health and Human Services, the federal poverty level (FPL) for 2023 is \$30,000 for a four-person home.¹³



In the Knoxville MSA, 14.6% of the population is earning below the FPL, which is a median observation in comparison to its peer cities.

Population Earning Below the Federal Poverty Level



Source: 2020 American Community Survey

The 2023 State of Housing Report shows several key data points as it relates to rent and mortgage prices in the East Tennessee and Knoxville areas.

2023 State of Housing Report¹⁴

- Knoxville real estate listing prices now exceed the national average.
- While home price growth is slowing, it still remains above the historic average. In the Knoxville metro area, home prices rose by 15.9% from the fourth quarter of 2022.

- The lack of housing inventory also plays a role in pricing, and it is estimated that home prices will have increased from 3% -5% in 2023.
- Rent is estimated to increase by 4% in 2023. The average rent in the fourth quarter of 2022 was estimated at \$1,382 in the Knoxville metro area.

Data from the Baker Center report in 2020 indicated that Knoxville was a relatively affordable place to live. However, there have been significant changes over the past several years. One of the main issues cited in the key informant interviews is a lack of affordable housing in addition to low inventory on the housing market in Knoxville.

According to the Knox Area Association of Realtors, there is currently a lack of 22,000 dwelling units.

U.S. Census Bureau Data¹⁵

Total number of housing units in Knox County:

217,226

58.7%

of owner-occupied housing with a mortgage have a monthly housing cost of \$1,000-\$2,000

More than **46%** of Knoxville's renters have a cost burden, meaning they are putting more than 30% of their income toward a rent payment.



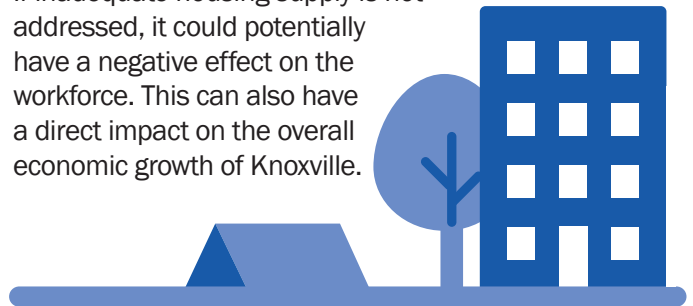
Knoxville is affordable in comparison with its peer cities, but because of high demand for affordable housing, rent and mortgage rates are increasing at a rate not matched by wages. Both rent and mortgage increases have been a direct result of slower economic growth, high inflation, and economic uncertainty in 2022.¹⁴

One of the largest contributing factors to homelessness is lack of affordable housing.¹²

Approximately 7,796 individuals received homeless services in 2020.¹²

According to the Knoxville Homeless Management Information System (HMIS), most of the clients using their services are aged 25-55.

Unstable housing or homelessness can lead to overall stress or mental health issues. This can impact being able to go into a workplace or find stable employment. If inadequate housing supply is not addressed, it could potentially have a negative effect on the workforce. This can also have a direct impact on the overall economic growth of Knoxville.



Upstream Solutions

- Utilize and expand local resources to ensure people can remain in their homes and avoid evictions. This includes providing resources for landlords as well (many people have been driven to the edge of eviction by the COVID-19 pandemic).¹⁶ Some resources, such as the City of Knoxville's Affordable Housing Program, help fund the rehabilitation of existing homes. Additionally, the program can assist in providing grant opportunities to build homes to sell to individuals or non-profits to be used for affordable housing.
- Increase and preserve existing affordable housing. This solution requires partnerships between local authorities, zoning, permitting, codes enforcement, and even environmental health officials.¹⁶

