

TFIMR Tulsa  
Fetal & Infant  
Mortality Review  
Project

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## Tulsa Area Preterm Birth Profile

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# TULSA FETAL AND INFANT MORTALITY REVIEW

**The Tulsa Fetal and Infant Mortality Review (TFIMR) project reviews infant and fetal deaths that meet specific criteria within Tulsa and seven surrounding counties. TFIMR is designed to enhance the health and well-being for those of childbearing age, infants and their families.**

**The goal is to bring community members together to examine and improve the social, economic, safety, cultural, and health system factors that impact fetal and infant mortality.**

**Through TFIMR, the community becomes experts in planning locally appropriate policies and specific interventions to better serve families in the community.**

**Interested in learning more about TFIMR and what it means to be a TFIMR member?**

**Visit the [Tulsa Fetal and Infant Mortality Review Project's webpage](#)**

# WHY IS IT IMPORTANT TO REDUCE PRETERM BIRTH?

**A preterm birth is a birth that occurs at less than 37 weeks of pregnancy.**

**Preterm birth places babies at risk of disability and death.**

**A preterm birth can happen to anyone even under the best circumstances, but we can work to reduce the chance that a preterm birth will happen.**



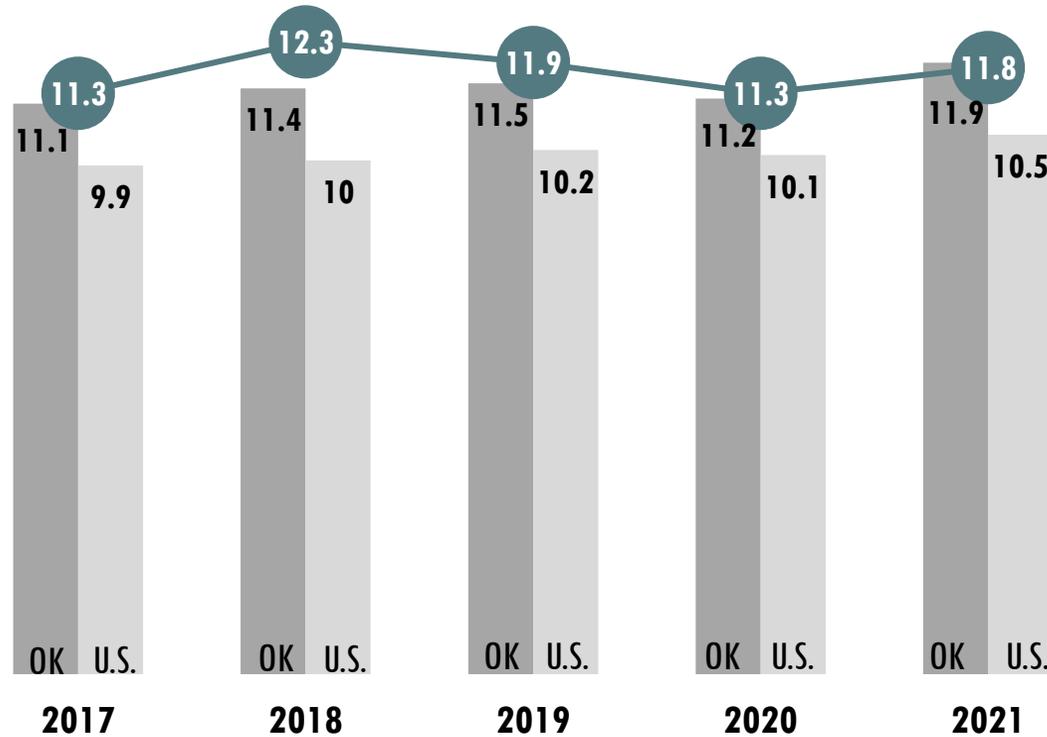
## **Tulsa County Preterm Birth Report Card**

March of Dimes reported a F grade for Tulsa County for its 2021 preterm birth rate of 11.8%. The 2021 preterm birth rate worsened from 11.3% in 2020<sup>1</sup>.

