



PERSPECTIVE

TO EFFECTIVELY RESPOND TO THE HEALTH NEEDS OF OUR COMMUNITY, WE MUST HAVE A DEEP UNDERSTANDING OF THE CHALLENGES WE FACE.

Much of what is responsible for an individual's health and that of the broader community takes place outside of healthcare settings. Therefore, for a hospital to conduct a community health needs assessment requires a lot of listening and convening leaders and organizations that work daily with the challenges facing our county. This most recent assessment is possible because of the willingness of dozens of stakeholders working with Roane Medical Center to identify the most significant issues facing the health and well being of Roane County.

All tax exempt, not-for-profit hospitals are required to conduct a community health needs assessment on a three-year cycle and make the results publically available. Although Roane Medical Center serves patients from multiple counties, more than 50% of its inpatient and outpatient business comes from Roane County. Thus, the assessment and its findings are limited to Roane County.

The Goals of the 2016 Assessment

1. Update the data for each of the 2013 assessment health priorities.
2. Determine if the 2013 health priorities will remain, be replaced or modified for 2017-2019.
3. Build upon the first assessment by developing an Implementation Plan for 2017- 2019 comprising actionable tactics that address the most significant issues identified.

Participants

Traditionally, public health was the role of the local health department. Faced with growing complex social issues and with health becoming a multifaceted challenge, the players in public health have expanded. No single organization has the resources or expertise to meaningfully create sustained health improvement. The emergence of the new public health system is made up of traditional and non-traditional members who, by collaborating, have a greater capacity to see improved health outcomes.

The input from the following members of the Roane County Public Health System have guided the discussion and decision-making processes which have led to the identification of the five most significant health priorities for Roane County. Participating organizations provided representation at planning meetings:

- Roane County Health Department
- The Bridge at Rockwood
- Anderson County Sheriff's Department
- Roane County Health Council
- Roane County Police Department
- Roane County EMS
- Mid-East Community Action Committee
- Roane County Parks and Recreation
- UT Extension Office
- Public Defender's Office
- Roane County Government
- Roane County United Way
- Roane County Anti-Drug Coalition
- Roane County Chamber of Commerce
- Roane County School System
- Roane Medical Center
- Boys and Girls Club
- Coordinated School Health
- Patient Family Council members (3)

The Roane County Public Health System

Civic Groups	Parks
Community Centers	Philanthropies
Corrections Organizations	Police
Cumberland County Health Department	Schools
Doctors	
Drug Treatment Programs	
Economic Development	
Employers	
EMS	
Environmental Health	
Faith Communities	
Fire Departments	
Home Health Agencies	
Hospitals	
Laboratory Facilities	
Libraries	
Local Government	
Mental Health Services	
Nursing Homes	

BUILDING UPON THE FIRST ASSESSMENT

The federal government modified its assessment guidelines in 2015 after taking into consideration the concerns of hospitals and health systems. Significant issues identified by the assessments are complex and at the core of many of the health issues facing communities. Many hospitals preferred not to completely re-do the first global assessment, because not enough time had passed to see measurable progress on initial priorities. The federal government gave hospitals the option of doing a completely new assessment or building upon the findings from the first assessment. Roane Medical Center chose the latter.

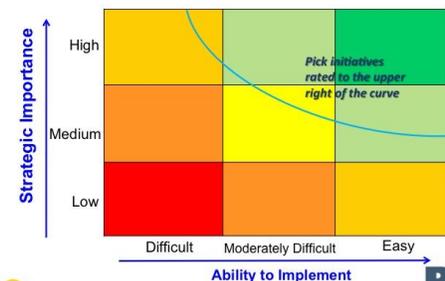
OUR PROCESS

Working with the University of Tennessee-Knoxville School of Public Health, a process was devised to “build upon” the first assessment. In the summer of 2016, the data for each of the five priority areas were compiled for the most recent year available, county demographics were updated, and a community health forum was held with 28 community leaders participating. An assessment tool, “Forces of Change,” was used from the Center for Disease Control’s national Mobilizing for Action through Planning and Partnerships (MAPP) framework. This assessment tool provided an analysis of trends, events and factors that influence the ability of a community to improve its health status.

The decision-making process for the second assessment was similar to the first. An assessment data team was formed with participants representing the hospital, health department, social service agencies and funders. Each member was given a data notebook containing a summary report from the Forces of Change workshop, updated demographics and updated data for each of the previously determined five priority areas. Over a two-week period the team met to discuss the data and, using a modified Hanlon process, answered and scored the priority areas based upon 1) How significant is this issue? 2) How serious is this issue? 3) How effective are the interventions? 4) How feasible are the interventions?

In validating the data and prioritizing the issues, three tools were used which ultimately resulted in the five most significant issues being re-validated, and modified.

Setting Implementation Priorities for Initiatives or Performance Measures



1. Methodology adapted from the Hanlon Method
2. Public Health Foundation – Setting Implementation Priorities (looking at an issue’s strategic importance relative to its ability to implement)
3. Nominal voting process, giving each team member 10 dots to vote for the remaining priorities

PRIORITIES FOR 2017 – 2019

1. Prescription Drug Abuse (including Neonatal Abstinence Syndrome)
2. Transportation
3. Obesity
4. Affordable Prescriptions

*Diabetes was a priority from the 2013 assessment. Since obesity is a primary driver of diabetes the data group felt diabetes could be better served by addressing obesity as a means of managing as well as preventing more diabetes.

*Neonatal Abstinence Syndrome was incorporated under the Prescription Drug Abuse priority.

*Although mental health did not make the top priority list the data group felt its importance still needed to be communicated as a barrier to a healthier Roane County.

