PERSPECTIVE

"TO EFFECTIVELY RESPOND TO THE HEALTH NEEDS OF OUR COMMUNITY, WE MUST HAVE A DEEP UNDERSTANDING OF THE CHALLENGES WE FACE." – MARTHA BUCHANAN, MD, KNOX COUNTY HEALTH DEPARTMENT DIRECTOR

Much of what is responsible for an individual's health and that of the broader community takes place outside of healthcare settings. Therefore, a community health 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 leadership of the Knox County Health Department together with the Community Health Council, local healthcare providers, governmental agencies and dozens of stakeholders working collaboratively to identify the most significant issues facing the health and well-being of Knox 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. Knox County is blessed to have a progressive health department with the resources and expertise to conduct a comprehensive needs assessment every few years. Although Fort Sanders Regional and Parkwest Medical Center did not lead this effort, both organizations helped to underwrite part of the expense of the assessment, participated in planning meetings and helped establish the final most significant health priorities. Both Knox County hospitals derive their patient mix from multiple counties, however, more than 50% of its inpatient and outpatient business comes from Knox County. Thus, the assessment and its findings are limited to Knox County.

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 Knox County Public Health System have guided the discussion and decision-making processes which have led to the identification of the four most significant health priorities for Knox County. Participating organizations provided representation at planning meetings:

Community Health Council

Kindall Aaron, Coalition on Childhood Obesity
Kristy Altman, Knoxville Track Club
David Brace, City of Knoxville
Martha Buchanan, Knox County Health Department
Jim Dickson, YMCA of East Tennessee
Paul Erwin, University of Tennessee Department of Public Health
Alon Ferency, Heska Amuna Synagogue
Mark Field, Knoxville Chamber
Lara Fleming, The Trust Company
Gaye Fortner, HealthCare 21 Business Coalition
Pam Frye, Harmony Family Center
Ben Harrington, Mental Health Association of East Tennessee
Melissa Knight, InterFaith Health Clinic
Viren Lalka, Lalka Tax Service, LLC
Aneisa McDonald, Knox County Schools
Laurie Meschke, University of Tennessee Department of Public Health
Joe Miles, University of Tennessee Department of Psychology
Karen Pershing, Metropolitan Drug Commission
Debbie Pinchok, community volunteer
R. Mark Ray, Children's Ear, Nose & Throat Specialists,
PLLC Patricia Robledo, City of Knoxville
Warren Sayre, Summit Medical Group
Eve Thomas, Knoxville Police Department
Rosalyn Tillman, Pellissippi State Community College
Karen Tindal, community volunteer
Lisa Wagoner, Knox County Schools
Regina Washington, South College
Amanda Weber, Remote Area Medical
Carlos Yunsan, Kizer & Black, Attorneys
Ellen Zavisca, Knoxville Regional Transportation Planning Organization

Data Collaborative Group

Kathleen Brown, Knox County Health Department
Linda Daugherty, University of Tennessee Center for Applied Research and Evaluation
Mike Dunthorn, City of Knoxville
Gene Fitzhugh, University of Tennessee Department of Kinesiology Recreation & Sport Studies
Terri Geiser, Knox County Health Department
Ben Harrington, Mental Health Association of East Tennessee

Al Iannacone, Knox County Health Department
Jennifer Jabson, University of Tennessee Department of Public Health
Pat Kelly, East Tennessee Children's Hospital
Margaret Knight, University of Tennessee Department of Public Health
Tim Kuhn, Metropolitan Planning Commission
Alicia Mastronardi, Knox County Health Department
Rhonda McAnally, University of Tennessee Medical Center
Polly McArthur, University of Tennessee College of Nursing
Aneisa McDonald, Knox County Schools
Clea McNeely, University of Tennessee Department of Public Health
Laurie Meschke, University of Tennessee Department of Public Health
Joe Miles, University of Tennessee Department of Psychology
Michelle Moyers, Knox County Health Department
Agricola Odoi, University of Tennessee College of Veterinary Medicine
Karen Pershing, Metropolitan Drug Commission
Mark Prather, Knox County Health Department
Erin Read, Knox County Health Department
Warren Sayre, Summit Medical Group
Roberta Sturm, Knox County Health Department
Regina Washington, South College
Gary Young, Covenant Health

Community Health Assessment Process

The 2014-2015 Knox County Community Health Assessment was conducted under Together Healthy Knox (THK), an initiative of the Community Health Council. The Community Health Council was formed in 2012 after the first assessment and is made up of government appointees and volunteer community leaders. The charge of the Community Health Council is to prioritize Knox County health improvement opportunities based on data from ongoing community health assessments.