# ONE IN NINE BABIES WERE BORN PRETERM IN TULSA COUNTY IN 2020.<sup>1</sup>

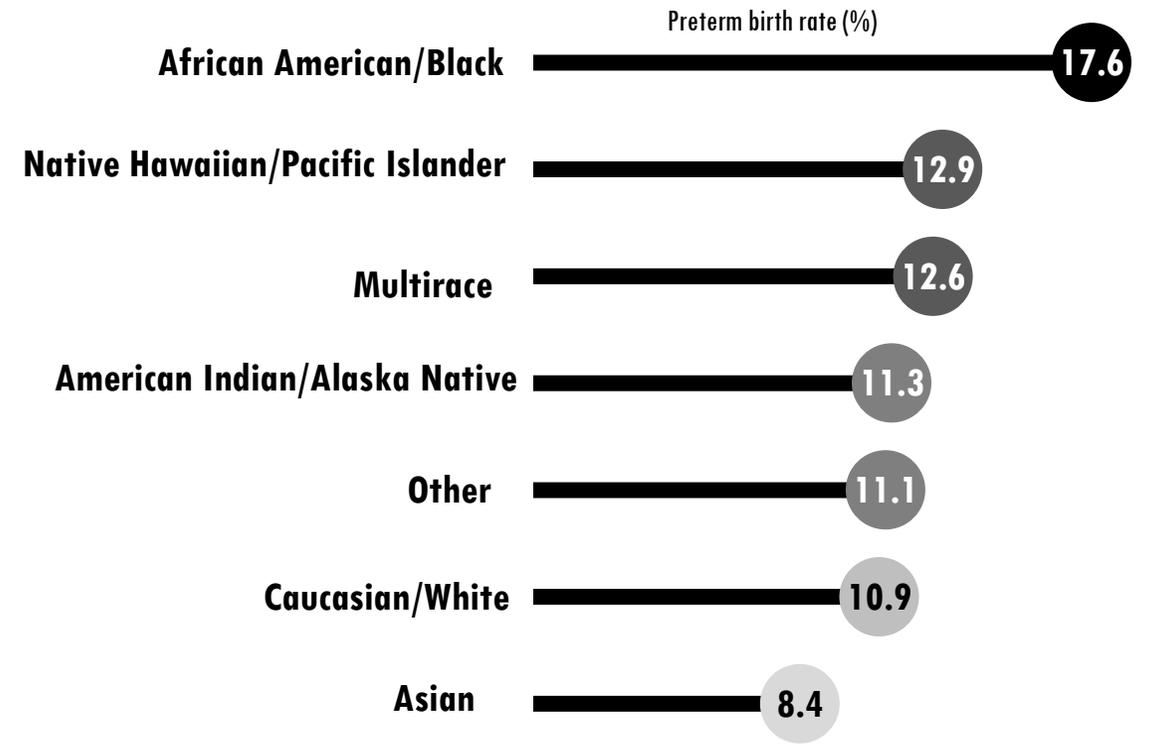
The annual percent of babies born preterm in Tulsa County remains higher than the United States.<sup>1</sup>

Preterm birth rate (%) by Year



The burden of preterm birth is not the same across Tulsa County populations.<sup>2</sup> Differences in exposures to risk factors increases disparities.

(2018-2020 3-Year rate. Not categorized by Hispanic/Non-Hispanic Ethnicities)

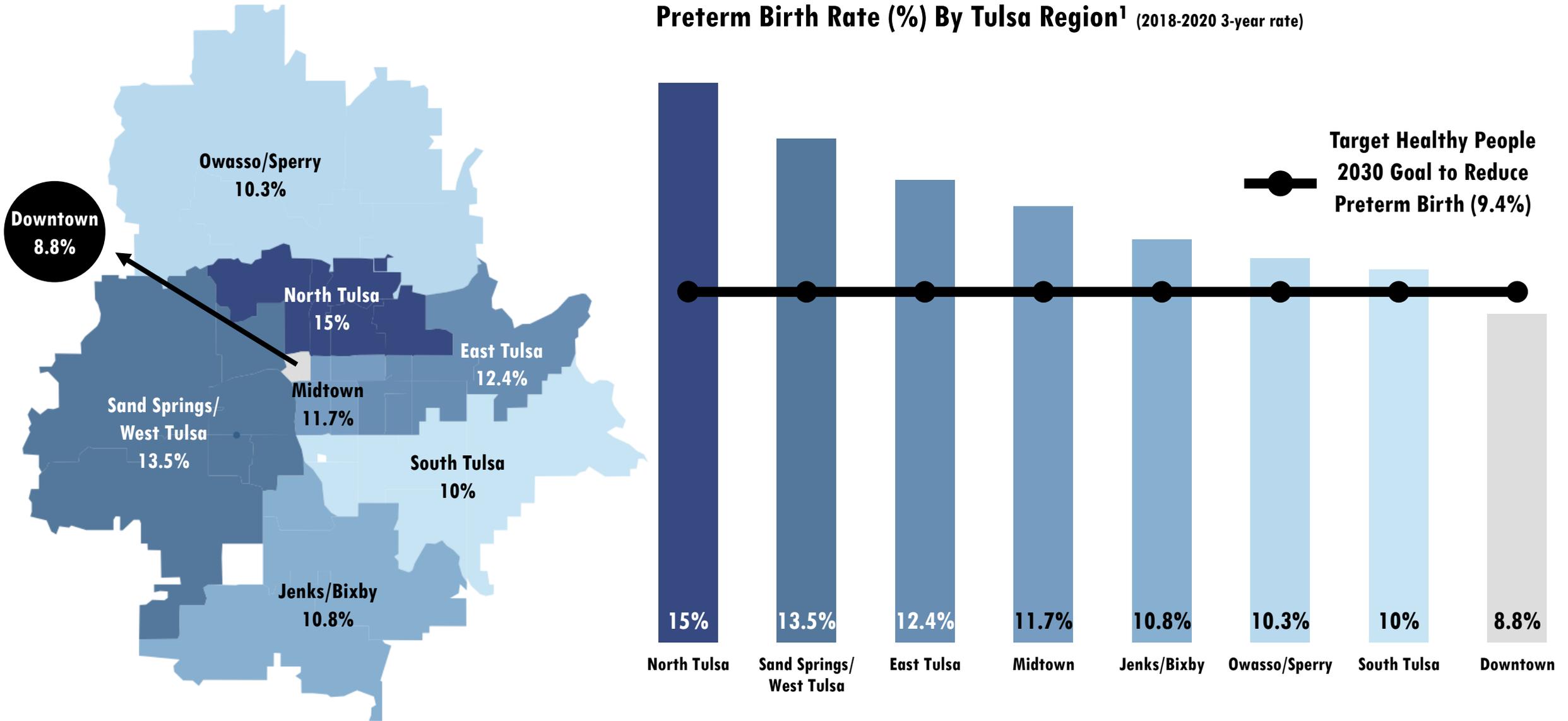


<sup>1</sup> National Center for Health Statistics, final natality data. Retrieved April 11, 2022, from [www.marchofdimes.org/peristats](http://www.marchofdimes.org/peristats)

<sup>2</sup> Oklahoma State Department of Health, Vital Statistics, 2018-2020, 3-Year rate.