A REVIEW OF DATA

Roane County Demographics

2013- 2016 Comparison*

Demographics	2013	2016	Tennessee 2016
Population	53,838	52,748	6,549,352
% Below 18 years of age	20.5%	19.8%	22.8%
% 65 and older	19.2%	21.2%	15.1%
% Non-Hispanic African American	2.8%	2.7%	16.8%
% Asian	0.6%	0.6%	1.7%
% Hispanic	1.4%	1.7%	5.0%
% Non-Hispanic White	93.3%	93.1%	74.6%
% Female	50.9%	50.9%	51.3%
% Rural	NA	51.0 %	33.6%

*Source – County Health Rankings

Forces of Change Summary Findings

Forum participants, through structured and timed discussions, gave voice to their perceptions of the forces impacting the health of Roane County. The group identified the top “most critical forces” and then determined the threats and opportunities created by those forces.

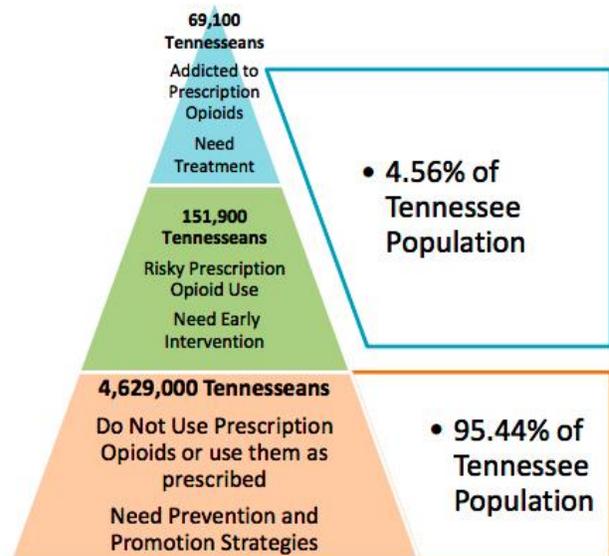
The most critical forces in Roane County:

- Substance Abuse
- Physical Abuse
- Family Support (lack of)/ Shifting family structure
- Healthcare accessibility and affordability
- Cultural shifts/ Influences

REVIEW OF DATA (CONTINUED)

Drug Abuse in the United States, Tennessee and Roane County

It wasn't that long ago that the discussion around drug abuse centered on alcohol, marijuana, LSD and cocaine. In the past decade a new epidemic has emerged and taken center stage and that is the use and abuse of prescription drugs, particularly opiates. Prescription drug abuse is a global problem, and the U.S. is the world's biggest addict. The abuse of opiates from prescription drugs and heroin is an epidemic in Tennessee with disastrous and severe consequences to Tennesseans of every age, including overdose deaths, emergency department visits, hospital cost, newborns with Neonatal Abstinence Syndrome, children in state custody, and people incarcerated for drug-related crimes.



1. How Significant is this Issue?

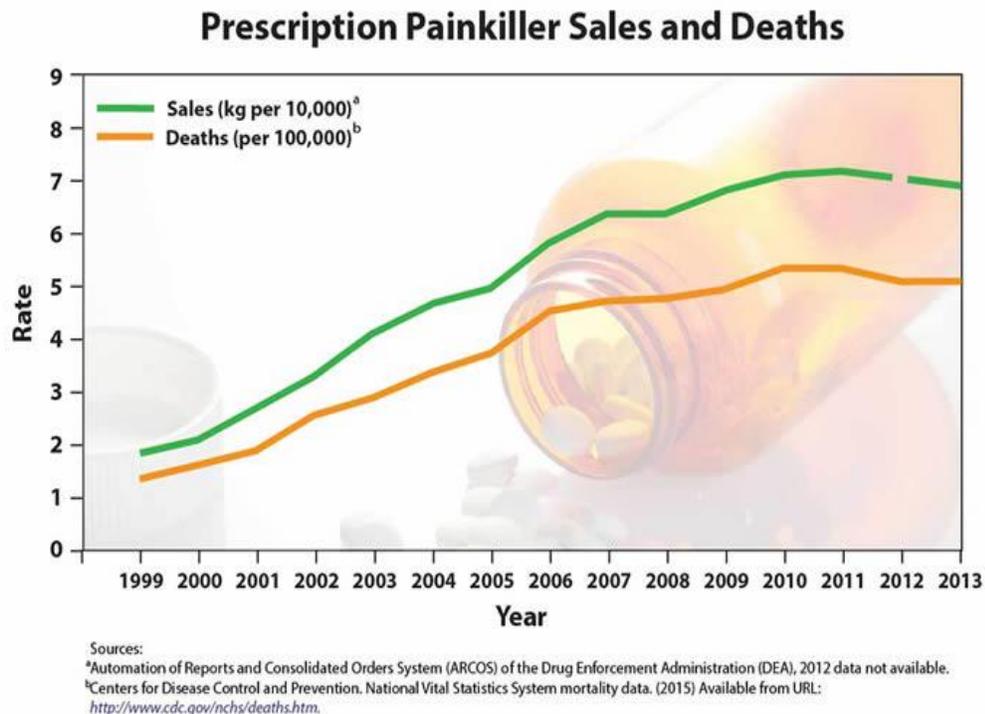
- Americans account for 99% of the world's hydrocodone (Vicodin) consumption, 80% of the world's oxycodone (Percocet and Oxycontin) and 65% of the world's hydromorphone (Dilaudid) consumption.
- An estimated 52 million Americans use prescription drugs for nonmedical reasons at least once in their lifetimes – with some using prescription drugs for recreational purposes.