In 2014, the Knox County Health Department convened monthly data group meetings with assessment partners to organize and coordinate the qualitative and quantitative data collection efforts. The qualitative data consisted of 12 focus groups, 26 key informant interviews and a quality of life survey with more than 2,000 responses. A Behavioral Risk Factor Survey (BRFS) and Youth Risk Factor Survey (YRFS) were conducted as well. Epidemiology staff compared local and state level data, data from the surveys, and mortality and disease prevalence data. All data were evaluated and priority health issues were narrowed down to 14 topic areas that represent the 20 priority health issues for Knox County. Public input on a summary of the assessment was sought in person and online in June 2015.

In 2015 the Community Health Council assembled subject matter experts on the top 20 issues and held a retreat in June to score the health priorities by 1) size of the problem, 2) seriousness of the problem, 3) effectiveness of interventions, and 4) feasibility of available interventions in our community. The three highest-scored issues were adopted as the most significant health priorities for Knox County.

In August 2015, representatives from the Community Health Council and the Knox County Health Department met with area hospital executives and administrators of large physician practice groups to present the June 2015 retreat outcomes. There was overwhelming feedback that the fourth-highest scoring issue, mental health, needed to be included. Thus, the final top four priority goals are:

1. Increase access to mental health resources
2. Decrease opioid abuse
3. Decrease tobacco use among youth and pregnant women
4. Increase access to safe greenways, sidewalks, and parks

In the fall of 2015, the Community Health Council worked with subject matter experts to identify outcome-based objectives for each priority goal. Based on existing data sets, these objectives are "SMART": specific, measureable, attainable, relevant and time-bound. In 2016 the Community Health Council formed action teams to address the priority goals and objectives.

Community Health Assessment – A Review of Data

For a printed copy of the 2014-2015 Knox County Community Health assessment go to:

http://knoxcounty.org/health/kchn/kchn.php?id=556

Priorities for 2017 – 2019

1. Increase access to mental health resources
2. Decrease opioid abuse
3. Decrease tobacco use among youth and pregnant women
4. Increase access to safe parks, greenways and sidewalks

Community Health Improvement Plan

2016-2019

Community Health Improvement Plan

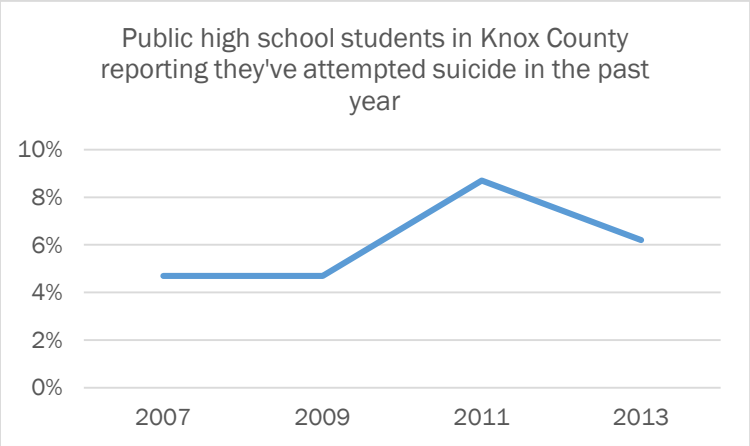
COMMUNITY
HEALTH COUNCIL

Goal: Increase access to mental health resources

OBJECTIVES

MH1: Decrease the percentage of public high school students in Knox County who report they have attempted suicide in the past 12 months by 20% by spring 2019.

Baseline: In 2013, 6.2% of public high school students in Knox County reported they had attempted suicide in the past 12 months.