# PRETERM BIRTH IMPACTS FAMILIES ALL ACROSS TULSA.

Preterm Birth Rate (%) By Tulsa Region<sup>1</sup> (2018-2020 3-year rate)

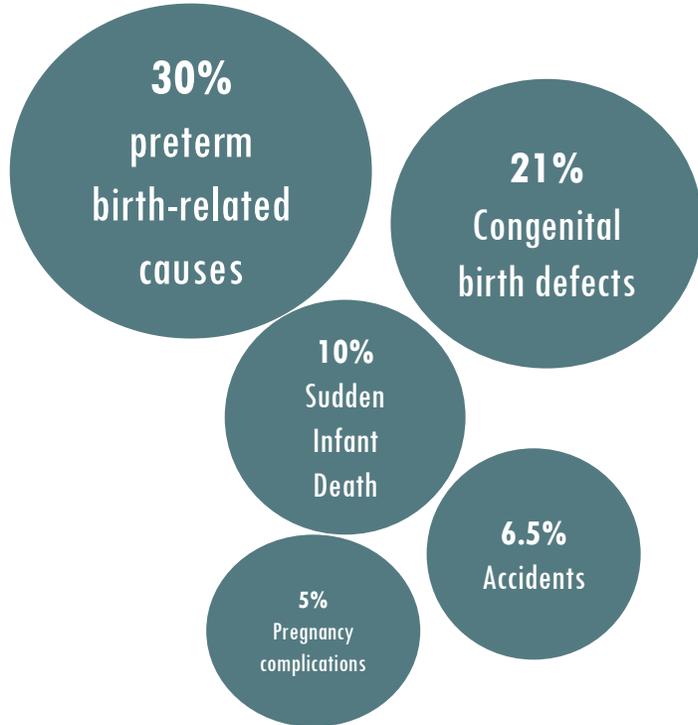


<sup>1</sup>Oklahoma State Department of Health, Vital Statistics, 2018-2020

# PRETERM BIRTH PLACES BABIES AT RISK FOR DISABILITY AND DEATH.

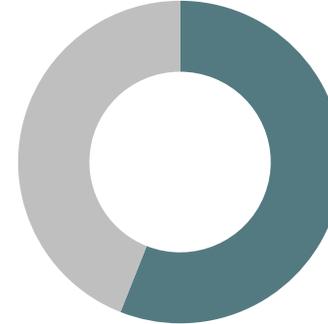
## Preterm birth-related causes are one of the biggest drivers of infant death in Tulsa County.

(OK2share, 2016-2020)



## Preterm babies are more likely to be placed in neonatal intensive care units (NICU).

(Oklahoma State Department of Health, Vital Statistics, 2016-2020)



In Tulsa Co. **54% of preterm babies** were admitted to the neonatal intensive care unit (NICU).



In contrast, **6% of babies born at 37 weeks or later** were admitted to the NICU.

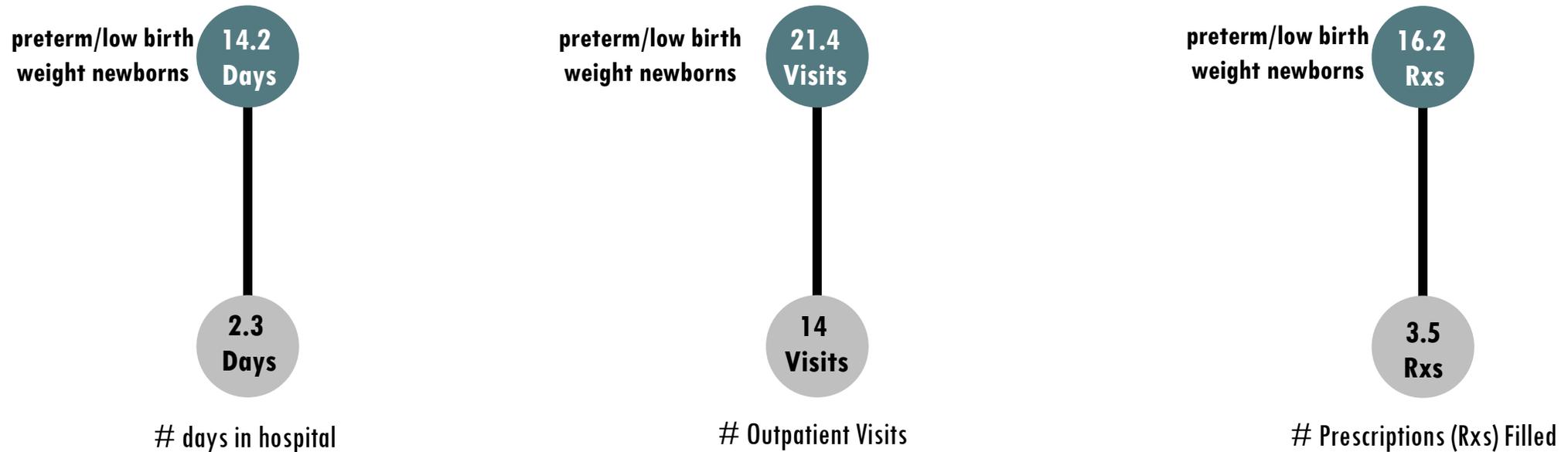
## BABIES BORN PRETERM THAT SURVIVE CAN EXPERIENCE:

- Breathing problems
- Feeding difficulties
- Cerebral palsy
- Developmental delay
- Hearing impairment
- Serious intestinal disease
- Intellectual disabilities
- Vision problems

# PRETERM BIRTH COSTS BOTH OUR FAMILIES AND COMMUNITY.

The average number of days spent in the hospital, number of outpatient doctor visits and prescriptions filled were higher among **preterm/low birth weight newborns** compared to newborns without those complications.

