

Jackson County Fetal & Infant Mortality Review (FIMR) Report 2019



Prepared by

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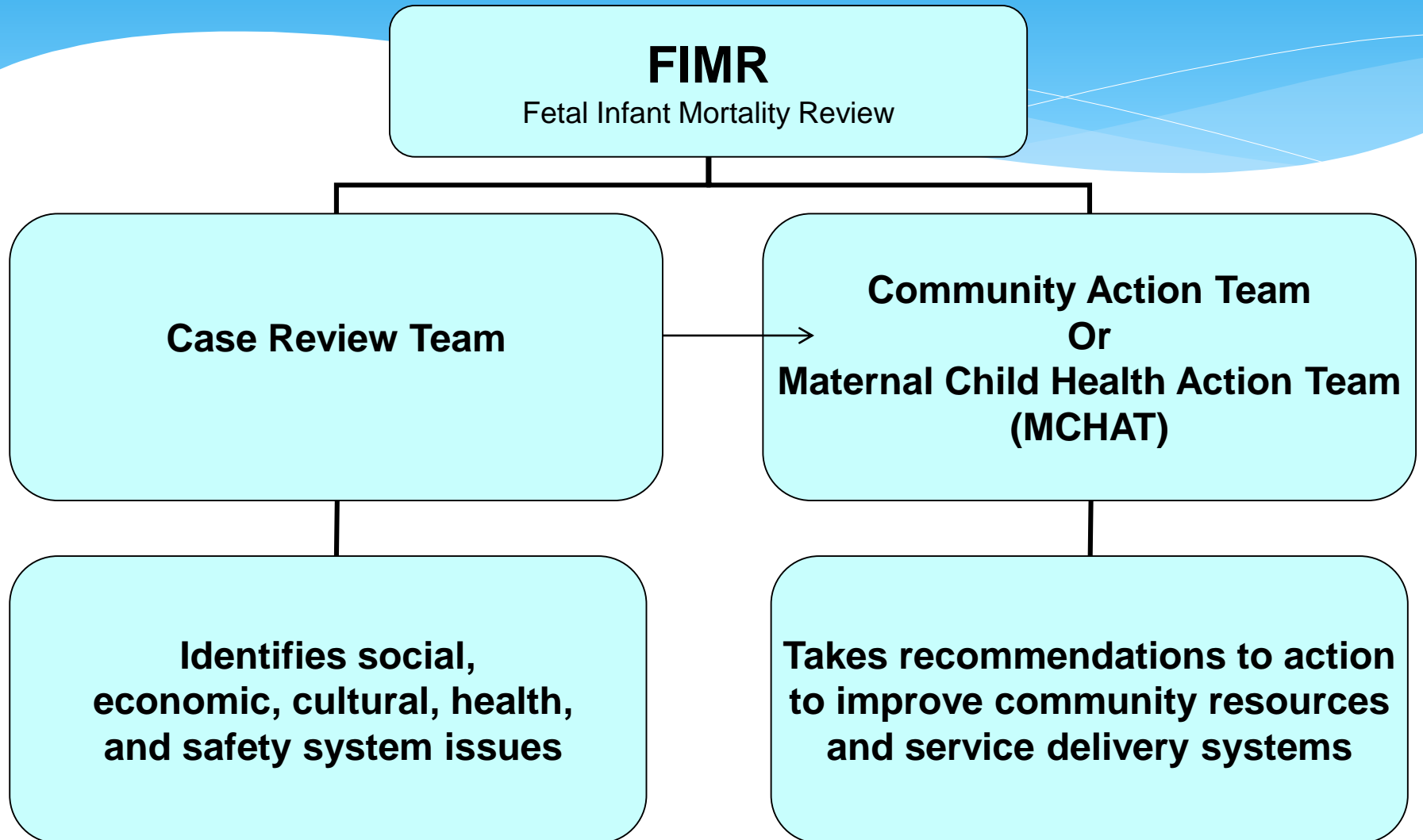
What Is Fetal Infant Mortality Review (FIMR)?