- Doctors wrote 55 million opioid prescriptions for people 65 and older in 2013, a 20 percent increase from the last five years. The same year, doctors wrote more than 38.4 million prescriptions for antidepressants to people over the age of 65, a 12% increase over the last five years, according to USA Today.
- For many years, alcohol was the primary substance of abuse. However, in 2012, prescription opioids surpassed alcohol as the primary substance of abuse for people who received services funded through the Tennessee Department of Mental Health and Substance Abuse Services.
- Tennesseans were more than three times more likely than the national average to identify prescription opioids as their primary substance of abuse.
- Tennessee ranks **second** in the nation for prescription drug abuse.
- In 2013, according to the Tennessee Bureau of Investigation, Tennessee led the nation in meth use. In the first 9 months of 2014 law enforcement agencies seized 813 meth labs in Tennessee, the second highest in the nation.
- In Tennessee people addicted to opioids are more likely to be married, employed, and have more than 12 years of education.
- Tennessee Department of Health data show that 1,451 people died from drug overdoses in the state in 2015, the highest number of overdose deaths ever recorded.
- There were 31 drug overdose deaths in Roane County during 2016. This is a 63% increase from 2015 (medical examiners office).
- In 2015, 7% of prescription claims in Roane County were for opioids.

2. How Serious is This Issue?

- In Tennessee deaths attributed to prescription drug overdose have risen by 200 percent since 1999.
- The public burden spending on substance abuse in Roane County in 2014 was \$11,485,700.
- 73,4% of substance abuse treatment admissions for Roane County citizens were for prescription drug abuse (TDMHSAS-as reported by facilities receiving funding from the state).
- Over the last 10 years, the number of newborn babies suffering from drug dependencies at birth (NAS) has soared by 1,000 percent.
- More than 50% of the children removed from their parents by the Department of Children's Services were taken from parents experiencing drug problems.
- If the state were to provide treatment and rehabilitation for every prescription drug addict unable to pay for services, it would cost Tennessee taxpayers approximately \$28 million.

- Meth is costing Tennessee taxpayers more than \$1 billion a year. In 2013, meth cost the state \$1.6 billion to cover the costs of investigations, chemical clean-ups, incarcerating suspects, caring for children of meth adults and medical care for patients burned in meth labs.
- Another disturbing aspect of Tennessee's prescription drug problem has been the state's rate of heroin consumption. As an opioid, heroin is a cheap alternative for addicts who cannot afford oxycodone or hydrocodone.
- In 2012 and 2013, more people died from drug overdoses in Tennessee than in motor vehicle accidents, homicides or suicides.



3. How Effective are the Interventions?

- The Tennessee Prescription Safety Act of 2012 has several key provisions to assist in efforts to control the opioid epidemic such as requiring all prescribers and dispensers of controlled substances to register in the Controlled Substance Monitoring Database. All prescribers must check this database prior to prescribing opioids or benzodiazepines for a patient. As of January 2013, dispensers are required to report to the database every seven days all controlled prescriptions dispensed, as well as the source of payment.
 - Since 2013, the database has 33,000 individual's opioid and benzodiazepines prescriptions in it and has been accessed by prescribers and dispensers nearly three million times.
 - As utilization of the Controlled Substance Monitoring Database has increased, the number of people doctor shopping has decreased.

- Restricting access to cold and sinus medications that contain pseudoephedrine, the choice ingredient for meth makers, has resulted in a dramatic decrease in meth labs, in some cases up to a 90% reduction.
- National Prescription Drug Take-Back Day is a program of the Drug Enforcement Agency, which aims to provide a safe, convenient and responsible means for disposing of prescription drugs while also educating the public about the potential for abuse of medications. In 2012 Tennessee collected over 10,000 pounds of pills in its Take Back Days.
- Drug Courts in the past two decades have rapidly expanded and have demonstrated a 50-75% effectiveness in reducing drug use and crime.
- The Safe Harbor Act of 2013 establishes pregnant women as priority users of available treatment from publicly funded drug addiction treatment providers. There is no data available yet on the effectiveness of this Act.
- Methadone treatment has been shown to increase participation in behavioral therapy and decrease both drug use and criminal behavior. However, individual treatment outcomes depend on the extent and nature of the patient's problems, the appropriateness of treatment and related services used to address those problems, and the quality of interaction between the patient and his or her treatment providers.
- Successful treatment for addiction typically requires continual evaluation and modification as appropriate, similar to the approach taken for other chronic diseases. For example, when a patient is receiving active treatment for hypertension and symptoms decrease, treatment is deemed successful, even though symptoms may recur when treatment is discontinued. For the addicted individual, lapses to drug abuse do not indicate failure—rather, they signify that treatment needs to be reinstated or adjusted, or that alternate treatment is needed.

4. **How Feasible are the Interventions?**

- Largely due to the local efforts of concerned leaders, legislators, community-based agencies, law enforcement and the court system, Roane County residents are aware of the drug problems in their community.
- The Roane County Anti-Drug Coalition is part of the Drug-Free Communities program (DFC), a federal grant program that provides funding to community-based coalitions that organize to prevent youth substance use. The purpose of the DFC program is to strengthen collaboration among community entities and reduce substance use among youth. Its programs include the following:

The Prescription Drug Task Force is composed of local physicians, pharmacists, law enforcement officers, and non-profit agencies focused on decreasing prescription drug abuse in Roane County. The goal of the task force is to increase the community's awareness of prescription drug issues and to reduce the number of overdose deaths in Roane County.

P3 Clubs (Positive Peer Pressure) have been initiated in the high schools and middle schools in Roane County. P3 clubs follow the curriculum of the nationally recognized Students Against Destructive Decisions (SADD) program. The mission of SADD is to provide students with the best prevention tools possible to deal with issues surrounding underage drinking, drug use, impaired driving and other destructive behaviors. Funding for many P3 activities is provided by the East Tennessee Foundation.

Celebrate Recovery is a faith-based program designed to help people struggling with “hurts, hang-ups, and habits” by helping them navigate the recovery process. Celebrate Recovery is based on eight Recovery Principles that are aligned with the 12-step recovery process.