(Thomas Reuters, March of Dimes, 2008)



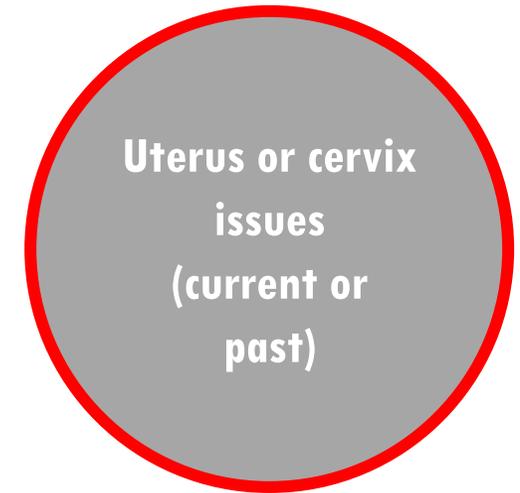
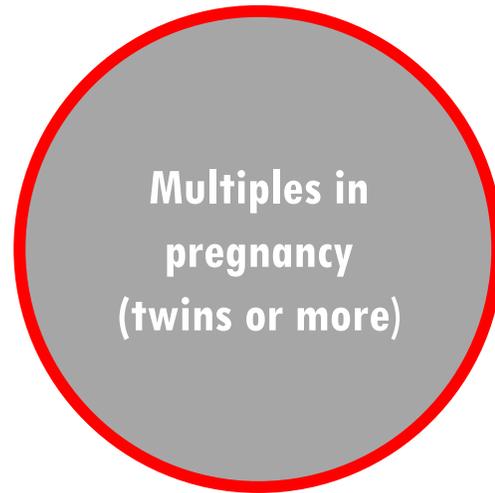
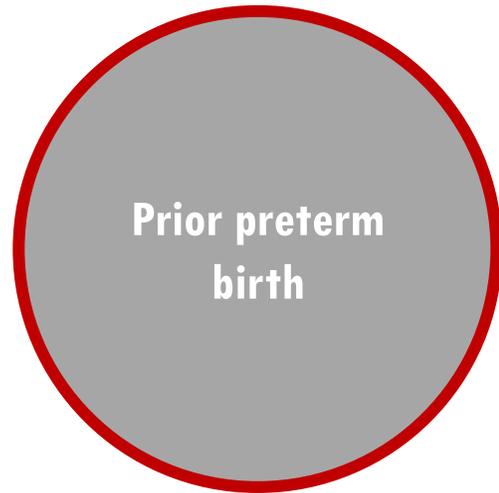
**The medical cost of preterm birth is around \$50,000 dollars compared to around \$13,000 for a term birth.**

With roughly 1,000 premature births occurring in Tulsa County each year, the total medical cost for prematurity estimates to around \$50,000,000 per year.

(March of Dimes/ Waitzman NJ, Jalali A, Grosse SD, Preterm Birth Lifetime Costs in the United States, 2016)

# WHAT FACTORS CONTRIBUTE TO PRETERM BIRTH?

**Not every preterm birth is preventable, and we don't always know what causes preterm labor or preterm birth. However, we do know certain risk factors may make preterm birth more likely to occur:**

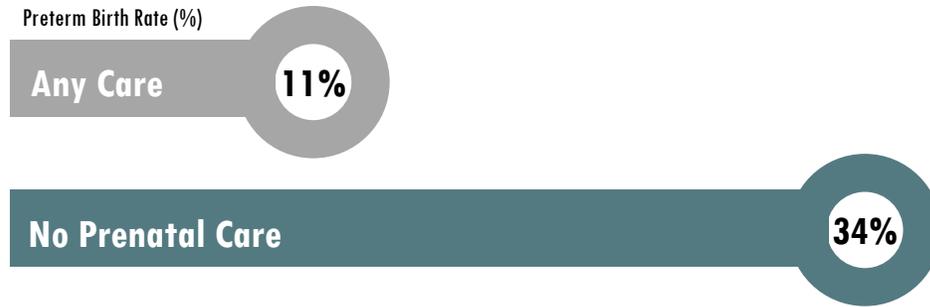


**Any of these signs or symptoms before the 37th week of pregnancy, may indicate preterm labor:**

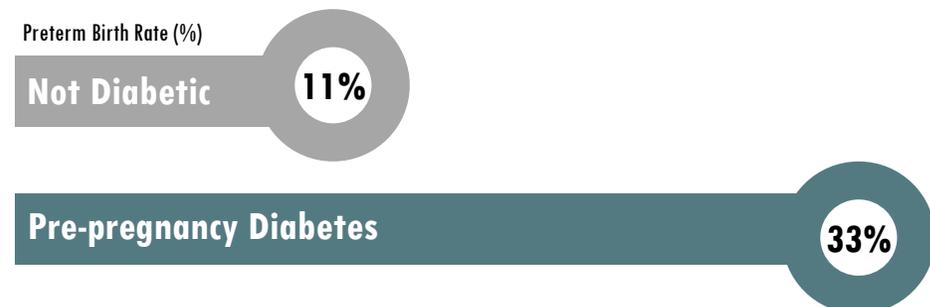
- Change in vaginal discharge (watery, mucus or bloody) or more discharge than usual
  - Pelvis or lower belly pressure, like baby is pushing down
    - Constant low, dull backache
  - Belly cramps with/without diarrhea
- Regular or frequent contractions that make the belly tighten, which may or may not be painful
  - Water breaks