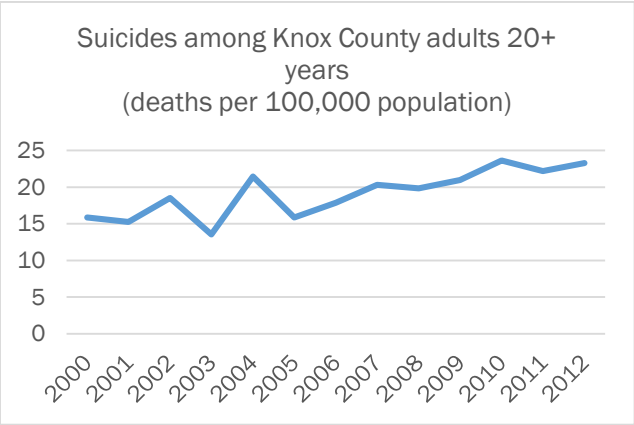


Year	Percentage
2007	4.7
2009	4.7
2011	8.7
2013	6.2

Data Source: Knox County Youth Risk Behavior Survey

MH2: Decrease the rate of suicide deaths among Knox County adults 20 years and older by 15%, or 12 deaths, by December 2018.

Baseline: In 2012, there were 23.28 suicide deaths among adults 20 years and older per 100,000 population in Knox County.



Year	Deaths per 100,000	Number
2000	15.85	45
2001	15.27	44
2002	18.52	54
2003	13.53	40
2004	21.43	64
2005	15.84	48
2006	17.85	55
2007	20.31	63
2008	19.84	62
2009	20.95	66
2010	23.61	75
2011	22.2	71
2012	23.28	75

Data source: Knox County death certificates provided by the Tennessee Department of Health, Office of Policy, Planning and Assessment

MH3: Decrease average wait time in the five-county region (including Knox County) from emergency department assessment to placement in mental health care from the current 30 hours to 24 hours, a reduction of 20%, by December 2018.

Baseline: In 2014 the average wait time from emergency department assessment to placement in mental health care was 30 hours in the five-county region that includes Knox County. *Data source: partnership of regional mental health providers, trend data currently unavailable*

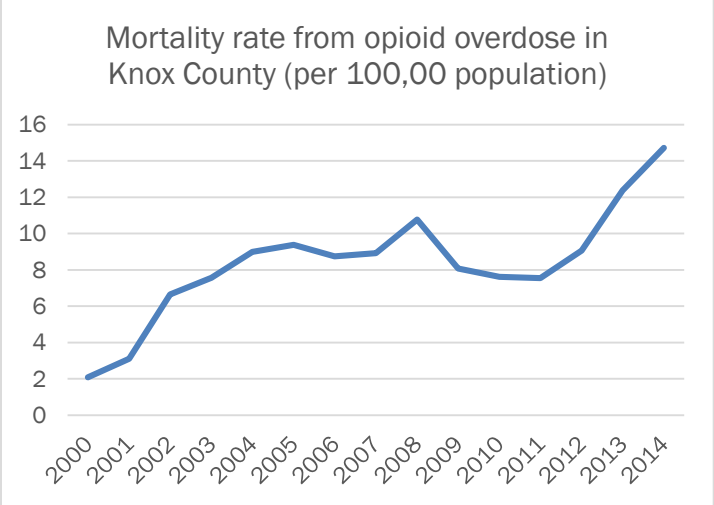
Ancillary Data Point: Teen suicide completions—in 2012, there were two deaths from suicide among county residents ages 15 to 19, for a rate per 100,000 population of 6.69.

Goal: Decrease opioid abuse

OBJECTIVES

OA1: Decrease the mortality rate from unintentional poisoning by opioids in Knox County by 10%, or six people, by December 2018.

Baseline: In 2014, there were 14.71 deaths from opioid overdose per 100,000 population in Knox County, a total of 66 deaths.