- The Narcotics Anonymous group Road to Recovery meets Mondays at 7:30 PM, Thursdays at 7:30 PM and Fridays at 7:30 PM at First Baptist Church, 215 North Kentucky Street, in Kingston.
- West Care Foundation, located in Harriman, is the county’s only local drug treatment center.
- Ridgeview Behavioral Health, located in Oak Ridge, provides the Mothers and Infants Sober Together program in Roane County.
- The Health Department provides Neonatal Abstinence Syndrome education programs.
- Roane County has a Recovery Court to divert eligible offenders into rehabilitation instead of incarceration.
- Roane County Anti-Drug Coalition has provided Naloxone to all law enforcement agencies in Roane County.
- There are three permanent drug disposal locations in Roane County. The Tennessee Dangerous Drug Task force reports that 256 lbs. of medication were collected in 2016.

DATA SOURCES

<https://www.drugwatch.com/2015/07/29/drug-abuse-in-america/>

<https://www.drugabuse.gov/publications/principles-drug-addiction-treatment-research-based-guide-third-edition/principles-effective-treatment>

Prescription for Success – Statewide Strategies to Prevent and Treat the Prescription Drug Abuse Epidemic in Tennessee. A report produced by the Tennessee Department of Mental Health and Substance Abuse Services, Summer 2014.

<http://wkrn.com/2013/04/25/tennessee-ranks-2nd-in-nation-for-prescription-drug-abuse/>

<https://www.tn.gov/news/36210>

<http://www.tennessean.com/story/opinion/contributors/2015/10/12/tennessees-meth-problem-war-wages/73824910/>

http://www.tn.gov/mental/policy/tmhsas.data_rpt.shtml

<https://www.cdc.gov/drugoverdose/epidemic/>

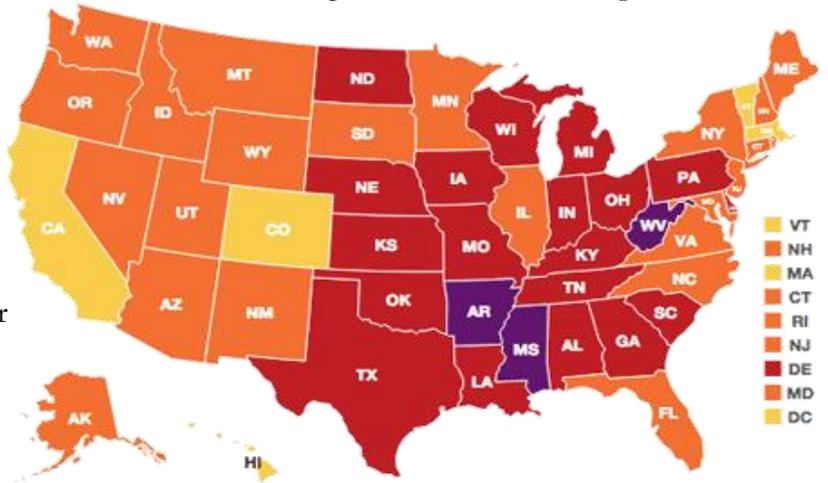
<http://www.nadcp.org/learn/facts-and-figures>

<https://www.recoveryranch.com/articles/drug-addiction/health-officials-scramble-to-respond-as-prescription-drug-abuse-epidemic-sweeps-through-tennessee/>

A REVIEW OF DATA (CONTINUED)

Obesity in the United States, Tennessee and Roane County

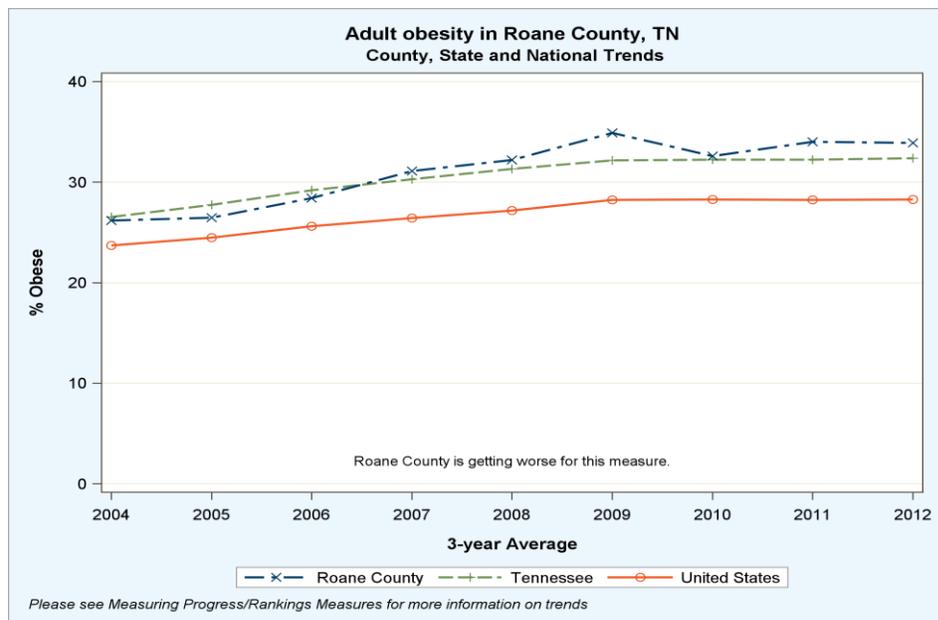
More people are overweight today than ever before. In fact, almost 70 percent of Americans ages 20 and older are overweight. About one-third of those are considered obese. “Overweight” and “obese” are both terms for having more body fat than what is considered healthy. Both are used to identify people who are at risk for health problems from having too much body fat. However, the term "obese" generally means a much higher amount of body fat than "overweight." The differentiation between overweight and obesity is based upon one’s Body Mass Index (BMI). BMI is calculated from height and weight measurements. A BMI between 25 and 29.9 is considered overweight, while a BMI of 30 or more is considered obese.



