



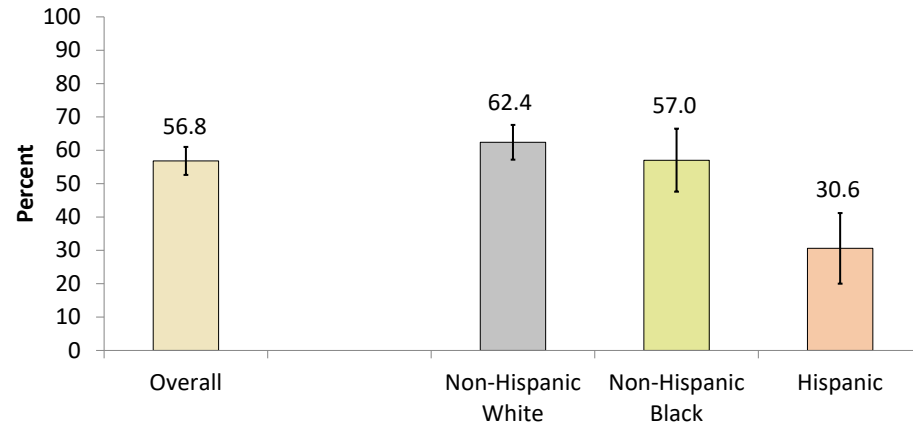
Needs Assessment

Women's and Maternal Health

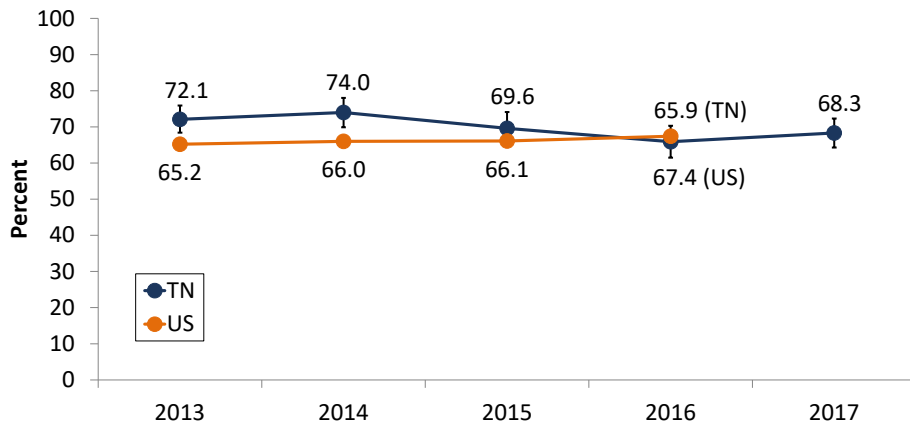
Well-Woman and Preconception Care

- In 2017, 68% of reproductive age women (18-44 years) in Tennessee reported having a routine checkup in the past 12 months.
 - Between 2013 and 2017, there was not a statistically significant increase or decrease in routine checkups among reproductive age women in the state
 - In 2016, the percentage of reproductive age women with a routine checkup was similar in Tennessee versus the US.
- In 2017, 57% of new mothers in Tennessee reported a regular checkup with their family doctor, a regular checkup with an OB/GYN and/or a family planning visit in the 12 months before getting pregnant.
 - Hispanic mothers were less likely than white or black non-Hispanics to have had such a visit.
 - The prevalence of a health care visit prior to pregnancy was similar in urban versus rural counties (data not shown).
 - Among women who had a pre-pregnancy health care visit, 49% reported that a health care worker talked to them about their desire to have or not have children

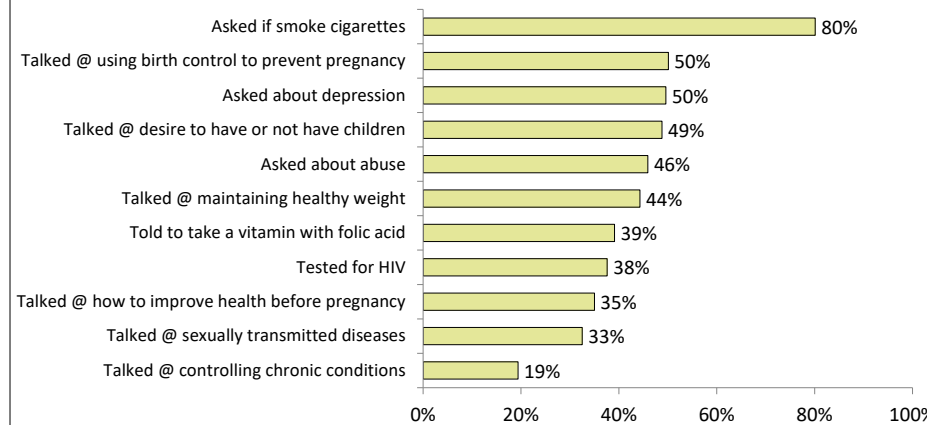
Pre-pregnancy Health Care Visits, Overall and by Race/Ethnicity Tennessee, 2017