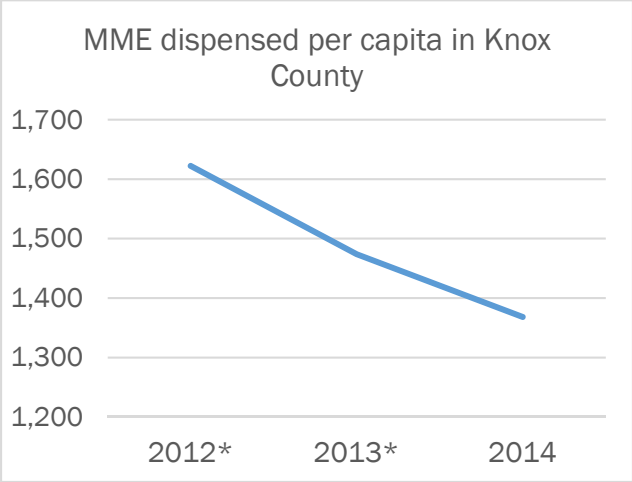
Year	Number	Rate per 100,000 pop
2000	8	2.09
2001	12	3.10
2002	26	6.64
2003	30	7.56
2004	36	9.00
2005	38	9.37
2006	36	8.74
2007*	37	8.92
2008	45	10.77
2009	34	8.08
2010	33	7.62
2011	33	7.55
2012	40	9.06
2013	55	12.37
2014	66	14.71

*Limitations of 2007 data made it impossible to separate opioid and non-opioid poisoning for that year. The 2007 number includes all overdose deaths.

Data Source: Knox County death certificates provided by Tennessee Department of Health, Office of Policy, Planning and Assessment

OA2: Decrease the amount of opioid drugs that are legally dispensed in Knox County by 20% by December 2018.

Baseline: In 2014, there were 1,207 morphine milligram equivalents (MME) per capita dispensed to patients in Knox County and reported to the Controlled Substances Monitoring Database (CSMD).



Year	MME dispensed	MME dispensed per capita
2012*	721,351,139	1,622
2013*	655,272,444	1,474
2014	608,407,729	1,368

*Use caution in comparing data from before & after first quarter 2013, when the Prescription Safety Act mandated utilization of the CSMD.

Data source: Controlled Substances Monitoring Database, Tennessee Department of Health

OA3: Decrease the number of babies born with Neonatal Abstinence Syndrome (NAS) in Knox County by 20%, or 20 births, by August 2018.

Baseline: In 2014, there were 103 babies born with NAS in Knox County.

Year	Rate	Number
2013*	18.7	99
2014	20.2	103
2015 (Jan-Aug)	18.7	73

*Use caution interpreting data from 2013 due to possible data collection issues in first year of NAS reporting.

Data source: Tennessee Department of Health

Ancillary Data Points

- Emergency department visits for opiate/narcotic overdose—in 2013, there were 23.59 emergency department visits for opiate/narcotic overdose per 100,000 population in Knox County, a total of 104.
- Number of custody petitions in Juvenile Court with drug or alcohol involvement—in 2014, 23.5% of custody petitions in Knox County had some type of drug or alcohol involvement (258 petitions out of 1,097).

Additional information

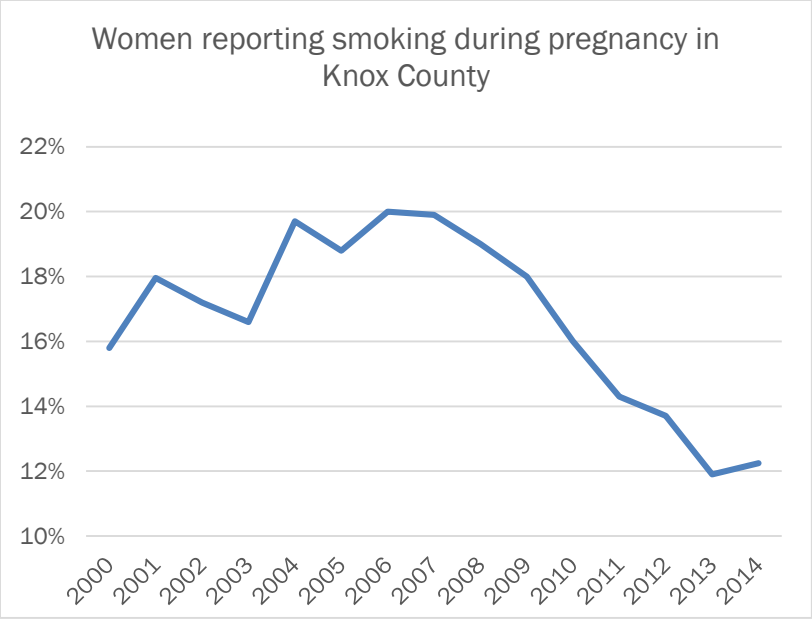
- The category of opioids includes heroin, opioids, methadone, synthetic narcotics and unspecified narcotics.
- The number of deaths from opioid overdose includes overdoses involving both single and multiple substances.
- NAS became a reportable disease in 2013, so historical data only reaches back that far. There are possible data collection issues in the first year of reporting.
- MME is a unit of measurement of pain-killing strength.
- Reporting to the CSMD is required by law.