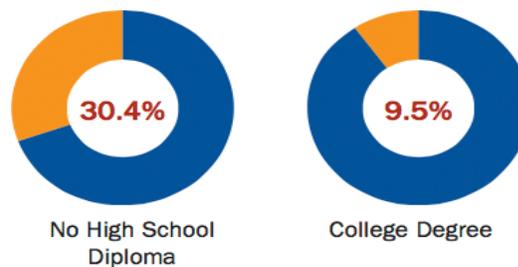
According to the most recent data, rates of obesity now exceed 35 percent in three states (Arkansas, West Virginia and Mississippi); 22 states have rates above 30 percent; 45 states are above 25 percent, and every state is above 20 percent. Arkansas has the highest adult obesity rate at 35.9 percent, while Colorado has the lowest at 21.3 percent. The data show that 23 of 25 states with the highest rates of obesity are in the South and Midwest.

1. How Significant is This Issue?

- According to *The State of Obesity: Better Policies for a Healthier America 2015*, Tennessee has the **14th highest** adult obesity rate in the nation. Tennessee’s adult obesity rate is currently at **31.2%**, up from **20.9%** in 2000 and from **11%** in 1990.
- Roane County in 2016 had a **34%** adult obesity rate. This rate has held steady since 2013.



- Individuals with lower income and/or education levels are disproportionately more likely to be obese. More than 33 percent of adults who earn less than \$15,000 per year are obese, compared with 24.6 percent of those who earned at least \$50,000 per year.

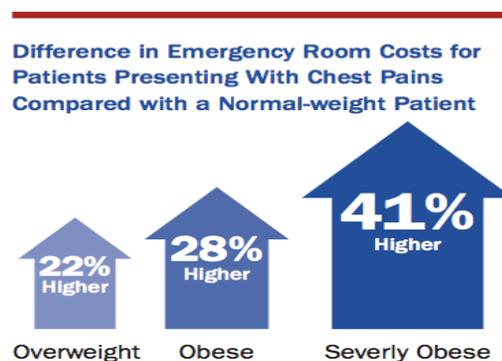


- Approximately 214,000 of 607,000 Tennessee children ages 10-17 years (35.3%) are considered overweight or obese according to BMI standards for specific age ranges.
- More than one in three (34.8%) white non-Hispanic children in Tennessee are overweight or obese, ranking the state 49th for this race subgroup, ahead of only West Virginia and Kentucky.

2. How Serious is This Issue?

- Obesity is one of the biggest drivers of preventable chronic diseases and healthcare cost in the United States. Currently, estimates for these cost range from \$147 billion to nearly \$210 billion per year. Additionally, obesity is associated with job absenteeism, costing approximately \$4.3 billion annually and with lower productivity while at work, costing employers \$506 per obese worker per year. As a person's BMI increases, so do the number of sick days, medical claims and healthcare costs. For instance:
- Obese adults spend 42% more on direct healthcare cost than adults who are a healthy weight.

- Per capita healthcare cost for severely or morbidly obese adults (BMI>40) are 81% higher than for healthy weight adults.
- Weight-loss programs were a \$2.5 billion-per-year business in 2014, and the industry is expected to grow.
- Moderately obese (BMI between 30 and 35) individuals are more than twice as likely as healthy weight individuals to be prescribed prescription pharmaceuticals to manage medical conditions.
- Individuals who are obese are more likely to have comorbid/chronic disease such as heart disease, hypertension, cancer and diabetes, which lead to decreased quality of life and early mortality.
- Cost for patients presenting at the emergency rooms with chest pain are 41% higher for severely obese patients, 28% higher for obese patients and 22% higher for overweight patients than for healthy weight patients.



3. How Effective are Interventions?

- Of thousands of weight-loss studies reviewed, Johns Hopkins researchers found only a few dozen are scientifically rigorous and reliable enough to be used in decision-making.
- In the few commercial programs tested in gold-standard trials lasting 12 months or longer, participants achieved modest, sustained weight loss.
- Based on their analysis of the studies, the researchers found Jenny Craig and Weight Watchers were backed by clinical trials that lasted 12 months or longer and showed program participants had a greater weight loss than nonparticipants.
- Nutri-System also produced more weight loss at three months than counseling or education alone, but the authors were unable to find any long-term trials of that program.
- Participants in the very-low-calorie meal replacement programs lost more weight than nonparticipants in trials lasting from four to six months. But the authors found only one long-term study, which showed no benefit from such a program at 12 months. The authors noted that very-low-calorie programs also carry higher risks of complications, such as gallstones.

4. How Feasible are Interventions?

- Of all the chronic conditions affecting a community, obesity is hard to miss. Anyone dealing with a weight problem is very aware of the limitations it carries and most would like to reduce their weight to a healthy level.
- Although there are no bariatric providers offering weight loss services in Roane County, that service is provided in the Covenant Health system, about an hour away.
- Federal matching funds provided by the Affordable Care Act make obesity screening and counseling available to people covered by federal health insurance exchanges and to some Medicaid recipients.
- The Health Department offers a Healthy Eating/Be Active class – 6 bi-weekly classes taught year round promoting physical activity, healthy cooking and food choices, and other healthy lifestyle behaviors.
- There are three Weight Watcher locations in Roane County.

DATA SOURCES

The State of Obesity: Better Policies for a Healthier America, a report from the Trust for America's Health (TFAH) and the Robert Wood Johnson Foundation (RWJF).

