

Table 1. Summary of Health Trends

Mortality Rates by Cause of Death 3-Yr. Age Adjusted, 2000-2013			
IMPROVING		WORSENING	
Heart Disease		Alzheimer's Disease	
Cancer		All Accidents	
Chronic Lower Respiratory Disease		Accidental Poisonings	
Stroke		Accidental Falls	
Motor Vehicle Accident		Suicide	
Other Health Indicators			
IMPROVING		WORSENING	
Teen Birth Rate (10-17) (2006-2013)		A&D Treatment Admissions* (2012-2014)	
Pregnancy Smoking % (2009 - 2013)			
Pre-term Births % (2002-2013)			
Infant Mortality 3-Yr. Rate (2000-2013)			
Black Infant Mortality 3-Yr. Rate (2002-2012)		Publicly funded treatment admissions	

Key Data Findings

Healthy People 2020 has established a subset of 26 indicators organized under twelve topics chosen to communicate major health concerns on a national level. The indicators were selected by *Healthy People 2020* on the basis of their ability to motivate action, the availability of data to measure progress, and their importance as public health issues. Each topic has one or more objectives from *Healthy People 2020* to measure progress. The *Healthy People 2020* Leading Health Indicator topic areas are:

- Access to Health Services
- Clinical Prevention Services
- Environmental Quality
- Injury and Violence
- Maternal, Infant, and Child Health
- Mental Health
- Nutrition, Physical Activity, and Obesity
- Oral Health
- Reproductive and Sexual Health
- Social Determinants
- Substance Abuse
- Tobacco

Based on the Leading Health Indicators, key findings from this report are detailed below.

Overall Health

- Hamilton County life expectancy increased from 76 years in 1999 to 77.4 years in 2013. The life expectancy of African Americans in Hamilton County is 73.4 years, which is 4.5 years less than the average life expectancy for whites in Hamilton County (77.9 years).
- While heart disease and cancer continue to be the major causes of death in Hamilton County, age-adjusted mortality rates for these diseases have decreased significantly in recent years. Based on three-year rolling averages, age-adjusted mortality rates have decreased by 32% for heart disease (from 261.3 to 177.1 per 100,000) and by 20% for cancer (from 214.4 to 172.3 per 100,000) between 2000 and 2013.

Access to Healthcare

- According to the U.S. Census Bureau, almost 44,000 (15.4%) of Hamilton County residents under age 65 did not have health insurance in 2013. Among working age adults (ages 18 to 64), 18.9% did not have health insurance. Residents under age 65 living at or below 138% of poverty were more likely to be uninsured (26.8%) than those living between 138% and 400% of poverty (16.5%). Note that these figures pre-date the 2014 implementation of individual mandate provisions of the Affordable Care Act.

Clinical Preventative Services

- In 2014, 64.8% of children under age two had completed all of a series of seven vaccinations against 11 communicable diseases, according to state estimates. Sixty percent of residents ages 65 and older had received an influenza vaccine.

Environmental Quality

- In 2013 and 2014, there were no days with an Air Quality Index (AQI) in the unhealthy range. The AQI reached “unhealthy for sensitive groups” an average of 5.6 days per year from 2010-2012.

Injury and Violence

- Deaths from unintentional injuries increased by 29.5% between 2000 and 2013 based on three-year age-adjusted mortality rates.
- Unintentional injury deaths include deaths due to poisonings, motor vehicle accidents, and falls. Historically, motor vehicle accidents have been the leading cause of unintentional injury deaths; however, three-year age-adjusted poisoning mortality rates have increased by 185.4% between 2000 and 2013 (from 5.3 to 15.4 per 100,000), surpassing motor vehicle accident deaths in 2007. The increase in poisoning deaths is linked to an increase in drug abuse: of the 75 poisoning deaths in Hamilton County in 2012, 66 (88%) were due to drug overdose.
- Age-adjusted deaths due to motor vehicle accidents decreased by 22% between 2000 and 2013 (from 15.3 to 11.9 per 100,000). While motor vehicle crash deaths are down, motor vehicle crash rates are up. Between 2008 and 2013, motor vehicle crash rates rose from 36.8 to 51 crashes per 1,000 licensed drivers. The data suggests that distracted driving contributed to the rise in crashes: crashes attributed to distracted driving doubled (from 1.7 to 3.6 per 1,000 licensed drivers) while alcohol-related and injury crashes remained stable.
- Unintentional falls are the leading cause of injury visits to the emergency department (ED). In 2012, Hamilton County residents had 10,638 ED visits due to falls, more than double the total number of ED visits for motor vehicle accidents, poisonings, firearms, fires, and drowning combined.
- Although relatively small in number, three-year age-adjusted mortality rates due to accidental falls have increased by 84.6% between 2000 and 2013 (from 3.9 to 7.2 per 100,000). This is attributed to rise in the aging population. Of the 26 unintentional fall deaths in 2012, nineteen (73%) were aged 65 and older, including 11 (42%) aged 85 and older.