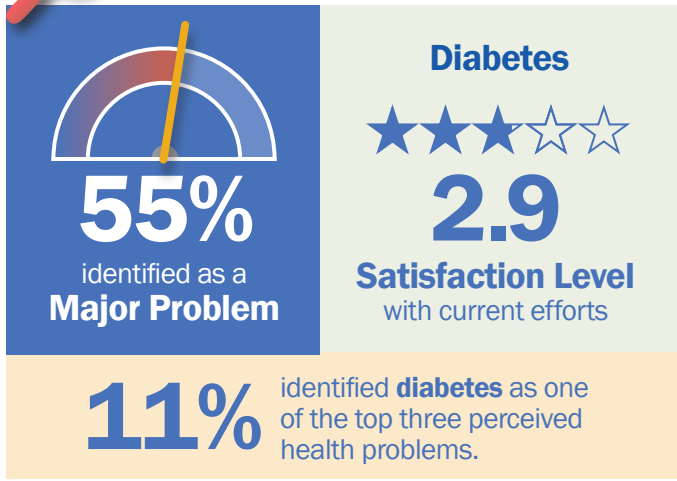
3. Diabetes

Define: Diabetes is a chronic condition that affects how your body turns the food you eat into energy. When you eat, your body breaks down the food into glucose and releases that into your bloodstream.¹⁷ An increase of sugar in the bloodstream alerts the pancreas to release insulin and signals the blood sugar to be used for energy.¹⁷ People with diabetes are unable to make or use insulin efficiently. There are three main types of diabetes: type 1, which is an autoimmune disease that often develops early in life; type 2, that develops over the course of many years and is often related to lifestyle factors; and gestational diabetes that can occur during pregnancy.

Health Outcome/Driver of Health: Diabetes is a health outcome in which type 1 diabetes is genetic, and type 2 diabetes can be common among people who are overweight or obese.¹⁸ Diabetes can also be a driver of health as it can lead to other health problems.



Results: Participants identified diabetes as a major problem, particularly in education and outreach efforts.

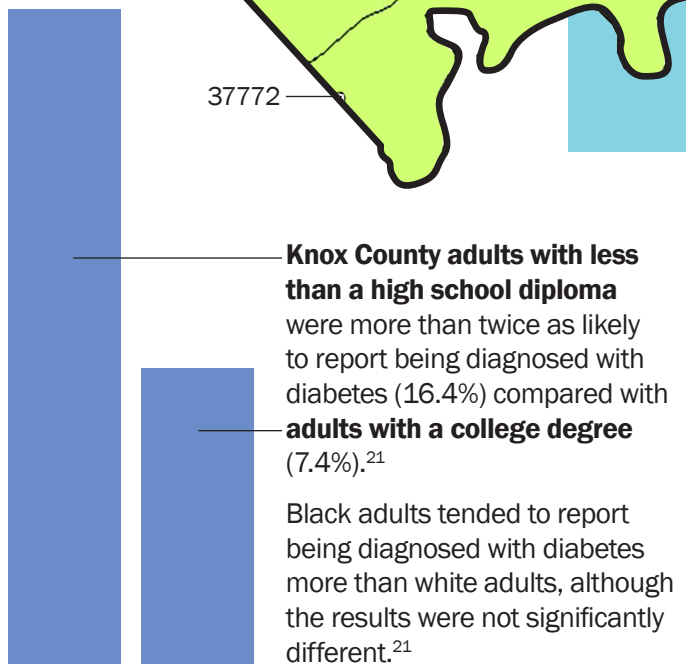
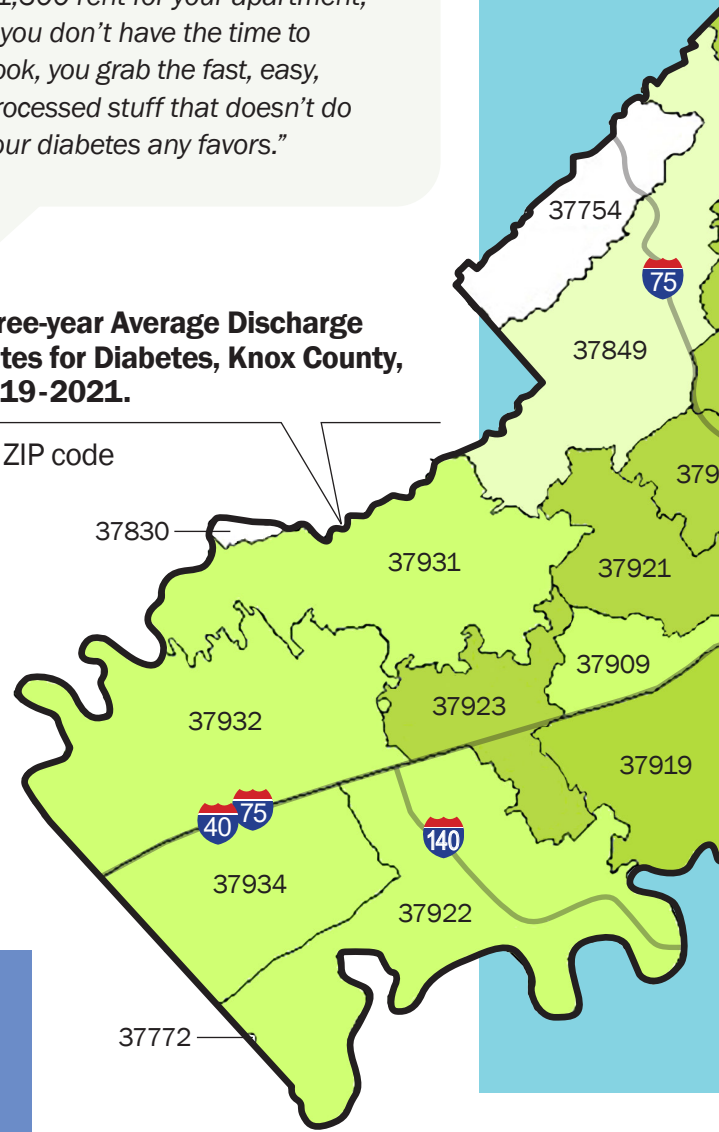