<http://tfah.org/reports/stateofobesity2015/release.php?stateid=TN>

The Healthcare Costs of Obesity, A Project of the Trust for America's Health and the Robert Wood Johnson Foundation. <http://stateofobesity.org/healthcare-costs-obesity/>

Tennessee State Obesity Data, Rates and Trends, <http://stateofobesity.org/states/tn/>

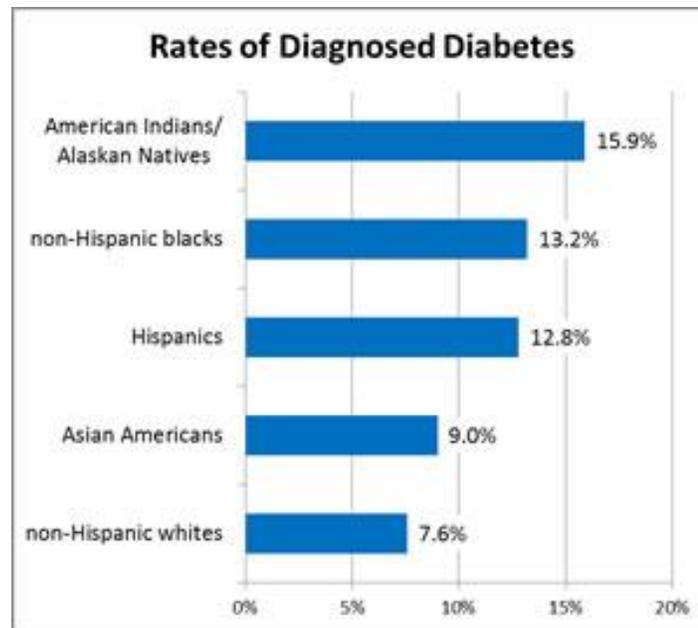
John Hopkins Medicine,

http://www.hopkinsmedicine.org/news/media/releases/few_commercial_weight_loss_programs_show_reliable_evidence_of_effectiveness_johns_hopkins_reports

Childhood Obesity Action Network, www.nichg.org/obesityaction network

County Health Rankings and Roadmaps, <http://www.countyhealthrankings.org/>

- According to a study published online in JAMA September 2015, nearly **50%** of adults living in the U.S. have diabetes or pre-diabetes, a condition where a person already has elevated blood sugar and is at risk to develop diabetes.
- According to WebMD, two problems in the U.S. — overweight or obesity and a sedentary lifestyle — are also two of the most common causes for diabetes.
- A new study finds that diabetes cases among Medicaid-enrolled patients increased 23 percent in states that expanded the program under the Affordable Care Act.
- Diabetes affects minority populations more often than white Americans.



2. How Serious is This Issue?

- The CDC projects that one-in-three adults could have diabetes by 2050.
- 1.4 million Americans are diagnosed with diabetes every year.
- Diabetes remains the 7th leading cause of death in the United States.
- 29.1 million people or 9.3% of the population have diabetes in the U.S.. Of this number 8 million are undiagnosed.
- After adjusting for population age differences, **cardiovascular disease death rates** were about 1.7 times higher among adults aged 18 years or older with diagnosed diabetes than among adults without diagnosed diabetes.
- After adjusting for population age differences, hospitalization rates for **heart attack** were 1.8 times higher among adults aged 20 years or older with diagnosed diabetes than among adults without diagnosed diabetes.
- After adjusting for population age differences, hospitalization rates for **stroke** were 1.5 times higher among adults with diagnosed diabetes aged 20 years or older compared to those without diagnosed diabetes.
- Diabetes was listed as the primary cause of kidney failure in **44%** of all new cases in 2011.

- About **60%** of non-traumatic lower-limb amputations among people aged 20 years or older occur in people with diagnosed diabetes.
- Diabetes may be underreported as a cause of death. Studies have found that only about 35% to 40% of people with diabetes who died had diabetes listed anywhere on the death certificate and about 10% to 15% had it listed as the underlying cause of death.
- People with diagnosed diabetes incur average medical expenditures of about \$13,700 per year, of which about \$7,900 is attributed to diabetes. People with diagnosed diabetes, on average, have medical expenditures approximately 2.3 times higher than expenditures would be in the absence of diabetes.
- The total estimated cost of diagnosed diabetes in 2012 is \$245 billion, including \$176 billion in direct medical costs and \$69 billion in reduced productivity.
- In 2012, the cost of diabetes in Tennessee for direct medical costs was \$3.62 billion and indirect costs such as lost work productivity were \$1.48 billion (Diabetes by the Numbers: Tennessee)
- In 2016, 88% of Medicare enrollees in Roane County were receiving diabetes monitoring by receiving HbA1C testing (County Health Rankings & Roadmaps: Tennessee)

3. How Effective are Interventions?

- According to the American Diabetes Association, nutritional choices and increasing physical activity has proven to delay and prevent the onset of type 2 diabetes.
- For people with diabetes, being physically active helps insulin work more efficiently and generally lowers blood glucose levels.

4. How Feasible are Interventions?

- Diabetes should have some moderate level of awareness in the community. It was identified as a top priority in the 2012 assessment.
- There are efforts to support individuals with chronic health care conditions such as diabetes to have greater access to insurance and preventive care to address health concerns and manage illness through the Affordable Care Act and TennCare. Having insurance provides access to services, tools, and education to help manage diabetes and turn around pre-diabetic states.
- The Medicare Diabetes Prevention Act provides the National DPP as a covered benefit for eligible Medicare beneficiaries who are at risk for developing type 2 diabetes (American Diabetes Association).
- Those individuals who do not have access to registered dietitians may access government websites for assistance in meal and activity planning. An example of such a website is myplate.gov/supertracker.
- Get Fit Tennessee offers resources online for healthy lifestyle choices.

- The Roane County Health Department offers a series of classes in diabetes and self-management. They also partner with UT Extension to offer a variety of health/nutrition classes such as the Dining with Diabetes.
- The Health Department will see uninsured diabetic patients in their primary care clinic and now offers a retinal screening program on a quarterly basis.