Routine Checkups Among Women 18-44 Years of Age Tennessee and US, 2013-2017



Pre-pregnancy Health Care Visit Content Tennessee, 2017

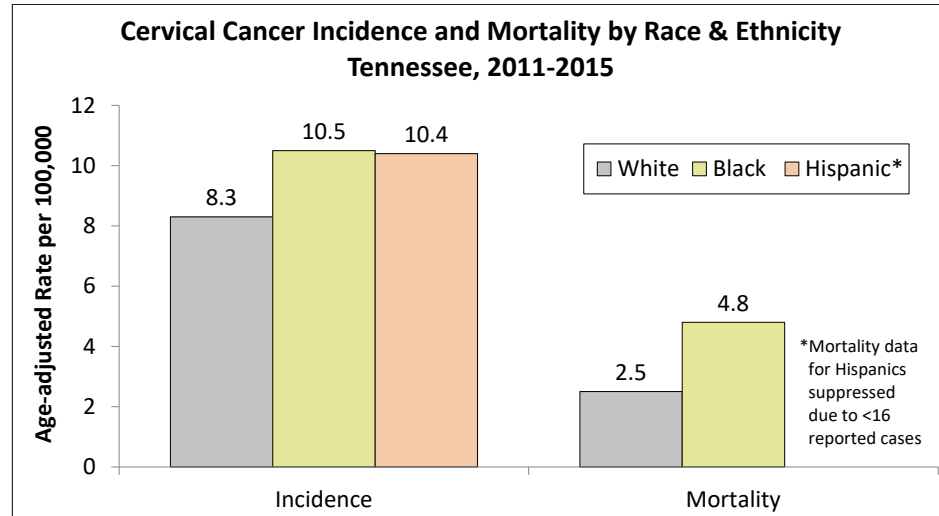
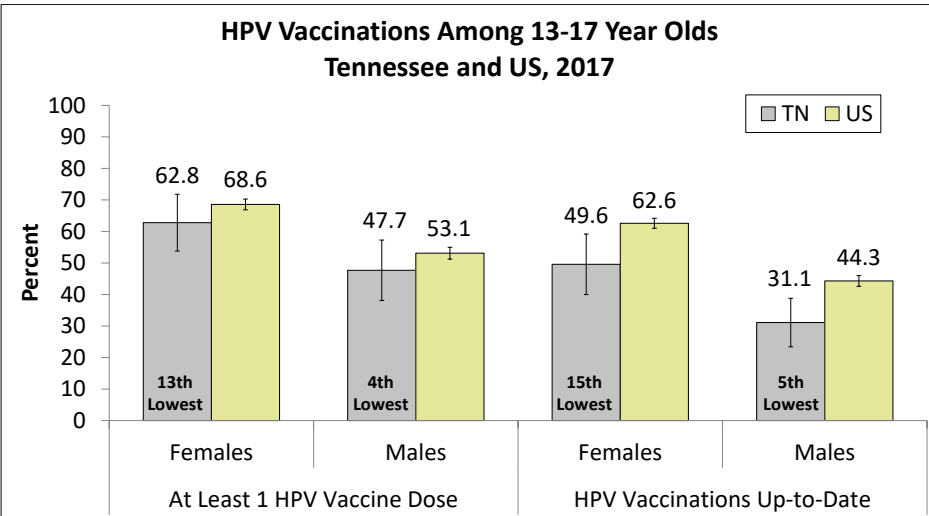
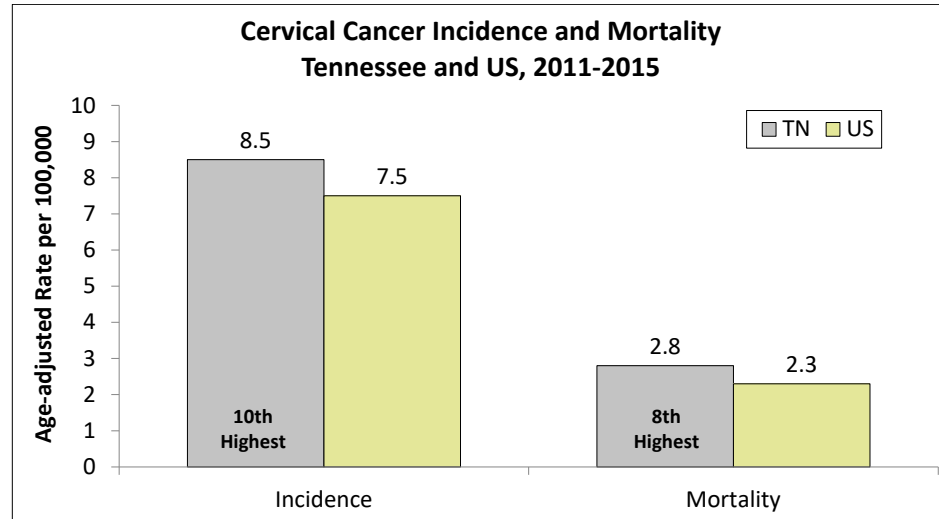


Data sources:

Tennessee Department of Health; Division of Population Health Assessment; Behavioral Risk Factor Surveillance System and Pregnancy Risk Assessment Monitoring System. Statistical significance of comparisons by location/race determined by non-overlap of 95% confidence intervals.

Cervical Cancer Prevention & Early Detection

- Compared to other states, Tennessee had the 10th highest cervical cancer incidence rate and 8th highest cervical cancer mortality rate in 2011-2015.
- Cervical cancer incidence and mortality rates were higher among black Tennesseans than among whites.
- In 2016, there were approximately 80,000 women in the state between the ages of 40 and 64 who were at or below 250% of the FPL and uninsured and who would therefore qualify for cervical cancer screening services through the Tennessee Breast and Cervical Screening Program (TBCSP).
- In FY2018, the TBCSP performed 2,585 cervical cancer screenings – a small fraction of the potentially eligible women in the state.
- In 2017, the percentage of both male and female adolescents with up-to-date HPV vaccinations was lower in Tennessee than in the US. Among the 50 states, Tennessee had the 5th lowest vaccination rate among boys and the 15th lowest among girls.



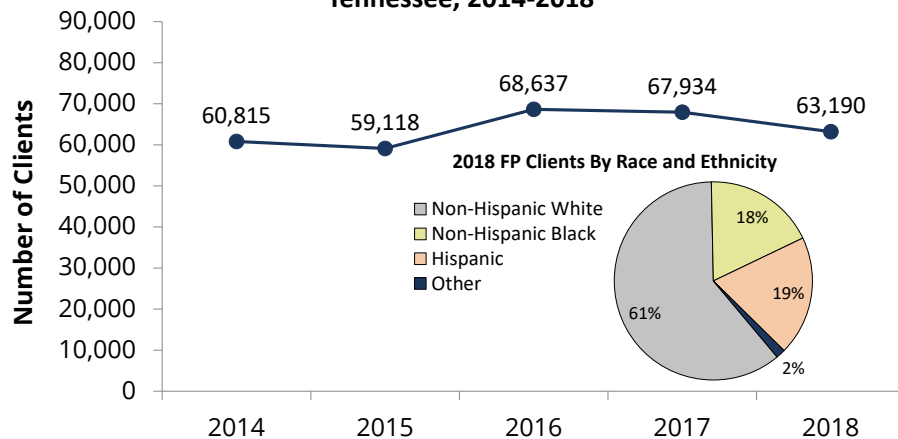
Data sources:

- 1) U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool, based on November 2017 submission data (1999-2015); U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; www.cdc.gov/cancer/dataviz, June 2018. Race categories not mutually exclusive from Hispanic origin.
- 2) U.S. Census Bureau, Small Area Health Insurance Estimates. [Online] [Cited: Mar 29, 2019.] <https://www.census.gov/data-tools/demo/sahie/#/>.
- 3) Centers for Disease Control and Prevention. TeenVaxView Interactive! [Online] [Cited: Mar 29, 2019.] <https://www.cdc.gov/vaccines/imz-managers/coverage/teenvaxview/data-reports/index.html>.

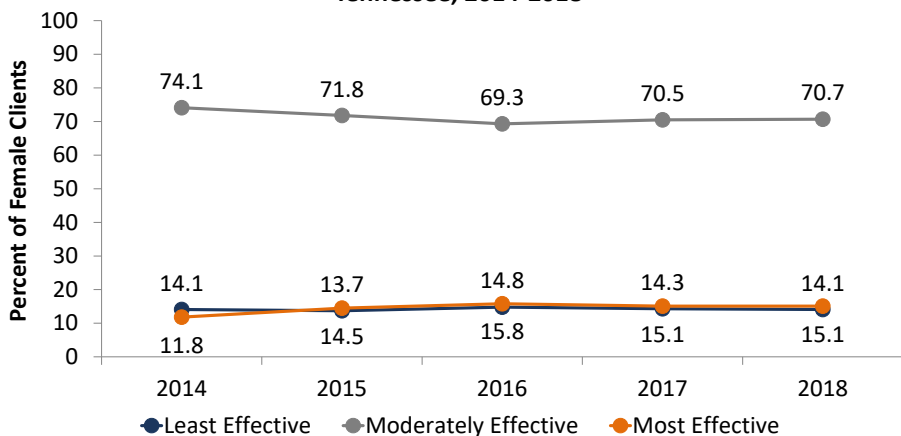
Contraception Access

- In 2014, there were over 434,000 Tennessee women aged 13-44 in need of publicly funded contraceptive services and supplies.
- Since 2014, TDH's Title X program has provided family planning (FP) services to approximately 64,000 persons annually, the majority of which (86%) are women who are 44 years of age or younger and who are uninsured or on public health insurance. Therefore there remains a large unmet need for contraceptive services in the state.
- In 2017, 15% of female FP clients in Tennessee elected a most effective contraceptive method (i.e. sterilization or LARC), compared to 21% nationally.
- Although the percentage of female FP clients electing LARCs increased statewide between 2014 and 2018, within individual counties this percentage ranged from 0% to 28% in 2018. Relatively lower uptake of LARCs may be an indication of barriers to these methods.
- A survey of TDH FP providers conducted in 2018 identified 28 counties without IUC providers and 9 counties without both IUC and implant providers.