Goal: Decrease tobacco use among youth and pregnant women

OBJECTIVES

TY1: Decrease the percentage of women in Knox County who report smoking during pregnancy to 10% by December 2018.

Baseline: In 2014, 12.2% of pregnant women in Knox County reported smoking.

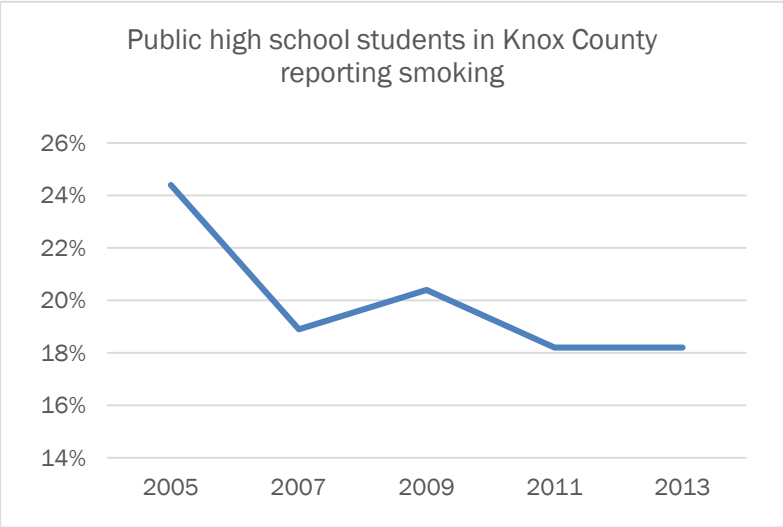


Year	Percentage
2000	15.8
2001	18.0
2002	17.2
2003	16.6
2004	19.7
2005	18.8
2006	20.0
2007	19.9
2008	19.0
2009	18.0
2010	16.0
2011	14.3
2012	13.7
2013	11.9
2014	12.2

Data Source: Knox County birth certificates provided by the Tennessee Department of Health, Office of Policy, Planning and Assessment through the Health Information Tennessee website (http://hit.state.tn.us/)

TY2: Decrease the percentage of public high school students in Knox County who report smoking by 5% by spring 2019.

Baseline: In 2013, 18% of public high school students in Knox County reported smoking at least one cigarette in the last 30 days.



Year	Percentage
2005	24.4
2007	18.9
2009	20.4
2011	18.2
2013	18.2

Data source: Knox County Youth Risk Behavior Survey

Ancillary Data Points

- Babies born with low birth weight—in 2014, 8.3% of babies born in Knox County were born with low birth weight.
- Babies delivered prematurely—in 2014, 10.4% of babies born in Knox County were delivered prematurely.