DATA SOURCES

www.tn.gov/health/topic/specialreports/roane

<https://www.cdc.gov/diabetes/data/statistics/2014statisticsreport.html>

<http://stateofobesity.org/diabetes/>

<http://www.diabetes.org/diabetes-basic/statistics/>

A REVIEW OF DATA (CONTINUED)

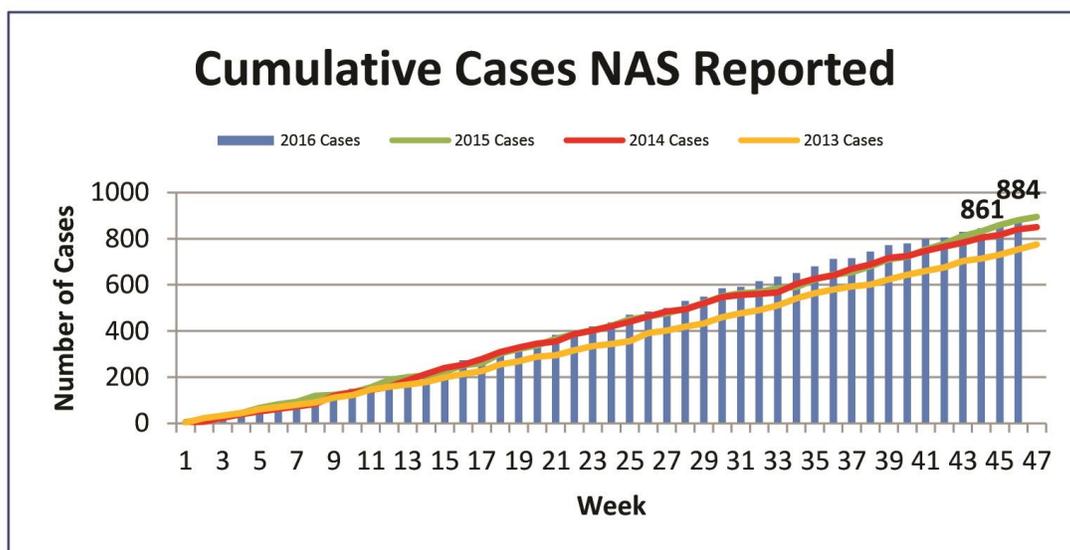
Neonatal Abstinence Syndrome in the United States, Tennessee and in Roane County

Neonatal Abstinence Syndrome (NAS) happens when a baby is exposed to drugs in the womb before birth. Withdrawal symptoms commonly occur in the infant 24-48 hours after delivery. NAS is most often caused when a woman takes opioids during pregnancy. The more common opioids are codeine and hydrocodone, morphine and oxycodone. Other drugs like antidepressants or sleeping pills can also be the cause of NAS.

1. How Significant is This Issue?

- Babies with NAS are more likely than other babies to be born with low birth weight, or have breathing difficulties, feeding problems and seizures. They usually have prolonged hospital stays.
- Taking opioids and other drugs during pregnancy can also increase the possibility of birth defects that can change the shape or function of one or more parts of the body.
- From January 1 through the end of November 2016 there have been 884 cases of NAS in Tennessee.

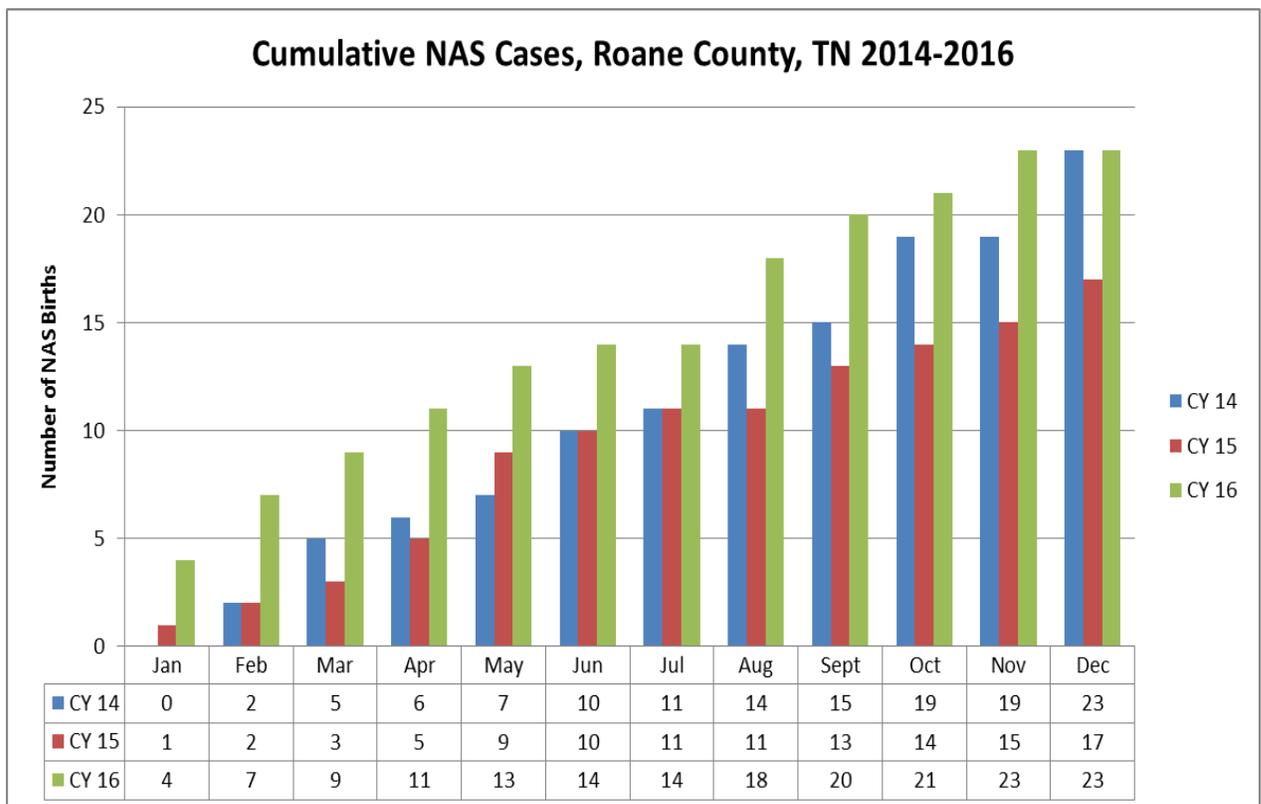
Tennessee Data



Jan – Nov 2016

Maternal County of Residence	# Cases	% Cases ²
Davidson	57	6.5
East	193	21.8
Hamilton	16	1.8
Jackson/Madison	3	0.3
Knox	83	9.4
Mid-Cumberland	108	12.2
North East	168	19.0
Shelby	4	0.5
South Central	41	4.6
South East	32	3.6
Sullivan	63	7.1
Upper Cumberland	84	9.5
West	32	3.6
TOTAL	884	99.9