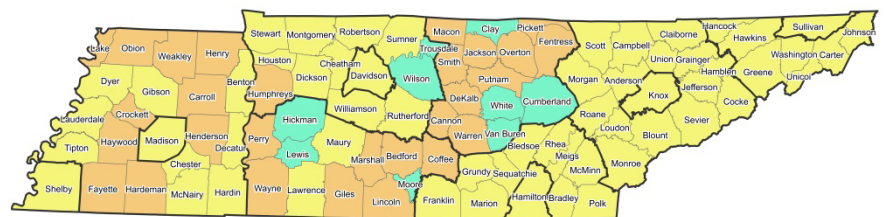
**Title X Family Planning Clients
Tennessee, 2014-2018**



**Methods by Effectiveness Among Title X Family Planning Clients
Tennessee, 2014-2018**



TDH LARC Provider Type by County*



LARC Provider Type: ■ IUC and Implant Provider(s) ■ Implant Provider(s) Only ■ No LARC Provider

*Includes providers who have been both trained and who had inserted an IUC and/or implant in the 6 months prior to the inventory.

Data sources:

1) <https://data.guttmacher.org/states>

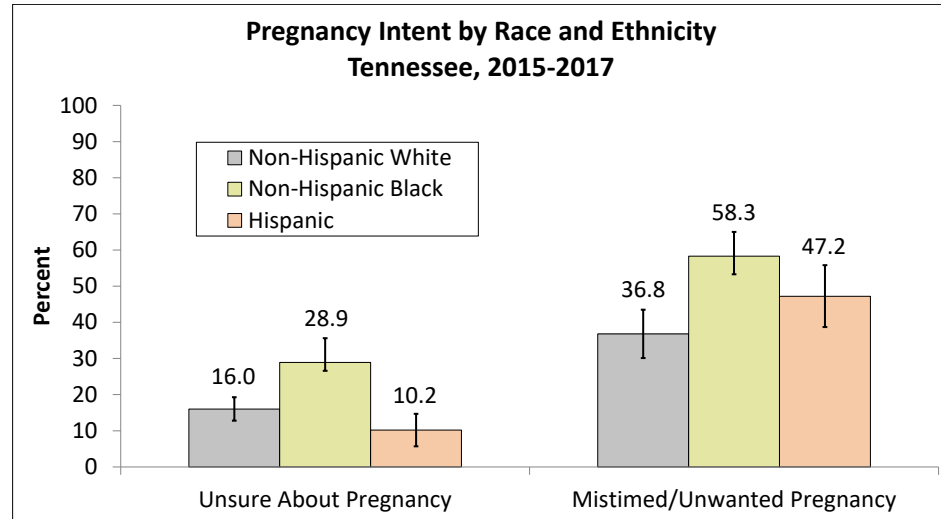
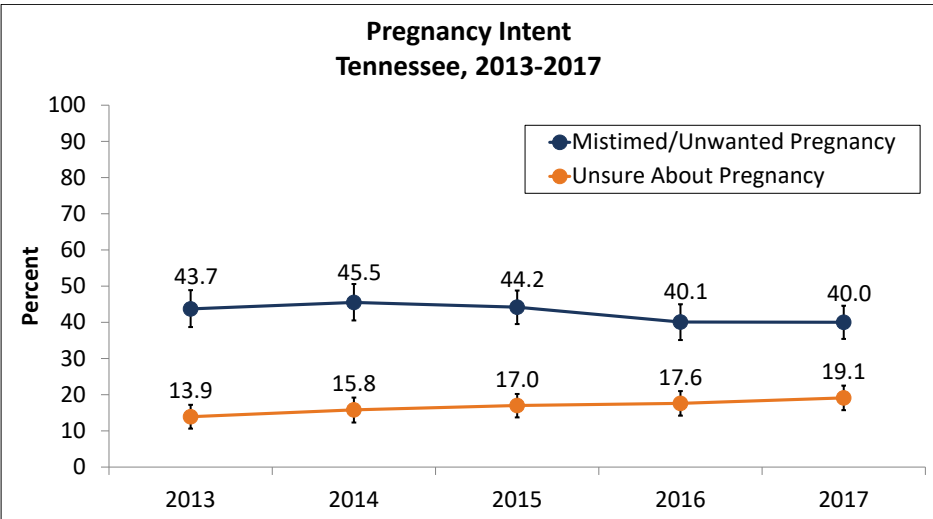
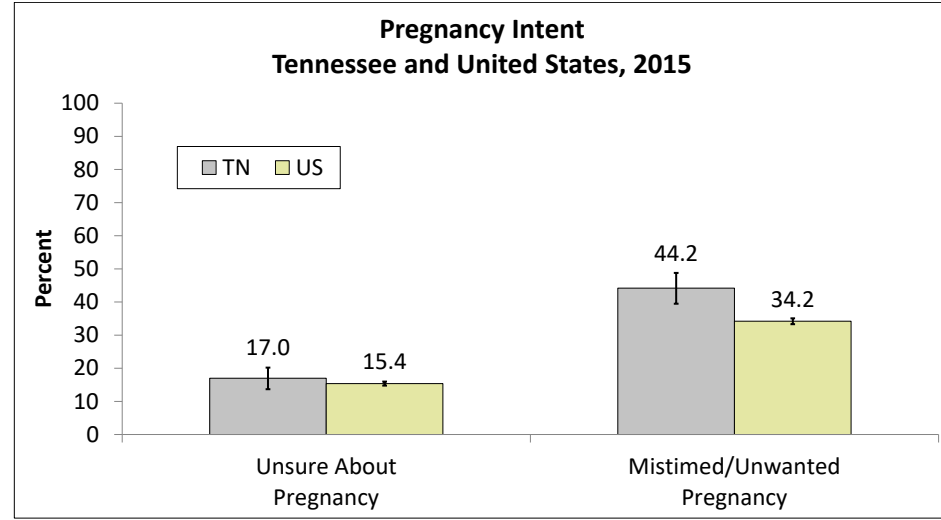
2) Tennessee Department of Health; Patient Tracking Billing Management Information System. Accessed 27 March, 2019.

3) Fowler, C. I., Gable, J., Wang, J., & Lasater, B. (2018, August). Family Planning Annual Report: 2017 national summary. Research Triangle Park, NC: RTI International.

LARC = long acting reversible contraceptive (IUCs and implants). IUC = intrauterine contraceptive.

Pregnancy Intent

- In 2017, 40% of new mothers in Tennessee said that their pregnancy was unintended (i.e. it was mistimed or unwanted), while 19% said they were unsure how they felt about their pregnancy.
- Black non-Hispanic mothers were more likely than white non-Hispanics to have an unintended pregnancy and more likely than both white non-Hispanics and Hispanics to be unsure about their pregnancy.
- The prevalence of both unintended and of unsure pregnancies was similar in urban versus rural counties (data not shown).
- Between 2013 and 2017, there was not a statistically significant increase or decrease in unintended pregnancies in Tennessee. However, there was an increase in mothers who were unsure how they felt about their pregnancy.
- Compared to US mothers, those in Tennessee were more likely to have an unintended pregnancy. However, the percentage who said they were unsure about their pregnancy was similar.