# RISK FACTORS OF PRETERM BIRTH IN TULSA CO.

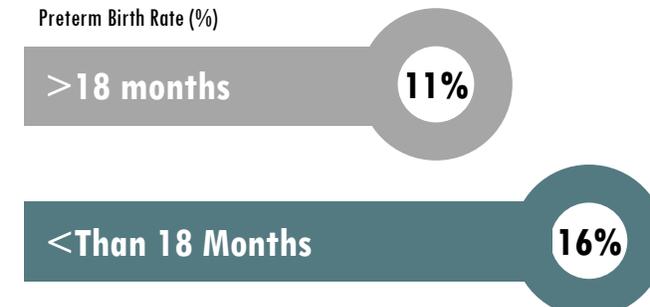
**Prenatal Care:** Prenatal care visits are the best time to learn steps to ensure a healthy pregnancy and address pregnancy concerns. In Tulsa County, those who had no prenatal care had a higher preterm birth rate than those who had any prenatal care throughout pregnancy. <sup>1</sup>



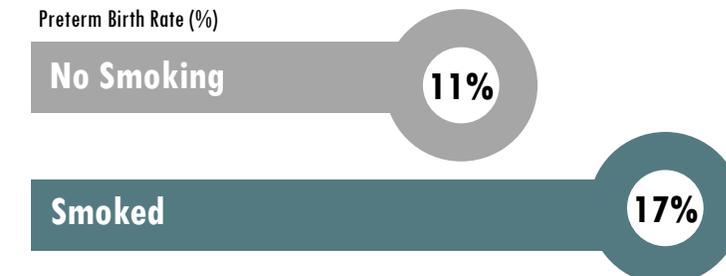
**Diabetes:** Many parents with Diabetes have healthy pregnancies, but it can cause pregnancy complications that can lead to preterm birth. In Tulsa County, those with pre-pregnancy Diabetes had a higher preterm birth rate than those who did not. <sup>1</sup>



**Short time between pregnancies:** Allowing time between pregnancies helps the body prepare for future births. In Tulsa County, the preterm birth rate was higher among those who did not space out pregnancies at least 18 months compared to those who did. <sup>1</sup>



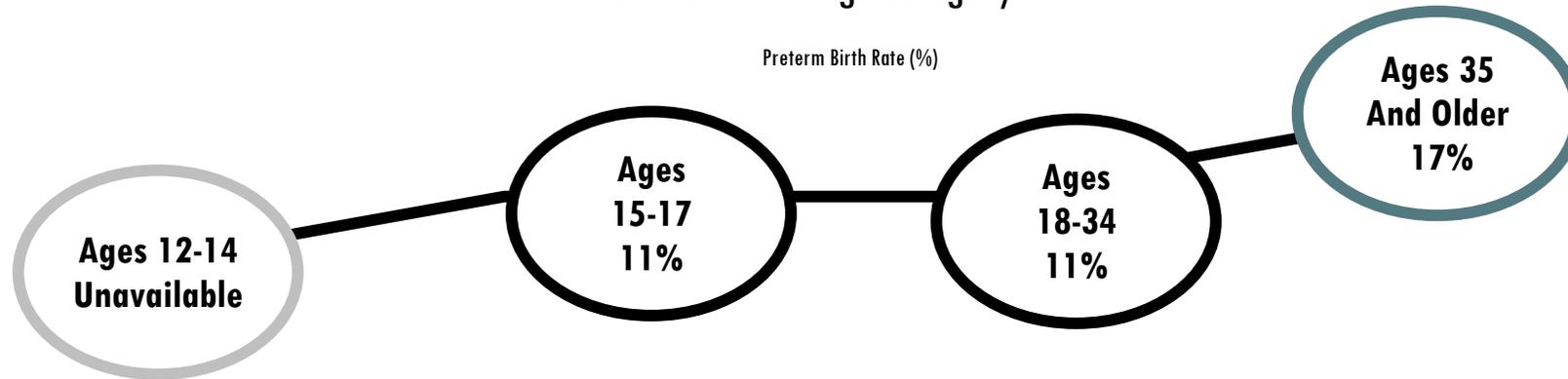
**Substance Use:** Connection to services for tobacco or other drugs is important to ensure a healthy pregnancy. In Tulsa County, those who smoked had a higher preterm birth rate than those who did not. <sup>1</sup>