- Compared to calendar year 2014, the incidence of NAS has maintained a significant increase each month in Roane County for 2016.



2. How Serious is This Issue?

- The rate of NAS nationally was 1.2 babies per 1000 births in 2000, 1.5 in 2003, 1.96 in 2006, 3.39 in 2009, and 5.8 in 2012.
- The average length of stay for a newborn with NAS is **17** days compared to **2** days for those without NAS
- The hospital costs for newborns with NAS were **\$66,700** on average compared to **\$3,500** for those without NAS.
- The cost to hospitals in 2012 was estimated to be **\$1.5 billion**. The majority of these charges (**81%**) were paid by state Medicaid programs, reflecting the greater tendency of opiate-abusing mothers to be from lower-income communities.
- In the majority of Tennessee NAS cases (79.1%), at least one of the substances causing NAS was prescribed to the mother by a health care provider.

3. How Effective are Interventions?

- Most babies with NAS who get treatment get better in 5-30 days. Longer-term effects of NAS on growth and development are yet to be determined.
- Not many rehab clinics will detox a pregnant woman and the few that do have long waiting lists.
- Most physicians recommend a gradual tapering of less harmful medications like methadone, paired with a comprehensive addiction treatment program. However, these programs are scarce.
- Tennessee was the first state to pass a “fetal assault” law punishing pregnant women who tested positive for opioids. The law was meant to help women get treatment and hold them accountable for child abuse. But doctors who treat addicts say Tennessee's experiment backfired, encouraging women to avoid prenatal care and exposing their babies to more risks while failing to reduce the astronomical costs of treating newborns who suffer from drug withdrawal. The law expired recently due to lack of support to continue it.

4. How Feasible are Interventions?

- “Mothers and Infants Sober Together” is a program administered by Ridgeview Behavioral Health in Oak Ridge, which provides the program services in Roane County.

DATA SOURCES

[http://www.marchofdimes.org/complications/neonatal-abstinence-syndrome-\(nas\).aspx](http://www.marchofdimes.org/complications/neonatal-abstinence-syndrome-(nas).aspx)

<https://www.drugabuse.gov/related-topics/trends-statistics/infographics-increases-in-maternal-opioid-use-neonatal-abstinence-syndrome>

<https://tn.gov/health/article/nas-update-archive>

A REVIEW OF DATA (CONTINUED)

Transportation Barriers to Healthcare Access

Transportation is a commonly identified barrier to care, but is understudied in terms of the detail needed to address more direct health and transportation policy interventions.

“You can provide the best care in the world, but it doesn’t matter if the patient has no way to get to it.”

1. How Significant is This Issue?

- Transportation barriers lead to rescheduled or missed appointments, delayed care, and missed or delayed medication use. These consequences may lead to poorer management of chronic illness and thus poorer health.
- Several studies have shown that transportation is a barrier to prenatal care, childhood preventive medical visits, cancer care, and the management of chronic diseases.
- According to the Roane Health Department director, the majority of the clients (65% or more) have transportation challenges coming for health department services.
- In 2012 and in 2013, three different community health needs assessments were conducted and in each transportation was identified as one of the most significant issues facing Roane County.
- As demand for transit service grows, tax revenues that support transit are shrinking at federal, state, and local levels. However, unlike roadway transportation, it is uncommon to fill these gaps with infusions from general funds.

2. How Serious is This Issue?

- Lack of access to affordable transportation is a major contributor to health disparities. It isolates low-income people from health care facilities and forces families to spend large percentages of their budgets on cars and other expensive options.
- People of color, households in rural areas, and people with disabilities face significant hurdles because many cannot drive and public transportation options are often unavailable, inaccessible or unreliable.

3. How Effective are Interventions?

- To promote greater parity in health care, transportation policy much shift away from new highway construction and toward other transportation modes such as expanding public transportation, walkable communities, and bicycle-friendly roads.

4. How Feasible are Interventions?

- ETHRA transportation program operates limited transportation services in Roane County. The program provides public and medical transportation. Residents are asked to schedule an appointment at least 72 hours in advance. Medical trips have priority. One-way trip is \$3.00 or \$6.00 for a round trip within the county of residence. An additional \$3.00 is charged for every county line crossed. Extra stops under 15 minutes are \$1.00. Extra stops over 15 minutes are \$3.00.
- Round-About-Roane, a senior transportation program, started service in 2016. This program is based on a successful model of using community volunteers to provide transportation for seniors.

DATA SOURCES

<http://www.civilrights.org/transportation/road-to-healthcare-parity.html?referrer>

<http://www.theatlantic.com/health/archive/2015/08/the-transportation-barrier/399728/>

Roane County Health Department and Roane County Anti-Drug Coalition

A SPECIAL THANK YOU TO OUR COMMUNITY ASSESSMENT DATA TEAM MEMBERS:

United Way of Roane County

Roane Medical Center

Roane County Health Department

The Bridge at Rockwood

Roane County Health Council

Roane County Anti-Drug Coalition

Mid-East Community Action Committee

Roane County Public Defender's Office