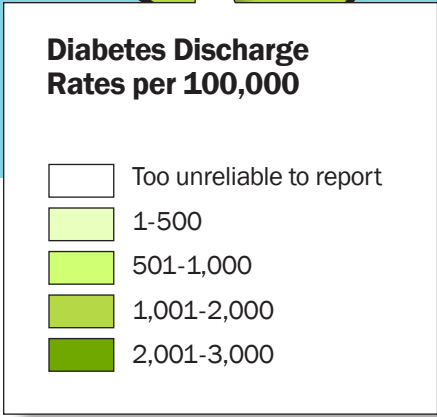
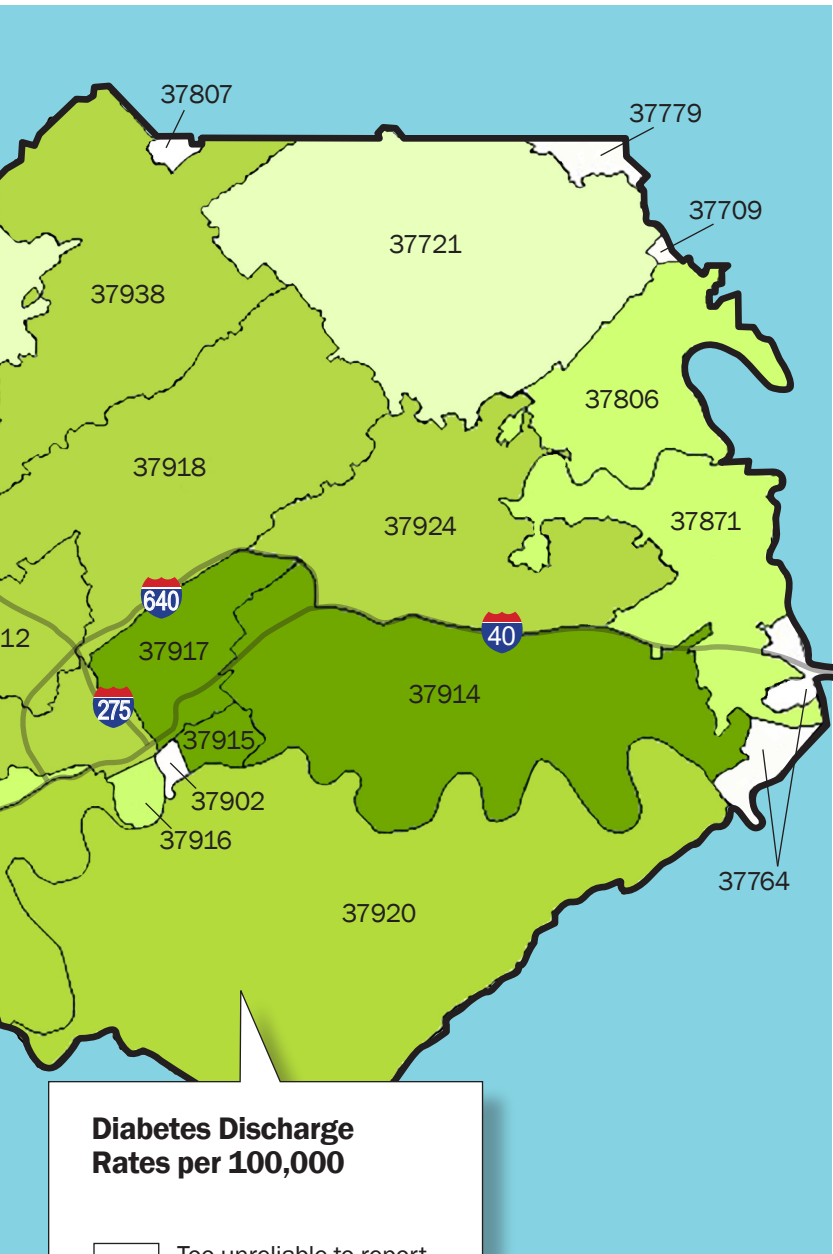
Several respondents noted **access to healthy foods** as a barrier to preventive measures in relation to diabetes. Eating and drinking processed foods has been linked to an increased risk of Type 2 diabetes. Therefore, it is important to incorporate whole foods such as fruits and vegetables as a preventive measure.¹⁹