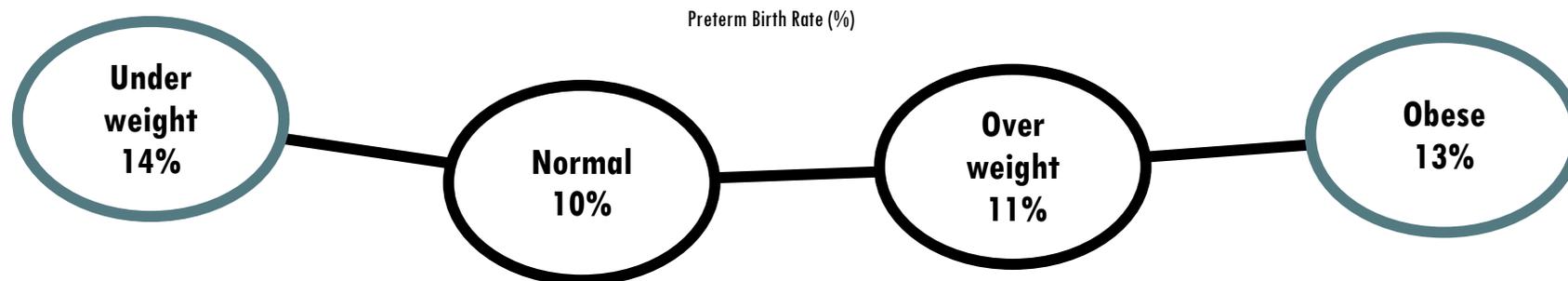
# RISK FACTORS OF PRETERM BIRTH IN TULSA CO.

**Maternal Age:** Those younger than 18 and those over the age of 35 are generally at greater risk for preterm birth.

In Tulsa County, those aged 35 or older had the highest preterm birth rate and data for those aged 12-14 was unavailable due to low counts of preterm births in that age category<sup>1</sup>.



**Weight:** Gaining the right amount of weight before and during pregnancy helps prevent pregnancy complications. In Tulsa County, those who were in the **underweight** and **obese** body mass index categories had the highest preterm birth rates.<sup>1</sup>

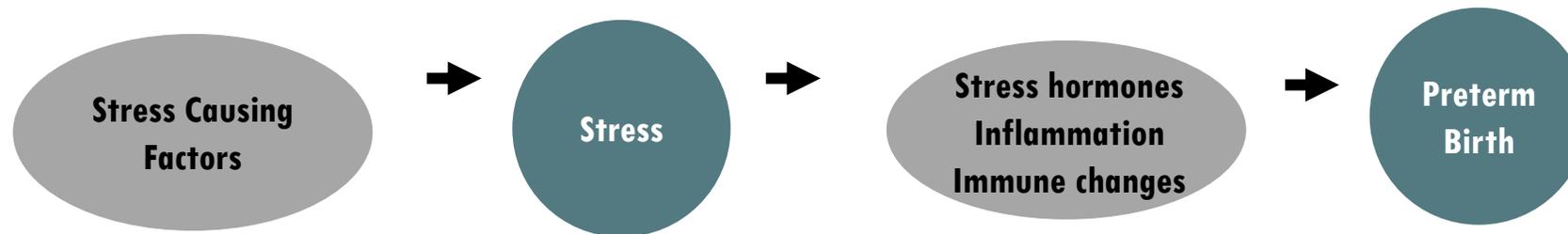


# RISK FACTORS OF PRETERM BIRTH IN TULSA CO.

**Stress:** Maternal stress is a well-established risk factor for preterm birth and has been associated with adverse birth outcomes.

Stress can come from many factors including but not limited to:

- Major Life Events/Abuse or Violence
- Adverse Childhood Experiences (ACEs) (youth emotional, physical, or sexual abuse, emotional or physical neglect, domestic violence, substance abuse, mental illness, incarcerated parents, separation/divorce)
- Neighborhood Environment
- Healthcare Resources & Navigation
- Racism/Discrimination
- Mental health and Behaviors
- Social Support
- Other social determinants of health (food access and quality, healthcare quality, economic stability, education access and quality, employment)



**Oklahoma ranks 6<sup>th</sup> highest in the nation for children with 2 or more ACEs and ranks in the bottom 10 of U.S. states for other determinants of health** such as food insecurity, health insurance coverage and poverty.<sup>1</sup>

A National Institute of Health study found that exposure to 2 or more ACEs was associated with a two-fold increase of preterm birth.<sup>2</sup>

<sup>1</sup>Community Service Council, 2021 Tulsa County Community Profile

<sup>2</sup>Christiaens, I. et al., 2015

# WHAT CAN WE DO TO REDUCE PRETERM BIRTH?

## Those of Childbearing Age (ages 16-49) or Planning a Pregnancy

### **Eat healthy and be active.**

- ✓ Visit [Show your Love](#) to learn how young adults can achieve their goals and make healthy lifestyle choices.
- ✓ Visit [Tulsa-health.org/WIC](http://Tulsa-health.org/WIC) to learn about the WIC supplemental nutrition program that serves women, infants and children up to age five with healthy food benefits.
- ✓ Visit [SNAP or the supplemental nutrition assistance program](#) to learn how it supports low-income families to buy nutritious foods at farmers markets and food stores.

### **Plan when to have a baby and create a birth plan.**

- ✓ Visit [Preparing for a Lifetime](#) for quick tips on planning for a baby.
- ✓ View the March of Dimes [printable birth plan](#) and other information on [what to know before or between pregnancies](#).
- ✓ Visit the [Take Control Initiative](#) or other family planning clinics to learn more about free birth control options.
- ✓ Sign up for the [Text4Baby App](#) to receive tips for a healthy pregnancy, appointment reminders, and health and safety tips before and during pregnancy.