- * The Jackson County FIMR case review team consists of a diverse group of health professionals, social service professionals and community members.
- * This team reviews the life and death circumstances of infants who died in Jackson County.
- * The team identifies factors contributing directly or indirectly to the infants death.
- * The goal is to identify ways to improve our community's service systems for pregnant women, infants and families with young children.

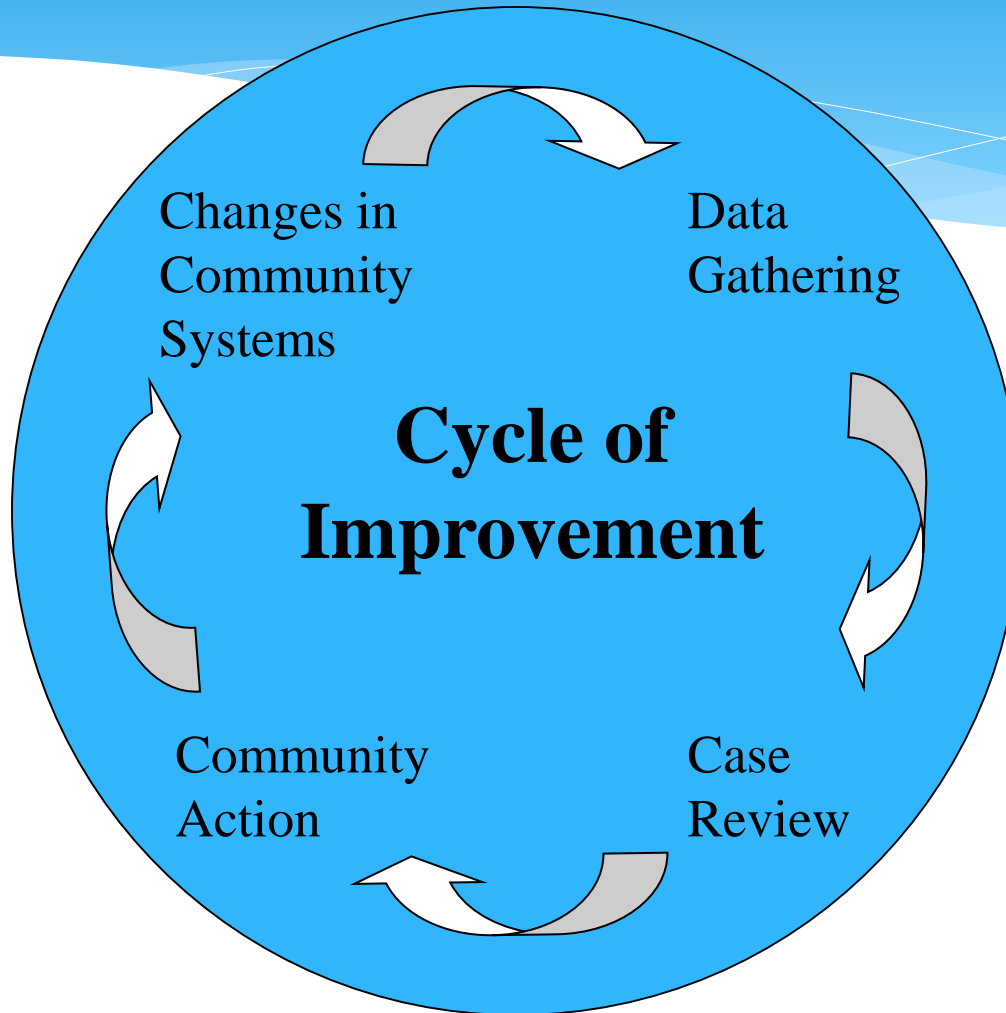
Why is FIMR important

- * Infant Mortality is often used as an indicator to measure the health and well-being of a community, because factors affecting the health of entire populations can also impact the *mortality rate of infants*.
- * FIMR is a surveillance methodology used nationally to monitor and understand infant death.
- * Evaluating these deaths is a window into the communities health, which allows us to identify gaps and improve birth outcomes in Jackson County.