“You have to have the energy and time to be able to cook and if you’ve got two jobs to afford the \$1,300 rent for your apartment, if you don’t have the time to cook, you grab the fast, easy, processed stuff that doesn’t do your diabetes any favors.”

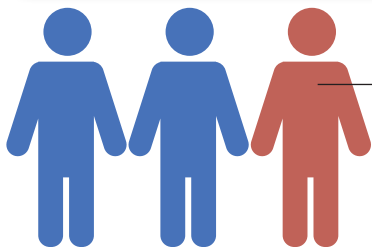
Three-year Average Discharge Rates for Diabetes, Knox County, 2019-2021.

By ZIP code





Source: 2019-2021 Knox County Hospital Discharge Data provided by the Division of Policy, Planning, and Assessment, Tennessee Department of Health²⁰



Prediabetes in the U.S.²¹

- One out of three people have prediabetes.
- 90% of those don't know they have prediabetes.

Economic Impact



Knoxville has a higher rate of chronic illness amongst its peer cities and has the second highest percentage of people diagnosed with diabetes (14%) with the other peer city average at 11.7%.



The Baker Center report from the University of Tennessee shows the implied excess cases of diabetes in Knoxville costing more than \$300 million a year. **Diabetes is the most expensive chronic condition in our nation, costing \$327 billion annually.**

Breaking down the \$327 billion, \$237 billion of that is spent on direct medical costs, and \$90 billion is the cost of reduced productivity.²²

Upstream Solutions

- Type 1 diabetes: Currently, there is no way to prevent type 1 diabetes since it is caused by an autoimmune reaction in the body. However, there are ways to treat it successfully through healthy lifestyle, managing blood sugar, and regular check-ins with your doctor.²³ Additionally, as type 1 diabetics must take insulin to manage their glucose levels, it is imperative that people with this condition have access to affordable insulin medication. This includes capping the price of insulin at an affordable price for everyone, as some drugmakers have already done.
- While not all risk factors for type 2 diabetes are preventable, changes in lifestyle, weight loss, and physical activity can have a large impact. Additionally, health promotion policy expansion can encourage people to become more physically active and make healthier food choices.²⁴
- Urban planning in the community and work environments including greenways, parks, and sidewalks can aid people in becoming more physically active in their everyday life.²⁴
- Working with the food industry on a national and local level to use healthier ingredients in food and limiting use of sugar, salt, saturated fats, and processed foods overall.²⁴