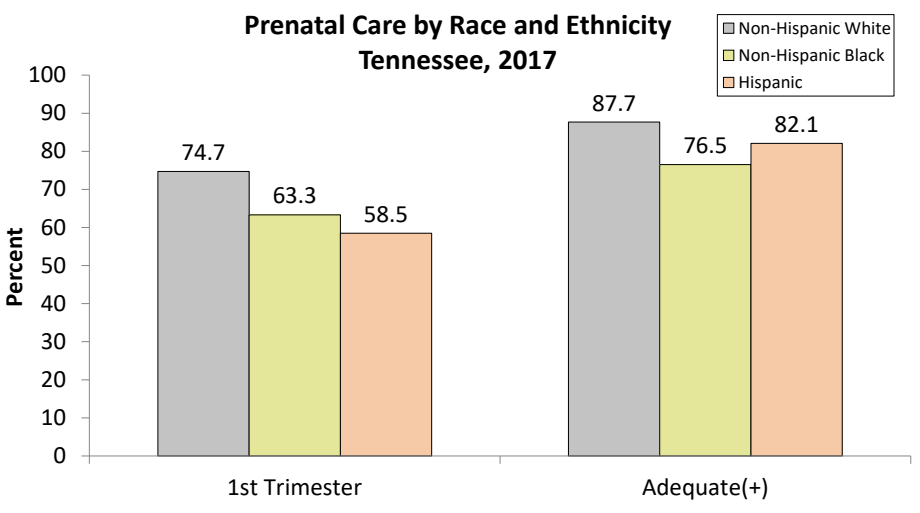
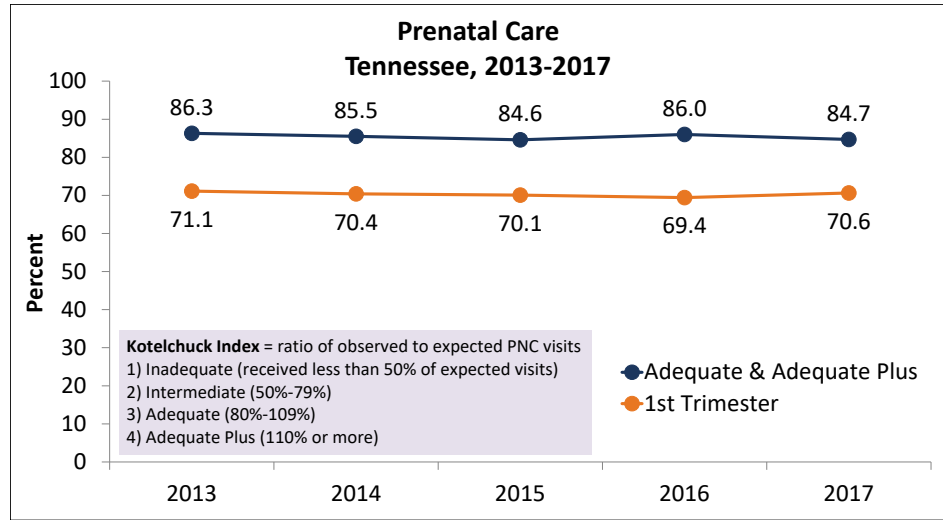
Data sources:

1) Tennessee Department of Health; Division of Population Health Assessment; Pregnancy Risk Assessment Monitoring System. Denominator for unintended pregnancies excludes women who reported that they were unsure how they felt about their pregnancy. Statistical significance of comparisons by location/race determined by non-overlap of 95% confidence intervals. Statistical significance of time trends was determined using proc surveylogistic.

2) Centers for Disease Control and Prevention (<https://www.cdc.gov/prams/prams-data/mch-indicators.html#>). US data includes 34 states that met the required 55% response rate.

Prenatal Care

- In 2017, 71% of infants born in Tennessee received prenatal care in the first trimester and 85% received adequate or adequate plus care.
- Between 2013 and 2017, there was not a statistically significant increase or decrease in the percentage of infants receiving first trimester care or in the percentage receiving adequate or adequate plus care.
- White non-Hispanics were more likely to receive first trimester and adequate/adequate plus care than black non-Hispanics or Hispanics.
- Although black non-Hispanics were more likely than Hispanics to receive first trimester care, they were less likely to receive adequate or adequate plus care.
- Among TDH regions, the percentage of infants receiving first trimester care ranged from 64% to 78% and the percentage receiving adequate or adequate plus care ranged from 73% to 96%.



Prenatal Care by TDH Region, Tennessee, 2017

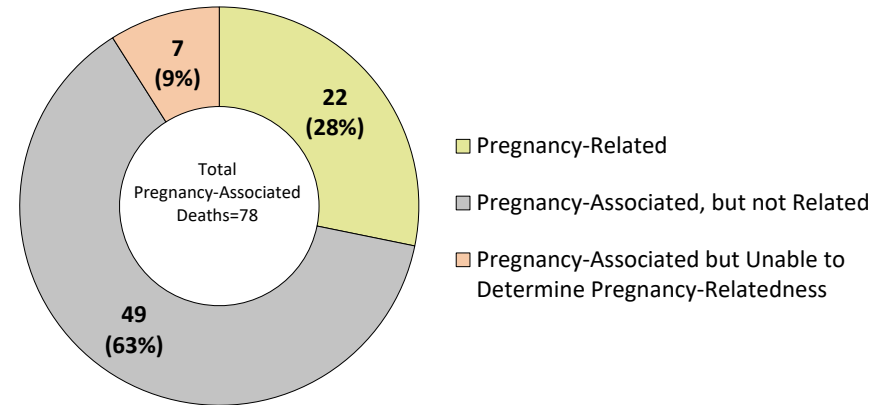
| Region | First Trimester (%) | Adequate/Adequate + (%) |
|------------------|---------------------|-------------------------|
| Davidson | 68.6 | 78.1 |
| East | 72.5 | 91.7 |
| Hamilton | 64.4 | 88.9 |
| Knox | 76.2 | 95.8 |
| Madison | 75.6 | 81.6 |
| Mid-Cumberland | 71.3 | 87.1 |
| Northeast | 75.9 | 81.6 |
| Northwest | 72.8 | 89.1 |
| Shelby | 66.6 | 72.8 |
| South Central | 69.0 | 89.4 |
| Southeast | 66.2 | 88.8 |
| Southwest | 74.3 | 83.5 |
| Sullivan | 77.5 | 79.2 |
| Upper-Cumberland | 75.6 | 91.8 |

Data source: Tennessee Department of Health; Division of Vital Records and Statistics; Birth Statistical System.