### **Support your mental health.**

- ✓ Visit [Preparing for a Lifetime](#) to learn about tips to help with depression and anxiety during and after pregnancy.
- ✓ For mental health crisis call the maternal mental health line at 1-833-943-5746 or 988.

### **Take a multivitamin that contains 400 milligrams of folic acid.**

- ✓ Learn about the [importance of folic acid](#)
- ✓ [Health insurance is important to have before pregnancy](#) review what healthcare services are covered by the Affordable Care Act or visit the Oklahoma Health Care Authority to learn about [SoonerCare \(Oklahoma Medicaid\)](#) that helps pay for medical services for those who qualify.

### **Limit smoking, alcohol and illicit drug use.**

- ✓ Call 1-800-Quit-Now or visit the [Oklahoma Tobacco Quitline](#) to learn about services to help quit tobacco use.
- ✓ Visit [Creeks Health Services](#) to learn more about adult substance use services that utilize best practices in treatment and counseling to support recovery.

### **Know the signs and symptoms of preterm labor and ask your doctor if low-dose aspirin can help reduce your risk.**

- ✓ See if a [low-dose aspirin](#) may be right for you to help prevent complications.
- ✓ Even if you have one sign/symptom of preterm labor visit your healthcare provider right away. View the [March of Dimes quick reference sheet](#) to learn the signs/symptoms.

# WHAT CAN WE DO TO REDUCE PRETERM BIRTH?

## Medical Providers

### **Encourage healthy behaviors among all childbearing aged clients and understand barriers.**

- ✓ The American College of Obstetricians and Gynecologists (ACOG) advises physicians to encourage their patients to maintain or adopt a healthy lifestyle before, during and beyond pregnancy. [Visit ACOG](#) to learn about healthy living tips to share with patients.
- ✓ Visit [Women's Preventative Services Initiatives](#) to print out the Well-Women Chart. It outlines preventive services based on age, health status, and risk factors.
- ✓ Share the Oklahoma Tobacco Helpline number 1-800-Quit-Now or visit the [Okhelpline website](#) to learn more about tools to help quit tobacco.

### **Reduce non-medically indicated deliveries before 39 weeks gestation and prescribe low dose aspirin for appropriate clients.**

- ✓ Read [The American College of Obstetricians and Gynecologists \(ACOG\) and the Society for Maternal-Fetal Medicine \(SMFM\)](#) recommendations on this topic.
- ✓ Visit the March of Dimes and retrieve the [Elimination of non-medically indicated \(elective\) deliveries before 39 weeks gestational age toolkit](#). A hospital resource for obstetrical providers, clinical staff, hospitals and healthcare organizations.
- ✓ [See if a low-dose aspirin](#) may be right for your clients to help prevent pregnancy complications that lead to preterm birth.
- ✓ [See if progesterone](#) may be right for clients to help prevent preterm birth, especially those with a short cervix.

### **Inquire about pregnancy intentions among those of childbearing age and encourage appropriate pregnancy spacing.**

- ✓ Review [ACOG recommendations on interpregnancy care](#) and see additional information on the risks and benefits of repeat pregnancy sooner than 18 months.
- ✓ Take [Beyond the Pill foundational training](#) in patient-centered contraceptive counseling and the most up-to-date information on IUDs and Implants.

### **Deliver culturally competent services.**

- ✓ Visit [March of Dimes](#) to learn how to dismantle bias in settings that deliver maternal and infant care.
- ✓ Review [ACOG recommendations and the importance of social determinants of health and cultural awareness in the delivery of reproductive health care](#).

# WHAT CAN WE DO TO REDUCE PRETERM BIRTH?

## Community Based Organizations

### **Encourage those of childbearing age to cease tobacco and other substance use that could be harmful to a developing baby.**

- ✓ Share the Oklahoma Tobacco Helpline number 1-800-Quit-Now or visit the [Okhelpline website](#) to learn more about tools to help quit tobacco.
- ✓ Visit [Creaks.org](#) for adult substance use counseling and support for everyday functioning and sustainable recovery.

### **Support connection to services and resources for caregivers.**

- ✓ Share resource information: Call 211 for local services or visit the [Eastern Oklahoma 211 website](#).
- ✓ Call 1-833-9-HELP4MOMS for maternal mental health resources or 988 when a parent is experiencing a mental health crisis and needs connection to mental health resources immediately.
- ✓ Share the Tulsa Health Department program information included in this document with patients who are pregnant or planning to become pregnant.

### **Engage and deliver culturally competent programs and services.**

- ✓ Work with those in the community to build relationships and understand their needs.
- ✓ Visit [March of Dimes to learn how to dismantle bias in settings that deliver maternal and infant care](#).
- ✓ Review [ACOG recommendations and the importance of social determinants of health and cultural awareness in the delivery of reproductive health care](#).

# WHAT CAN WE DO TO REDUCE PRETERM BIRTH?

## Policy Drivers

**Ensure funding to programs that improve access to services for those who are pregnant or parenting including healthcare coverage.**

- ✓ Examples include Title V Maternal and Child Health Block Grant Programs , Early Childhood Home Visitation Programs and Doula coverage. [Read more about the March of Dimes Position Statement on Doulas and Birth Outcomes.](#)
- ✓ Review the [March of Dimes Data Book for Policy Makers](#) to see quick data facts. Oklahoma and other state reports are available.