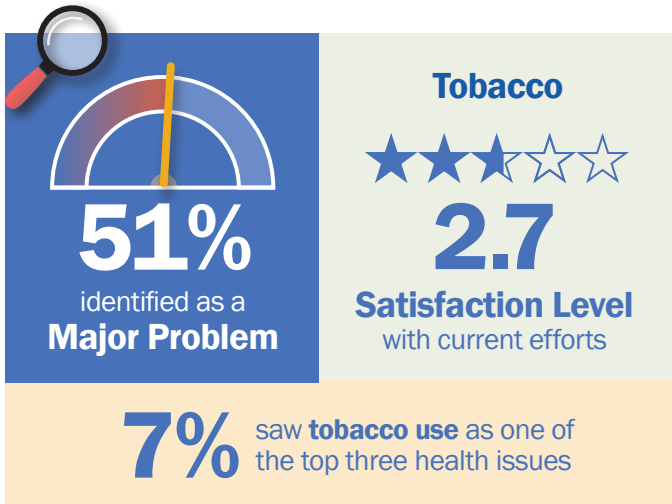
4. Tobacco

Define: The use of tobacco is one of the leading causes of preventable disease. While it is most often associated with cigarettes, tobacco is also included in a variety of other products such as smokeless tobacco and pipe tobacco.²⁵ Additionally, electronic cigarettes, including vapes, vape pens, and e-pipes, are also considered to be forms of tobacco use as they are electronic nicotine delivery systems (ENDS).²⁶ In the United States, more than \$240 billion is spent each year to treat diseases related to smoking.²⁵



Tobacco is a **driver of health** because it has several harmful effects that can lead to many chronic health conditions such as cancer, heart disease, and diabetes.

Results: Knox County residents identified tobacco use as a major problem.



Compared to its peer cities, Knoxville has the second highest rate of respondents saying they smoke cigarettes on a daily basis

Respondents were also concerned about the smoking they had observed in public or recreational areas, even when there was signage indicating a non-smoking area.

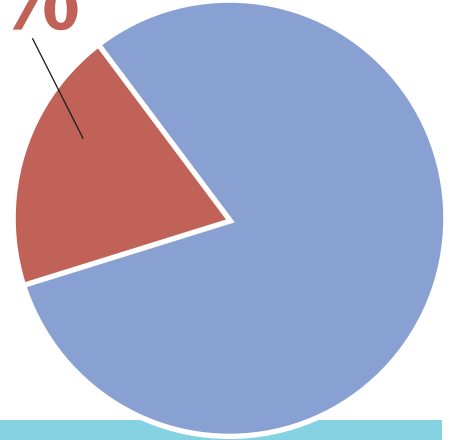
“There’s [sic] playgrounds we can’t go to. There’s a couple that have great signs that say no smoking. ... It makes it hard to be out and enjoy our community just because of the number of smokers around us.”

Knox County Student Tobacco and E-cigarette Use²⁷

In 2022 ...

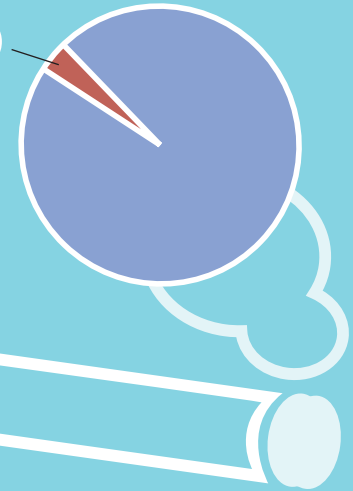
20.3%

used some form of tobacco, including electronic vapor products, cigarettes, cigars, chewing tobacco, or smokeless tobacco products during the past 30 days.



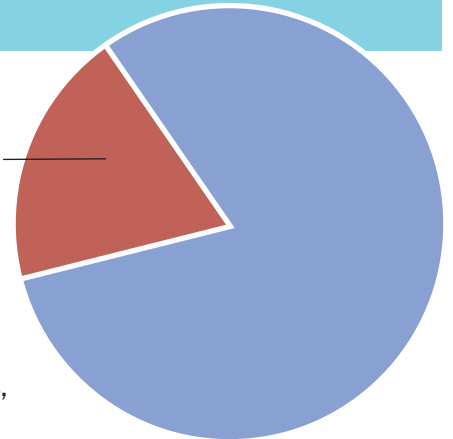
3.6%

of students smoked cigarettes on one or more days during the past 30 days.²⁷



18%

of the students used an electronic vapor product (including e-cigarettes, vapes, vape pens, e-cigars, e-hookahs, hookah pens, and mods) during the past 30 days.²⁷

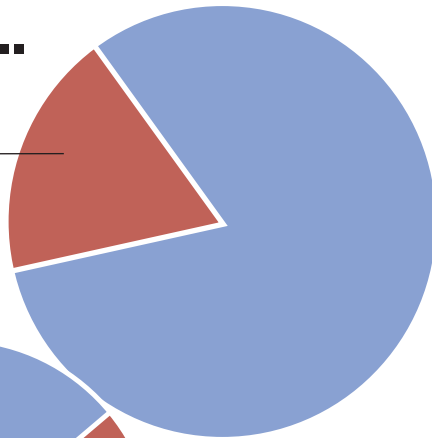


Knox County Adult Tobacco and E-cigarette Use²⁸

In 2021 ...