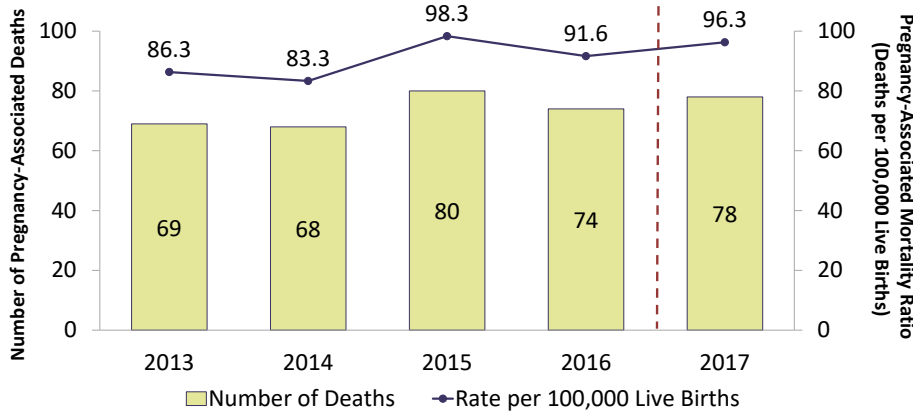
Maternal Mortality

- In 2017, 78 women in Tennessee died within one year of pregnancy
 - Tennessee's pregnancy-associated mortality ratio was 96.3 per 100,000 live births
 - Tennessee's pregnancy-related mortality ratio was 27.2 per 100,000 live births
 - Pregnancy-related deaths comprised 28% of all pregnancy-associated deaths in 2017
 - Top causes of pregnancy-related death included: embolism, cardiovascular and coronary conditions, and hemorrhage
- Substance use disorder contributed to 33% of all pregnancy-associated deaths
- Eighty-five percent (85%) of all maternal deaths were determined to be preventable

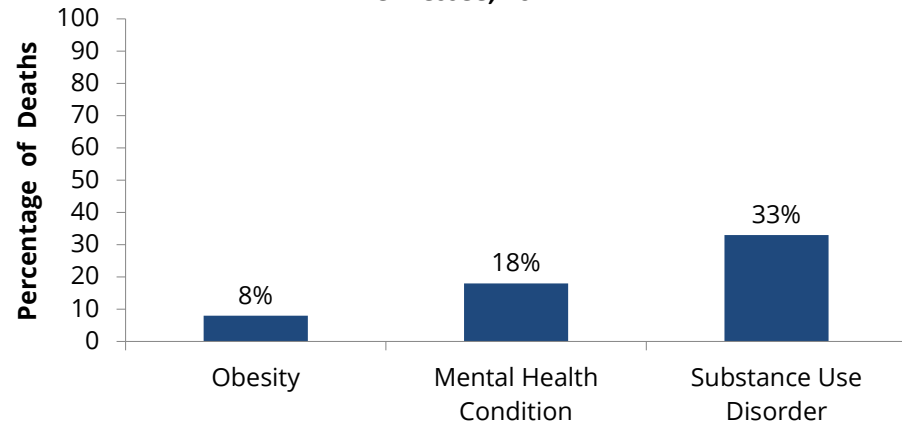
**Committee Determination of Pregnancy-Relatedness
Tennessee, 2017**



**Pregnancy-Associated Mortality
Tennessee, 2013-2016 and 2017**



**Contributing Factors for Pregnancy-Associated Deaths
Tennessee, 2017**



Data sources:

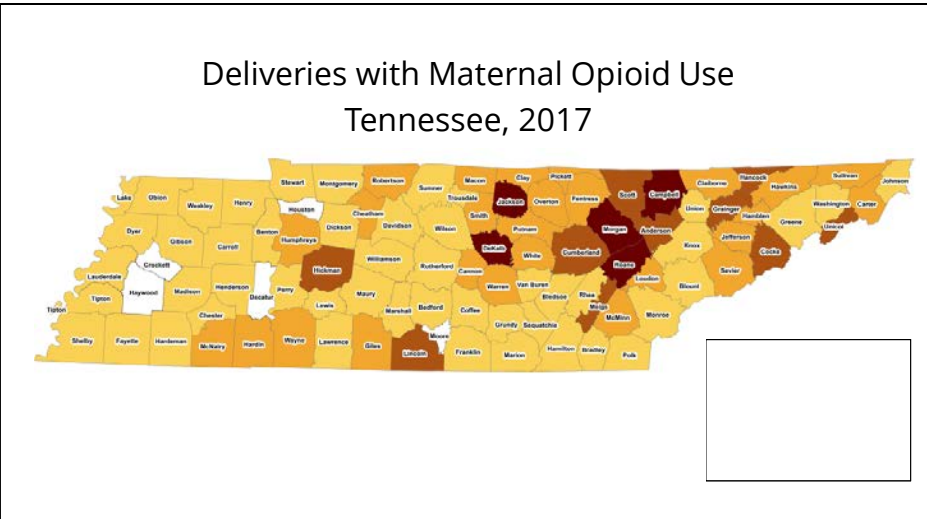
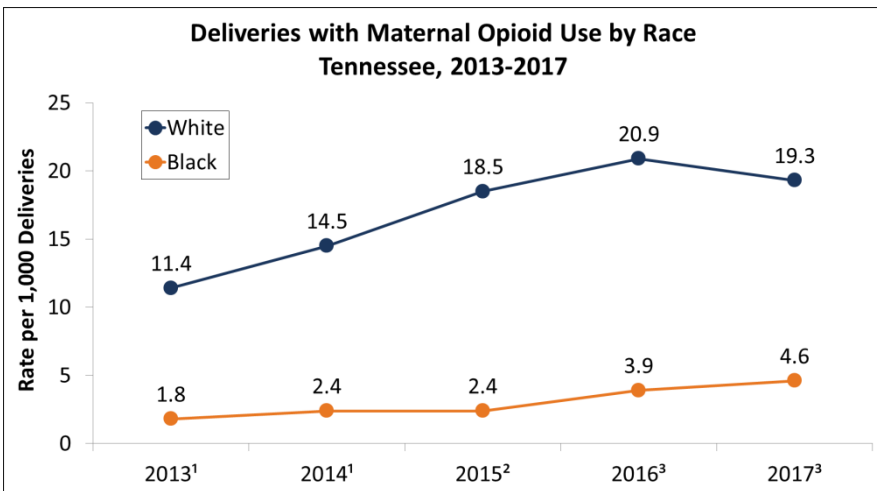
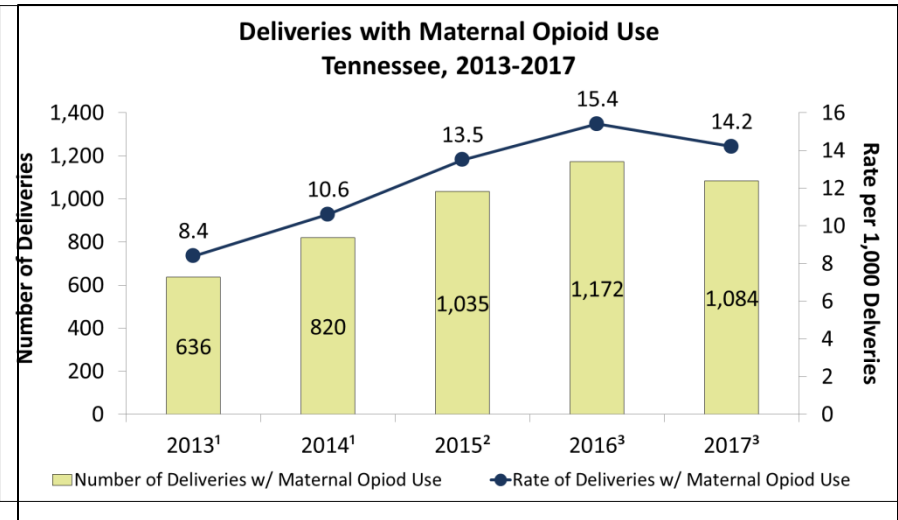
1) Tennessee Department of Health; Division of Vital Records and Statistics; Birth, Death and Fetal Death Statistical Systems (2013-2016).