**Invest in evidence-based models of care.**

- ✓ Review [March of Dimes Policy initiatives resource guide](#) that includes state contacts and resources for policy initiatives that impact preterm birth including evidence-based models of care.

**Invest in effective public policies that will reduce the rates of preterm birth and improve the outcomes for infants born preterm.**

- ✓ Understand the determinants of preterm birth and the determinants of healthy outcomes for infants born preterm.
- ✓ Continue to research and resource effective interventions.

# THE ROLE OF DOULAS IN IMPROVING BIRTH OUTCOMES & DISPARITIES

## **The Need:**

Women of color and those who are more than one race share an unequal burden of preterm birth in Tulsa County.

## **One Tool to Help Improve Birth Outcomes:**

Doulas improve communication between low-income, racially/ethnically diverse pregnant women and their health care providers.

The March of Dimes supports increased access to doula care, especially in under-resourced communities, to improve a range of health outcomes for parents and babies.

[Read more about the March of Dimes Position Statement on Doulas and Birth Outcomes](#)

## **Local Organization In Action:**

### **The Tulsa Birth Equity Initiative (TBEI)**

TBEI works closely with local community partners in a collaborative effort to explore and implement evidence-based strategies that address clear gaps in how we address maternal conception, pregnancy, mortality, and morbidity in our community.

#### **Programs Offered**

Doula Services for Expecting Families , Preconception Guidance Course and Queens Village-Tulsa

Visit <https://www.tulsabei.org/about> to learn more about the services TBEI offers.

# THE TULSA HEALTH DEPARTMENT HOSTS MANY PROGRAMS TO SUPPORT HEALTHY FAMILIES AND BABIES.

## Pregnant or a new parent?

Contact a family advocate or parentPROs community connector.

### Contact Family Advocates with ConnectFirst

Help with services, resources and information about local community programs.

**PHONE: 918-900-0808**

[www.connectfirsttulsa.org/](http://www.connectfirsttulsa.org/)

### Contact parentPRO

Connection to free voluntary home-visiting programs and home-based parenting support that are available to Tulsa Co. residents.

**PHONE: 918-779-6915**

[www.parentpro.org](http://www.parentpro.org)

**Healthy Start**-Free and confidential clinic triage with home visitation case management services for expecting and postpartum parents and their babies up to age two. Healthy start also has a **fatherhood program to support parenting fathers.**

**Women, Infants and Children (WIC)**- A supplemental nutrition program that serves to safeguard the health of income-eligible women, infant and children up to age five.

**Family Planning**-Education for birth control, including abstinence and natural family planning fertility awareness. Confidential and offered in English, Spanish and Burmese.

**Teen Clinic**-Teens can receive family planning/STD services.

**Maternal and Child Health Outreach Initiative**-assists parenting and pregnant individuals with SoonerCare, SoonerPlan and Soon to Be Sooners health insurance and social work needs.

**Children First**-A nurse family partnership. Family-centered home-based services by registered nurses (RNs) to help first-time mothers and their families prepare for parenthood.

**The Oklahoma State Department of Health's Preparing for a Lifetime: It's Everyone Responsibility initiative and the Oklahoma Family Planning Program,** provides additional services and resources to the TFIMR counties of Rogers, Creek, Osage, Okmulgee, Pawnee, Wagoner, and Washington.

# ADDITIONAL RESOURCES

## Maternal and Child Health Data

**Peristats**-Learn more about local and national trends in premature birth with PeriStats, a user-friendly online data resource by the March of Dimes.

**Community Service Council**- A source of local data to support vulnerable populations and learn the needs of Tulsans. A premier source for community data and research in the Tulsa area.

**Tulsa Health Department's Community Health Status Report**- A source of local data related to maternal and child health measures.

**Oklahoma State Department of Health's Preparing for a Lifetime**- A source of local and state maternal and child health measures and more information to improve infant outcomes.

**National Center for Health Statistics**-A source of state and national level maternal and child health data.

## Prematurity and Grief Resources for Parents

**March of Dimes and The American College of Obstetricians and Gynecologists (ACOG)** - general information on preterm labor and premature birth.

**March of Dimes My NICU Baby App**-Gives tips and helpful videos to care for your baby in the NICU. Includes options to connect with other families with similar experiences and create a customizable checklist to prepare to take baby home.

**March of Dimes-Dealing with Grief After the Loss of a Baby**

**Oklahoma State Department of Health's Preparing for a Lifetime**- extensive list of Tulsa and Oklahoma grief services to find support near you.

# REPORT DATA SOURCES

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**Region Data:** **Sand Springs/West Tulsa Region** - includes zip codes 74050, 74063, 74066, 74107, 74127, 74131 and 74132. **North Tulsa Region** - includes zip codes 74106, 74110, 74115, 74116, 74117, 74126 and 74130. **Owasso/Sperry Region** - includes zip codes 74021, 74055, 74070 and 74073. **Midtown Region** - includes zip codes 74104, 74105, 74112, 74114 and 74135. **Downtown Region** - includes zip codes 74103, 74119 and 74120. **East Tulsa Region** - includes zip codes 74015, 74108, 74128, 74129, 74134, 74145 and 74146. **South Tulsa Region** - includes zip codes 74011, 74012, 74014, 74133, 74136 and 74137. **Jenks/Bixby Region** - includes zip codes 74008, 74033, 74037 and 74047. Note that some zip codes may extend outside the boundaries of Tulsa County. In these cases, the total population for the zip code is included in the regional calculation.



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