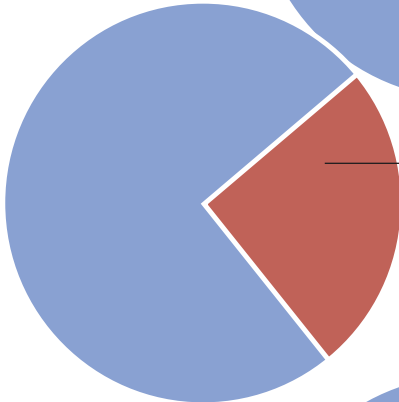
18.7%

of adults were smokers in Knox County.²⁸



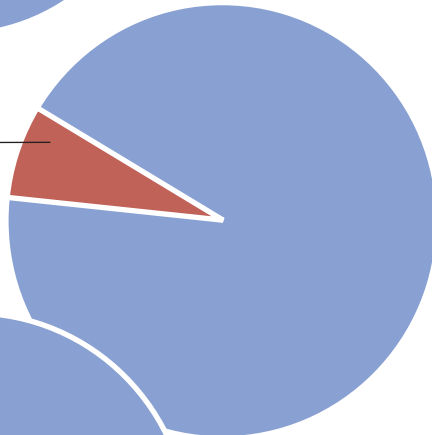
26.2%

Knox County adults reported being former smokers.²⁸



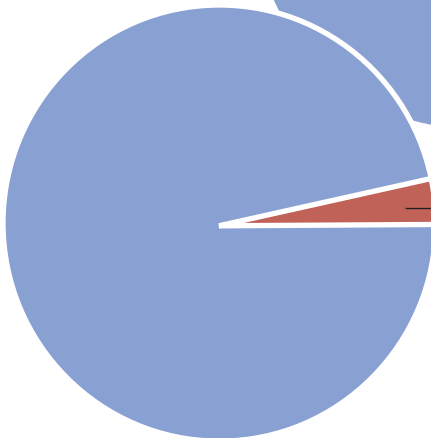
6.8% of

Knox County adults were e-cigarette users.²⁸



3.7% of

adults reporting using smokeless tobacco daily in Knox County.²⁸



While the data show that the rate of smoking has declined, **vaping rates have increased over the past few years particularly among youth.** The vaping rate increase could be linked to marketing strategies used to sell vaping devices, as well as the perception that they are not as harmful as smoking a cigarette.

Economic Impact



Tobacco is known to cause several poor health conditions costing billions of dollars every year for treatment. In addition to the cost of treating people for tobacco-related diseases, **there is also a**

\$180 billion estimated loss of productivity from smoking-related premature death.²⁹

According to the CDC, tobacco users have an increased risk of becoming ill, and this can affect the workplace due to absences.

Upstream Solutions

- Combatting tobacco and electronic vapor product usage can look different for various populations and age groups.
 - For adults, studies have shown that higher taxes on cigarettes reduces smoking. Additionally, instituting stricter laws on purchasing tobacco and electronic vapor products and restricting where they can be used reduces use.³⁰
- Interventions that work to delay the initiation of smoking have shown to be more effective than education on the dangers of smoking and vaping.³⁰ This can be done by increasing the minimum age to purchase tobacco products, as many states have done.
- Fostering the protective factors against smoking and vaping can be effective in prevention. Some protective factors include modeling healthy behaviors in a household or participating in a team sport.^{30, 31}

5. Mental Health

Define: Mental health affects every part of our lives and impacts our overall health.³² Mental illness, such as depression, can lead to other long-lasting health issues such as diabetes and stroke.³² There is no single cause for mental illness and mental health can change over time depending on various factors such as changes in lifestyle or job status.³²

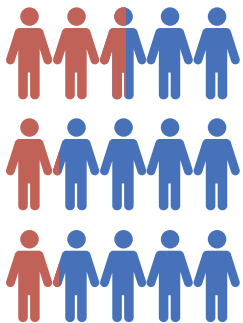
There are several risk factors that can contribute to having a mental health condition:³³