2) Tennessee Department of Health; Division of Family Health and Wellness; Maternal Mortality Review Program (2017).

A pregnancy-associated death is a death during pregnancy or within one year of the end of pregnancy from any cause. A pregnancy-related death is a subset of the above that occurs from a pregnancy complication, a chain of events initiated by pregnancy, or the aggravation of an unrelated condition by the physiologic effects of pregnancy.

Maternal Opioid Use

- In 2017, there were 76,160 hospitalizations for delivery among Tennessee residents aged 15-44.* Among these hospitalizations, there were 3,192 deliveries (42 out of every 1,000) that also had a maternal substance use diagnosis and 1,084 (14/1,000) that also had a maternal opioid use diagnosis.†
- The rate of deliveries with maternal opioid use increased over 80% between 2013 and 2016. However, there was an 8% decrease between 2016 and 2017.
- The rate of deliveries with maternal opioid use increased at a faster pace among blacks (155% increase) than among whites (83% increase) between 2013 and 2016. Although the rate among whites decreased between 2016 and 2017, it continued to increase among blacks during this time.
- Despite the trends observed above, the rate of deliveries with maternal opioid use was still over four times as high among whites compared to blacks in 2017.
- In 2017, the rate of deliveries with maternal opioid use ranged from 0/1,000 in Crockett, Decatur, Haywood, Houston and Moore counties to 78.4/1,000 in Jackson County.

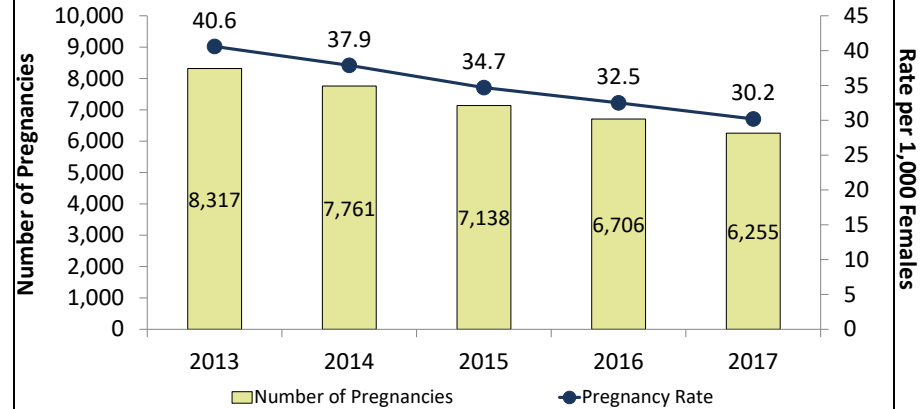


Data source: Tennessee Department of Health, Division of Population Health Assessment, Hospital Discharge Data System (HDDS). Results are preliminary.
 *Deliveries include live births and stillbirths. ¹ ICD-9-CM coded data. ² Coded as ICD-9-CM until September 30, 2015 and coded as ICD-10-CM from October 1st 2015 to December 31st 2015. ³ ICD-10-CM coded data †Substance use includes alcohol, cannabis, cocaine, opioids, other substances (hallucinogens, psychostimulants, sedatives, antidepressants, absinthe, glue, inhalants, and phencyclidine), and unspecified drugs.

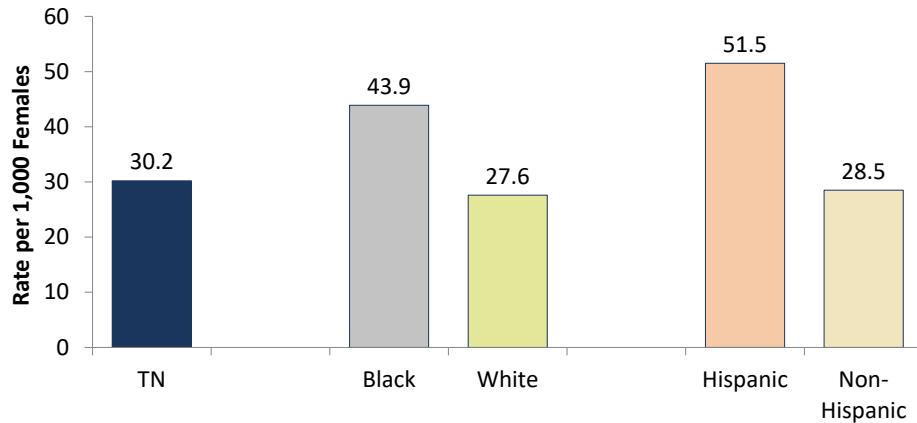
Teen Pregnancy

- In 2017, there were 6,255 pregnancies among Tennessee females aged 15-19 and the teen pregnancy rate was 30 per 1,000 females.
- There was a 26% decrease in the teen pregnancy rate between 2013 and 2017.
- The teen pregnancy rate was higher among black teens compared to whites and higher among Hispanics compared to non-Hispanics.
- In 2017, the teen pregnancy rate ranged from 6.8/1,000 in Williamson County to 88.2/1,000 in Decatur County.
- The majority of teen pregnancies in 2017 (88%) resulted in a live birth, 11% resulted in an abortion and 1% ended in a fetal death.
- In 2017, the birth rate among Tennessee teens aged 15-19 was 26.6/1,000 compared to 18.8/1,000 nationally and Tennessee had the 10th highest teen birth rate among the 50 states.

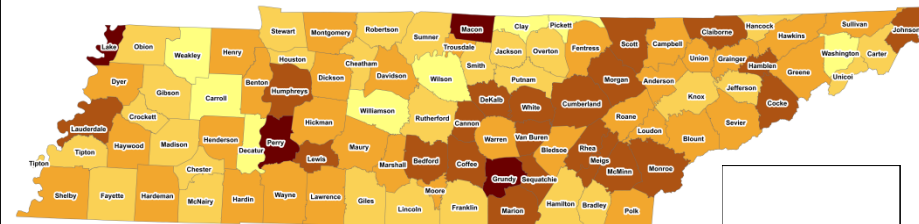
**Pregnancies Among Females Aged 15-19
Tennessee, 2013-2017**



**Pregnancies Among Females Aged 15-19 by Race
Tennessee, 2017**



**Pregnancies Among Females Aged 15-19
Tennessee, 2017**



Data sources:

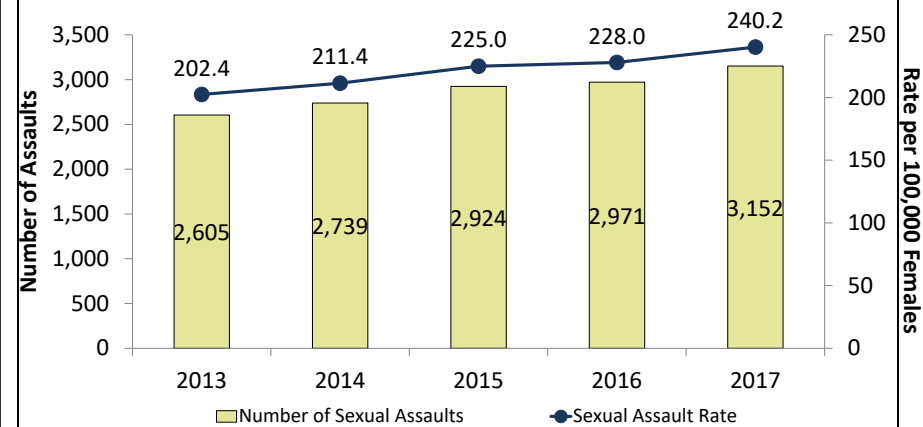
1) Tennessee Department of Health; Division of Vital Records & Statistics; Birth, Fetal Death and Induced Termination of Pregnancy Statistical Systems and population estimates based on interpolated data from the U.S. Census's Annual Estimates of the Resident Population. Race categories are not mutually exclusive from Hispanic origin.