Maternal, Infant, and Child Health

- Infant mortality rates in Hamilton County are improving. Based on three-year rolling rates, infant mortality decreased by 29.2% from 2000 to 2013, from 10.6 per 1,000 births to 7.5 per 1,000 births.

- In the past several years, Hamilton County infant mortality rates have been higher than state rates and were the second highest rates among the four largest Tennessee metropolitan counties, after Shelby County. In 2013, Hamilton County's infant mortality rate (6.7 per 1,000 births) was just under the Tennessee rate (6.8 per 1,000 births) and below both Shelby (9.7 per 1,000 births) and Davidson (7.7 per 1,000 births) Counties.

Mental Health

- There were 157 deaths by suicide in Hamilton County between 2011 and 2013, and the age-adjusted incidence rate was 14.4 per 100,000. White males are at the highest risk. Of the 157 suicides over the three year period, 119 (76%) were committed by white males. Three-year age-adjusted suicide rates increased by 27.3% between 2000 and 2013 (from 11.3 to 14.4 per 100,000).

Nutrition, Physical Activity, and Obesity

- Two out of every three adults (66%) in Hamilton County have are either overweight or obese, based on self-reported height and weight. Hamilton County's overweight/obesity prevalence is similar to the state (67%) and to the nation (64%)
- More than a quarter of high school students (27%) in Hamilton County are either overweight or obese, based on self-reported height and weight. Hamilton County's adolescent overweight/obesity prevalence is similar to the nation (28%) and lower than the state (33%).
- Almost two out of every three adults (31%) in Hamilton County are sedentary, lower than the state rate (34%) but higher than the national rate (25%).
- The majority of high school students in Hamilton County fail to meet recommended guidelines for physical activity. Three out of four (75%) do not get the recommended sixty minutes of daily physical activity, which was similar to state (75%) and national (73%) data for 2009. More than one in four high school students (26%) used a computer or played computer games outside of school (for non-school work) for three or more hours per day.
- Adult diabetes prevalence in Hamilton County has increased by 25% since 2004.

Reproductive and Sexual Health

- Teen birth rates have decreased by 61.7% since 2007 in Hamilton County. There are consistent racial disparities between African Americans and whites, although that gap has narrowed in recent years as rates have decreased for both African Americans and whites. Compared to the peak in 2006, teen birth rates in Hamilton County have decreased by 69% among African Americans (from 27.3 to 8.5 per 1,000) and by 49.2% among whites (from 10.3 to 5.2 per 1,000).
- Sexually transmitted disease (STD) rates in Hamilton County (including chlamydia, gonorrhea, and primary and secondary syphilis) are higher than state and national rates. In 2013, there

were 734.2 new STD cases per 100,000 Hamilton County residents, compared to 586.7 per 100,000 Tennessee residents and 558.2 per 100,000 U.S. residents.