- Adverse childhood experiences (ACEs) or trauma history
- Chronic medical conditions
- Use of alcohol or illicit substances
- Being lonely or feeling isolated
- Social and environmental factors³⁴
- Biological factors such as brain chemistry or family history³⁴



In 2022, **39.4%** of Knox County Schools high school students felt so sad or hopeless that it stopped them from doing their usual activities for two or more weeks in a row during the previous 12 months.²⁷

The Knox County Health Department’s Mental Health Report shows that the most urgent issues affecting overall mental health include childhood trauma, anxiety, and homelessness.³⁴



- More than 50% of Americans will be diagnosed with a mental illness at some point in their life.
- More than 1 in 5 adult Americans live with mental illness.
- More than 1 in 5 youth (aged 13-18) currently or at some point in their lives have had seriously debilitating mental illness.³³

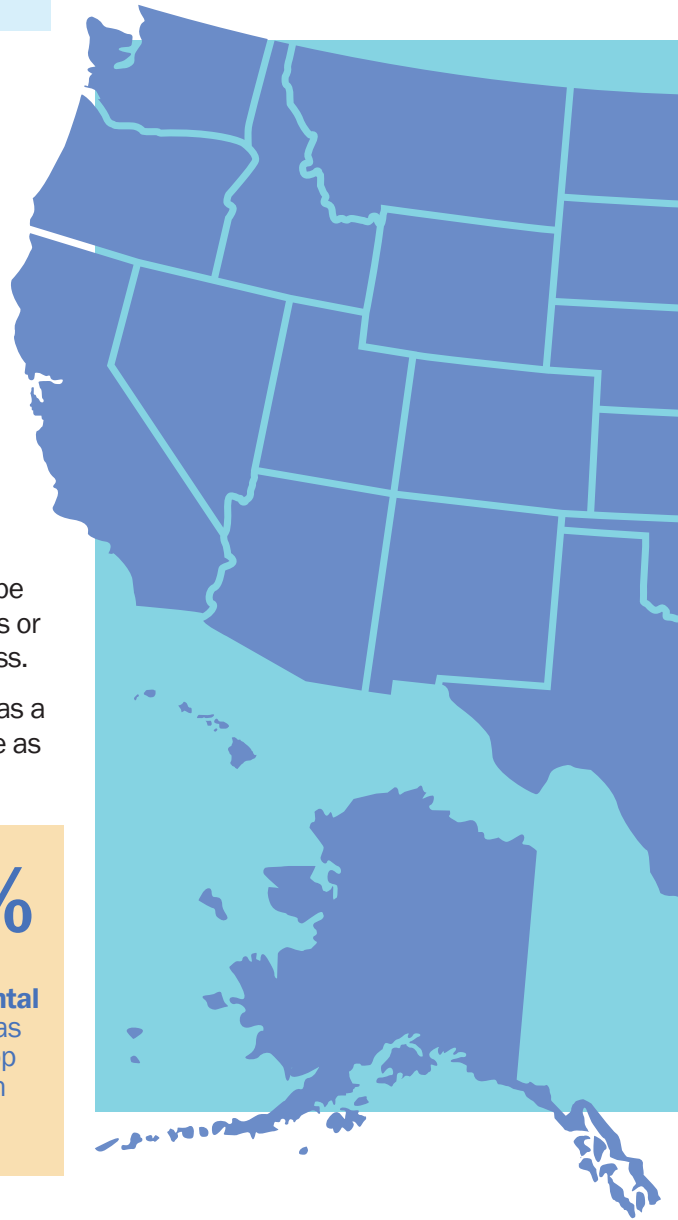


Driver of health/health outcome: Mental health can be a driver of health or a health outcome, due to stressors or chronic health conditions that can lead to mental illness.



Results: Knox County residents identified poor mental health as a major problem, particularly citing access to mental health care as a major concern.

<p>50% identified as a Major Problem</p>	<p>Mental Health</p> <p>★ ★ ☆ ☆ ☆</p> <p>1.8 Satisfaction Level with current efforts</p>	<p>25% identified access to mental health care as one of the top three health problems.</p>
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Several themes were seen throughout the key informant interviews and focus groups that included:

Barriers to Care and Transportation

“It is no secret there are some populations, especially in rural areas, who just don’t have a lot of providers in the area and oftentimes we have individuals who are having problems with transportation.”