2) Martin JA, Hamilton BE, Osterman MJK, Driscoll AK, Drake P. Births: Final data for 2017. National Vital Statistics Reports; vol 67 no 8. Hyattsville, MD: National Center for Health Statistics. 2018.

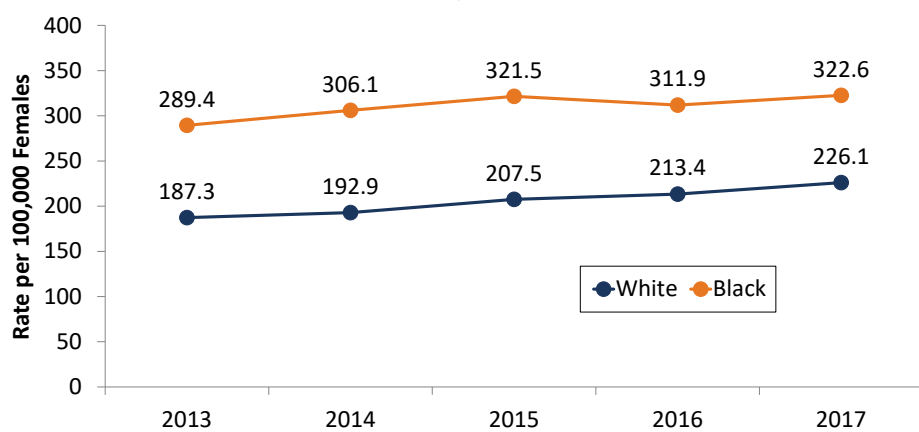
Sexual Violence

- Results of the 2010-2012 National Intimate Partner and Sexual Violence Survey found that the lifetime prevalence of sexual violence victimization among Tennessee women was 36%. In other words, approximately 1 out of every 3 women in the state experience sexual violence in their lifetime.
- In 2017, there were 3,152 sexual assaults among Tennessee women aged 15-44 years of age reported to the Tennessee Bureau of Investigation and the sexual assault rate was 240 per 100,000 females.
- The rate of sexual assault increased 19% between 2013 and 2017. Although this increase was observed among both black and white women, blacks were 43% more likely than whites to be the victims of sexual assault in 2017.
- In 2017, the rate of sexual assault ranged from 0/100,000 in Bledsoe, Cannon, Hancock, Johnson and Pickett counties to 649/100,000 in Decatur County.
- The most commonly reported type of sexual assault in 2017 was forcible rape (53%), followed by forcible fondling (30%), statutory rape (9%), forcible sodomy (4%), sexual assault with object (3%) and incest (1%).

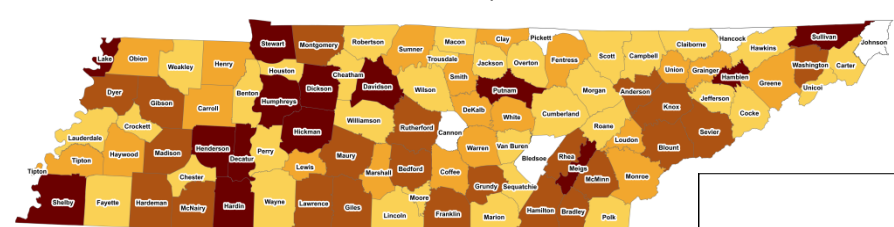
**Sexual Assaults Among Females Aged 15-44
Tennessee, 2013-2017**



**Sexual Assaults Among Females Aged 15-44 by Race
Tennessee, 2013-2017**



**Sexual Assaults Among Females Aged 15-44
Tennessee, 2017**

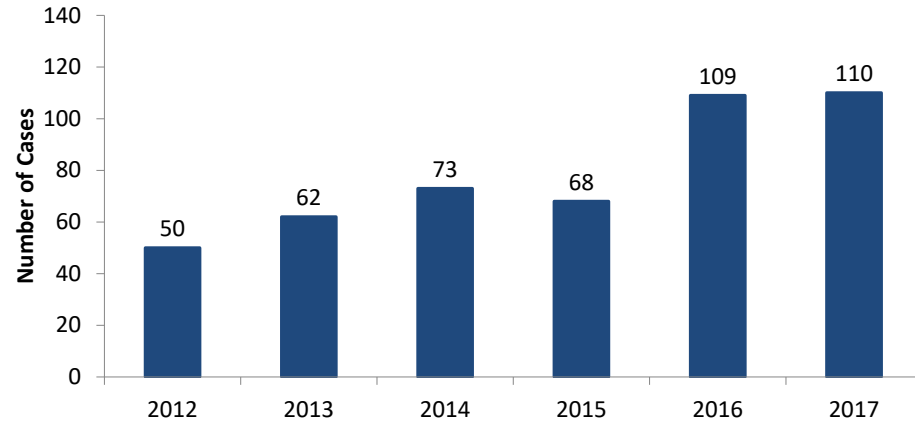


Data sources: 1) Smith SG, Chen J, Basile KC, Gilbert LK, Merrick MT, Patel N, Walling M, & Jain A (2017). *The National Intimate Partner and Sexual Violence Survey: 2010-2012 State Report*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. Sexual violence includes rape, being made to penetrate someone else, sexual coercion, and/or unwanted sexual contact. 2) Tennessee Bureau of Investigation, Tennessee Incident Based Reporting System (TIBRS), accessed March 2019 at <https://crimeinsight.tbi.tn.gov/public/Browse/browsetables.aspx>. 3) Tennessee Department of Health; Division of Population Health Assessment. Population estimates based on interpolated data from the U.S. Census's annual estimates of the resident population.

Human Trafficking

- A 2011 survey of law enforcement, social services and court personnel conducted by the Tennessee Bureau of Investigation found at least one reported case of human trafficking in 78 out of 95 counties in the state.
- The report concluded that sex trafficking in Tennessee affects both adults and minors, foreign- and native-born victims and urban and rural areas.
- In 2017, there were 8,524 cases of human trafficking reported to the National Human Trafficking Hotline nationwide.
 - California, Texas and Florida had the highest number of reported cases; Tennessee had the 19th highest number of cases.
 - The number of reported cases in Tennessee more than doubled between 2012 and 2017 (50 vs. 110, respectively). As of June 30th, 65 cases had been reported in Tennessee in 2018.
 - Human trafficking victims in Tennessee were more likely to be female, adult and US citizens.