Additional Information

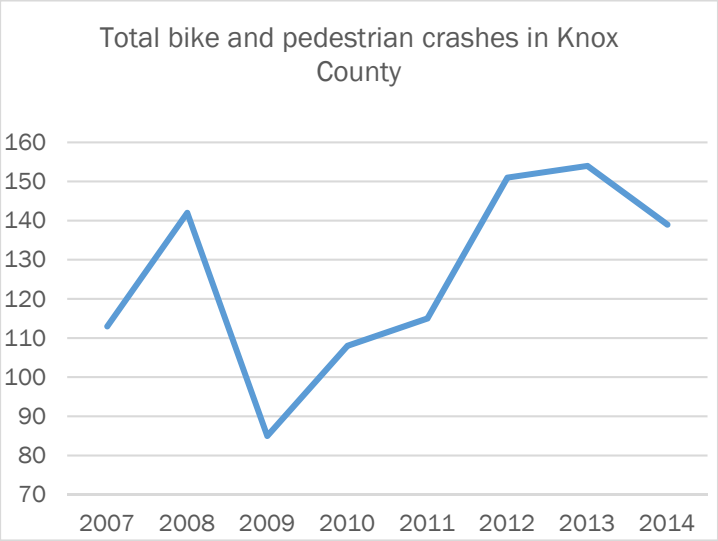
- Smoking during pregnancy: data is self-reported and birth certificate procedures vary across hospitals. Birth certificates are collected by the Tennessee Department of Health (Office of Policy, Planning & Assessment).
- Low birth weight (LBW) is weight at birth of less than 2,500 grams (5.5 lbs). Based on epidemiological observations that infants weighting less than 2,500 grams are approximately 20 times more likely to die than heavier babies. (Source: World Health Organization. http://apps.who.int/iris/bitstream/10665/43184/1/9280638327.pdf) Not all low birth weight births are a result of maternal smoking, but pregnant women who smoke are nearly twice as likely to have a low birth weight baby as women who don't smoke. Smoking during pregnancy causes low birth weight in at least one in five infants. (March of Dimes & American Cancer Society)

Goal: Increase access to safe parks, greenways, and sidewalks

OBJECTIVES

PGS1: Decrease the number of pedestrian and bicycle crashes with cars in Knox County by 20%, or 27 crashes, by December 2018.

Baseline: In 2014, there were 139 pedestrian and bicycle crashes with cars in Knox County.



Year	Total crashes
2007	113
2008	142
2009	85
2010	108
2011	115
2012	151
2013	154
2014	139

Data Source: Titan state database, data taken from crash reports filed by law enforcement officers

PGS2: Increase the percentage of Knox County residents who live within half a mile of a park or greenway by 3%, or 3,811 people, by December 2018.

Baseline: In 2015, 29.39% of Knox County residents lived within half a mile of a park or greenway, which is 127,026 out of 432,226 total residents.

Data source: Metropolitan Planning Commission, trend data currently unavailable

PGS3: Increase the ratio of sidewalk mileage to street mileage in Knox County from 1 to 8.16 to 1 to 8 by December 2018.

Baseline: In 2012, Knox County had 406 miles of sidewalk and 3,311 miles of streets, for a ratio of 1 to 8.16.

Data source: Metropolitan Planning Commission, trend data currently unavailable

PGS4: Increase the average daily number of greenway users on indicator greenways in Knox County by 10% by spring 2018.

Baseline: In May 2014, the average daily usage of indicator greenways in Knox County (see table below) was 305.5.

Greenway	Average daily usage
Halls	127
Lakeshore	370
Neyland	79
Sequoyah	812
Third Creek	395
Will Skelton	50

Data source: Knoxville Regional Transportation Planning Organization, Greenway Usage Report, 2009-2014. Trend data across years available only for Halls and Lakeshore greeenways.

Ancillary Data Point: Public transit ridership in Knoxville—in August 2015, total fixed-route ridership (includes both buses and trolleys) in the city of Knoxville was 250,133.

Additional information

- Street mileage excludes interstates and other roads not open to pedestrian traffic.
- Indicator greenways are those greenways where usage counters have been in place long enough to establish at least a minimal baseline of usage data. Usage counters on indicator greenways will remain in place for the next several years to help establish more long-term baselines.

A special thank you to our community assessment Partners

Covenant Health's member hospitals in Knox County, Fort Sanders Regional Medical Center and Parkwest Medical Center, are very grateful for the leadership of the Knox County Health Department and the Community Health Council for taking the lead in ongoing assessment activity for Knox County, Tennessee. Additionally, a thank you to every partner agency which contributes time, expertise and resources in this robust assessment effort. Fort Sanders Regional Medical Center and Parkwest Medical Center will develop an Implementation Plan that will continue to support the priority areas findings of this assessment.