Lack of Resources and Staff Available to Accommodate Those with Mental Illness



Tennessee ranks
46th
(out of 51)
for mental health
workforce availability.³³

“The demand seems to be infinite, and the supply of workforce seems to be finite, so it’s really a challenge to keep up with that demand.”

Some respondents cited the state of their mental health during the COVID-19 pandemic.

“Whether it was because of necessary isolation that people experienced in order to mitigate the spread of the disease or the sort of long-term impacts of just the discord in our community and the stress that some people are feeling around the lack of connectedness.”

Economic Impact



Mental illness can affect a person’s ability to go into work or school, leading to a loss of overall productivity. It is estimated that untreated mental illness costs the United States \$113 billion annually, due to the loss of productivity.³⁵ Oftentimes, the cost of treating a mental illness early on, before it leads to other chronic conditions, will be more effective than having it go untreated for an extended period of time. According to The Lancet Global Health, **for every \$1 invested in treatment for depression and anxiety, there is a \$4 return in better health and productivity.**

Upstream Solutions

- Incorporate trauma-informed care practices into educational systems early on, to aid in decreasing mental health challenges in the long run.
- Increase mental health screening practices in medical visits and education systems for youth, to include early intervention protocols.³⁶ This can aid in decreasing potential mental health challenges in the future.³⁶ The most recent data indicate that only 9.2% of primary care office visits had a screening for depression in people aged 12 and older.³⁷
- Sharing and utilizing mental health coping mechanisms can help prevent or mitigate future mental health challenges.

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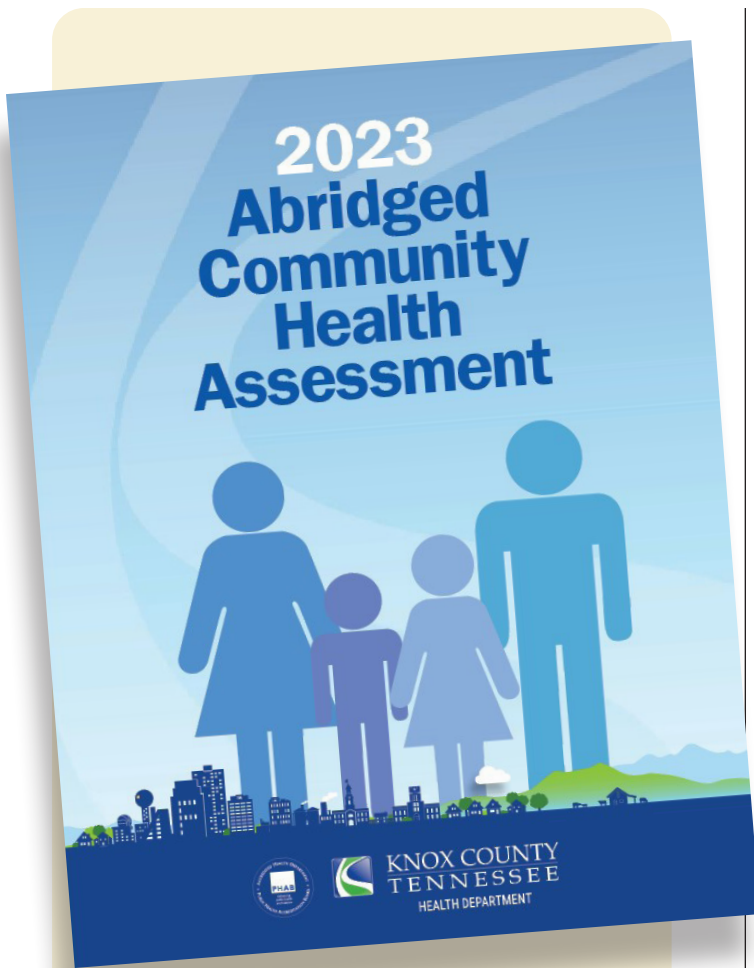
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Conclusion

This document provides a glimpse into the priority health issues identified by Knox County residents and demonstrates how health and the economy intersect in multiple ways. Overall, a community with poorer health conditions and outcomes is not able to be as economically efficient or successful. There is no singular intervention or program to improve the health in Knox County, but cultivating a healthy lifestyle and investing in preventive measures are two ways to create long-term change.

Identifying priority issues and solutions are crucial to improving our community's overall health and can be used as a reference point for future planning and policy changes.

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