Human Trafficking Cases Reported to the National Hotline Tennessee, 2012-2017



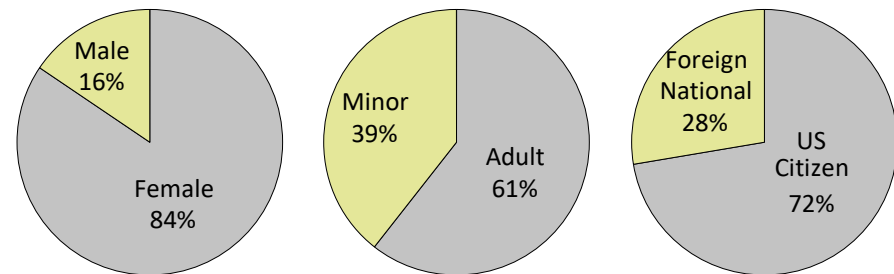
Top 5 Risk Factors for Human Trafficking United States, 2017

1. Recent migration or relocation
2. Substance use
3. Runaway/homeless youth
4. Mental health concern
5. Involvement in the child welfare system

Top 5 Methods of Force, Fraud or Coercion United States, 2017

1. Isolation (including confinement)
2. Emotional abuse
3. Economic abuse
4. Threats of any kind
5. Physical abuse (non-sexual)

Demographic Characteristics of Human Trafficking Victims Tennessee, 2017



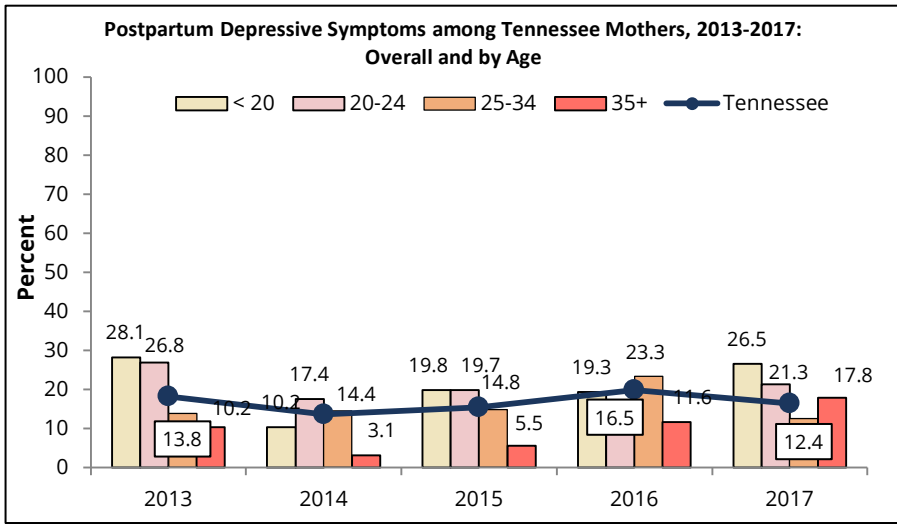
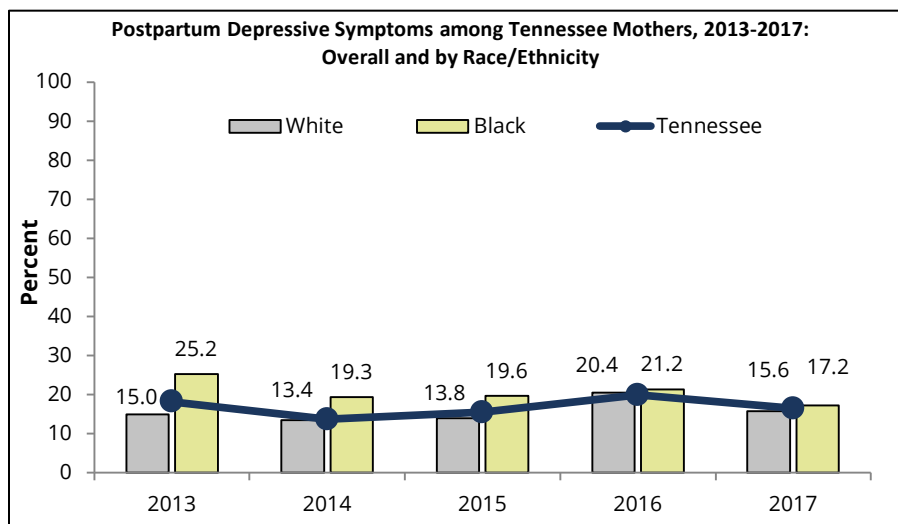
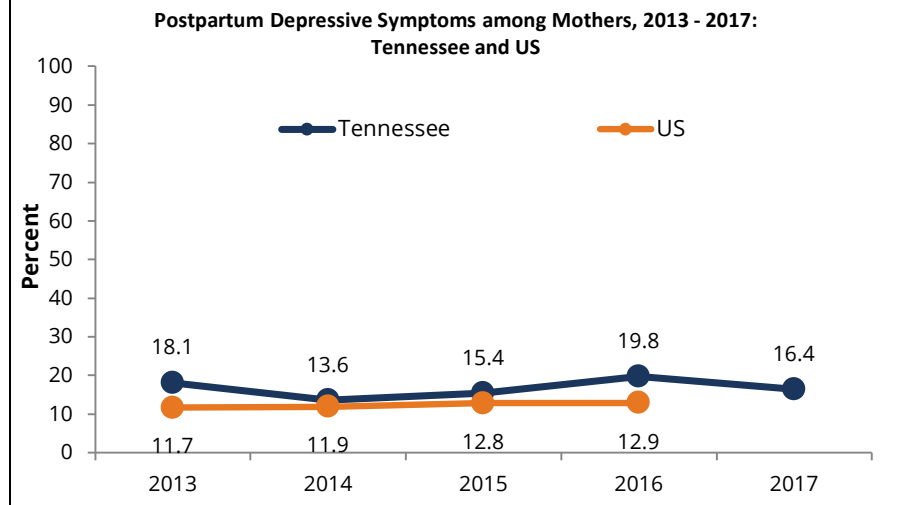
Total number of victims = 110

Data sources:

- 1) <https://www.tn.gov/content/dam/tn/tbi/documents/2011%20Tennessee%20Human%20Sex%20Trafficking%20and%20its%20Impact%20on%20Children%20and%20Youth.pdf>
- 2) <https://www.tn.gov/content/dam/tn/tbi/documents/2013%20The%20Geography%20of%20Trafficking%20in%20Tennessee.pdf>
- 3) <https://polarisproject.org/>

Postpartum Depressive Symptoms

- In 2017, 16.4% of Tennessee mothers reported postpartum depressive symptoms
 - Trending upward but no statistically significant change since 2013
 - Tennessee estimates are higher than US
 - National estimates from 2017 were not readily available
- In 2017, higher rates of postpartum depressive symptoms were reported among black mothers and younger mothers
 - No statistically significant racial differences
 - No statistically significant change among age groups



Data Sources: ¹Tennessee Pregnancy Risk Assessment Monitoring System (PRAMS), 2013 - 2017; Tennessee Department of Health, Office of Population Health Surveillance; Division of Population Health Assessment. Prepared March 2019 by Division of Family Health and Wellness. ²CDC PRAMS Selected Maternal and Child Health Indicators for all PRAMS sites, 2012-2015.; Accessed March 25, 2019 here: <https://www.cdc.gov/prams/pramstat/pdfs/mch-indicators/PRAMS-All-Sites-2012-2015-508.pdf>

Data Notes: Estimates determined by responding "Always" or "Often" to the following questions: "Since your new baby was born, how often have you felt down, depressed, or hopeless?" and "Since your new baby was born, how often had you had little interest or little pleasure in doing things you usually enjoyed?" (Postpartum)