Social Determinants

- The cohort graduation rate is the percent of public school students who receive a regular diploma within four years of entering high school. In Hamilton County the graduation rate was 83% for the 2013-2014 school year. The Tennessee Department of Education's statewide goal is 90% graduation by 2020.
- Health disparities between African Americans and whites in Hamilton County continue. Life expectancy for African Americans born in 2013 is 73.4 years, which is 4.5 years shorter than for whites (77.9 years). There are racial disparities in mortality rates by the causes of death as well. Among chronic diseases, age-adjusted mortality rates were significantly higher among African Americans for the following: nephritis (3.6 times higher), diabetes (2.7 times higher), stroke (32% higher), and heart disease (19% higher). Mortality rates for all cancers are 16% higher for African Americans than whites, but for prostate cancer, black men experience a mortality rate which is double that of white men (51 vs. 26.3 per 100,000). The mortality rate for breast cancer is 74% higher for black women than white women (33 vs. 19 per 100,000).
- There are racial disparities in maternal and infant health as well. African American babies are about 2.4 times more likely to die before their first birthday than white babies (13.4 vs. 5.6). Low birthweight (less than 5.5 pounds) and preterm birth (born before 37 weeks gestation) are among the leading causes of infant mortality. In 2013, the prevalence of low birthweight among African American babies were more than double the prevalence among white babies (16.2% vs. 7.7%), and preterm births were 51% higher for African Americans than for whites (16.3% vs. 10.8%).
- Although health disparities between African Americans and whites in Hamilton County persist, gaps have narrowed in several areas. The gap in life expectancy was 6.2 years in 2007, compared to 4.5 years in 2013. The gap in heart disease mortality narrowed from 61% in 2006-2008 (316.7 vs. 196.1 per 100,000) to a 16% difference in 2011-2013 (201.7 vs. 173.4 per 100,000). The disparity in infant mortality has narrowed from almost four times higher for African Americans than whites in 2002-04 (20.2 vs. 5.4) to about two and a half times higher for African Americans in 2011-2013 (13.4 vs. 5.6). The teen birth rate gap shrunk from 165% higher among African Americans than whites in 2006 (27.3 vs. 10.3 per 1,000 females age 10 to 17), to a 65% higher in 2013 (8.5 vs. 5.2 per 1,000). The infant mortality rate gap shrunk from being almost four times higher among African Americans than whites in 2002-2004 (20.2 vs. 5.4 per 1,000 births) to almost two and a half times higher in 2011-2013 (13.4 vs. 5.6).

Substance Abuse

- The prevalence of alcohol binge drinking among adults in both Hamilton County and Tennessee is 10%, substantially lower than the national prevalence of 17%.
- The prevalence of binge drinking among high school students in Hamilton County was 18%, compared to 19% in Tennessee and 22% nationwide.
- In 2012, there were 2,916 Emergency Department (ED) visits and 1,391 hospital admissions for alcohol-related disorders among Hamilton County residents. Drug-related disorders accounted for 3,538 ED visits and 1,288 admissions. In addition, 66 Hamilton County residents died from a drug overdose in 2012.

Tobacco Use

- In Hamilton County, the prevalence of cigarette smoking is 23% among adults and 17% among high school students.

Table 2. Leading Health Indicators

Leading Health Indicators	Hamilton County	TN	U.S.
Access to Healthcare			
Persons with health insurance (< 65)	85%	84%	85%
Adults with usual healthcare provider	78%	78%	77%
Clinical Preventative Services			
Children under 2 fully immunized	65%	73%	70%
Influenza vaccine, adults 65+	60%	70%	61%
Environmental Quality			
Unhealthy Air Days (AQI>100) 2013-2014	0	n/a	n/a
Injury & Violence			
Motor vehicle crash death rate per 100,000 (age-adjusted)	11.9	15.1	10.9
Homicide death rate per 100,000 (age-adjusted)	8.3	6.9	5.2
Maternal, Infant, and Child Health			
Infant mortality rate per 1,000	6.7	6.8	6.0
Percentage preterm live births	12.1%	11.0%	11.6%
Mental Health			
Suicide rate per 100,000 (age-adjusted)	14.4	14.5	12.6
Nutrition, Physical Activity, and Obesity			
Overweight or obese, adults	66%	67%	65%
Physical inactivity, adults	31%	34%	25%
5 + daily servings fruits/vegetables, adults	13%	9%	n/a
Obese, adolescents	12%	15%	15%
Insufficient aerobic activity, adolescents	75%	75%	73%
5 + daily servings fruits/vegetables, adolescents	20%	22%	n/a
Oral Health			
Dentists: population per dentist	1464:1	2035:1	1392:1
Reproductive and Sexual Health			
Teen birth rate per 1,000 (10-17)	5.7	5.7	4.7
Sexually transmitted diseases rate/100,000 (primary/secondary syphilis, gonorrhea, chlamydia)	734.2	586.7	569.2
Social Determinants			
High school graduation rate (cohort rate)	83%	87%	81%
Tobacco and Alcohol Use			
Current smokers, adults	23%	24%	20%
Current smokers, adolescents	17%	18%	18%
Binge drinkers past month, adults	10%	10%	17%
Binge drinker past month, adolescents	18%	19%	22%

Sources: U.S. Census, 2011-2013 Behavioral Risk Factor Surveillance Survey, 2011 Youth Risk Behavior Survey, Tennessee Department of Health, Tennessee Department of Safety, Tennessee Department of Education, CDC