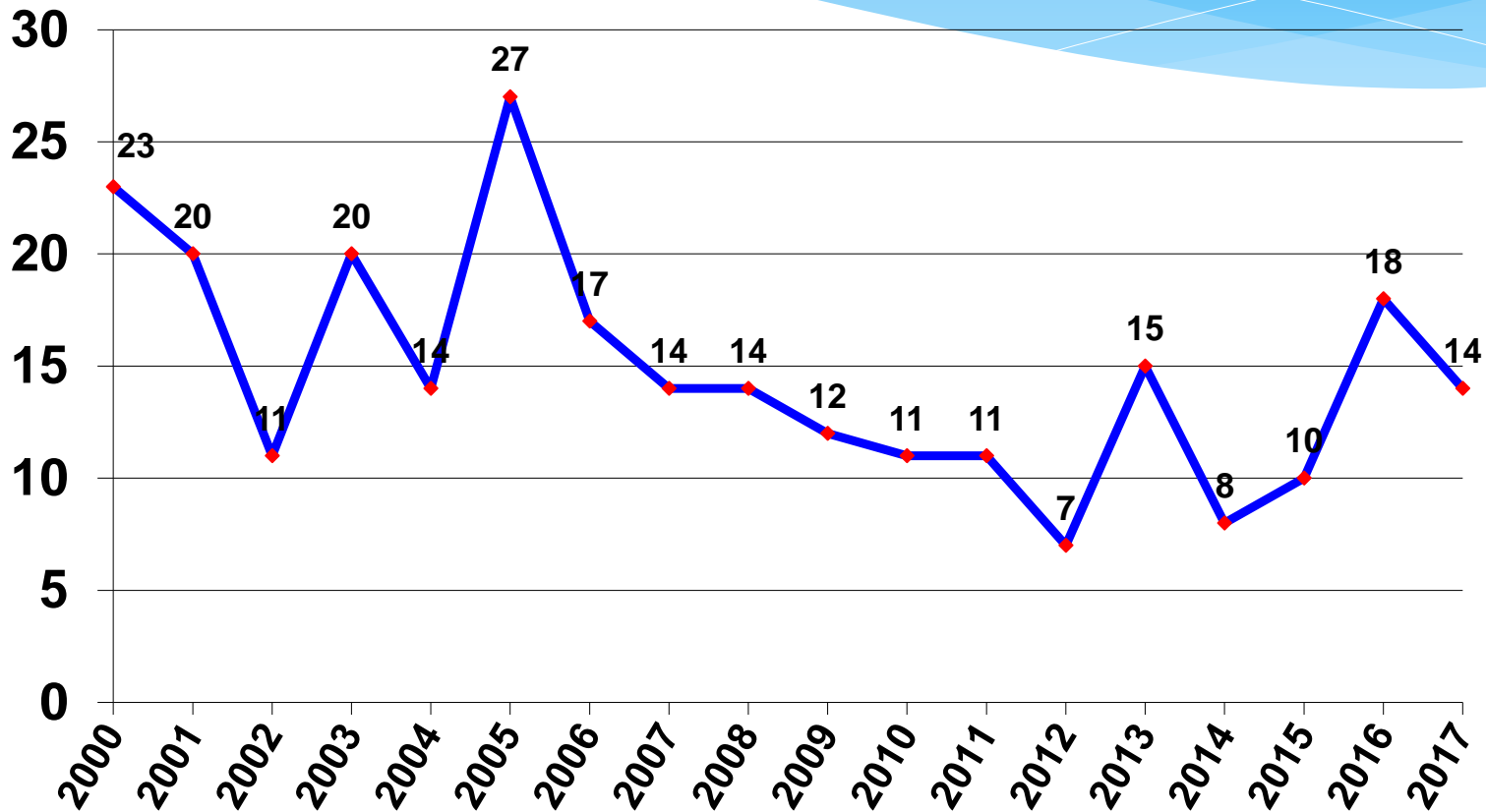
Two Tiered Process



The FIMR Process



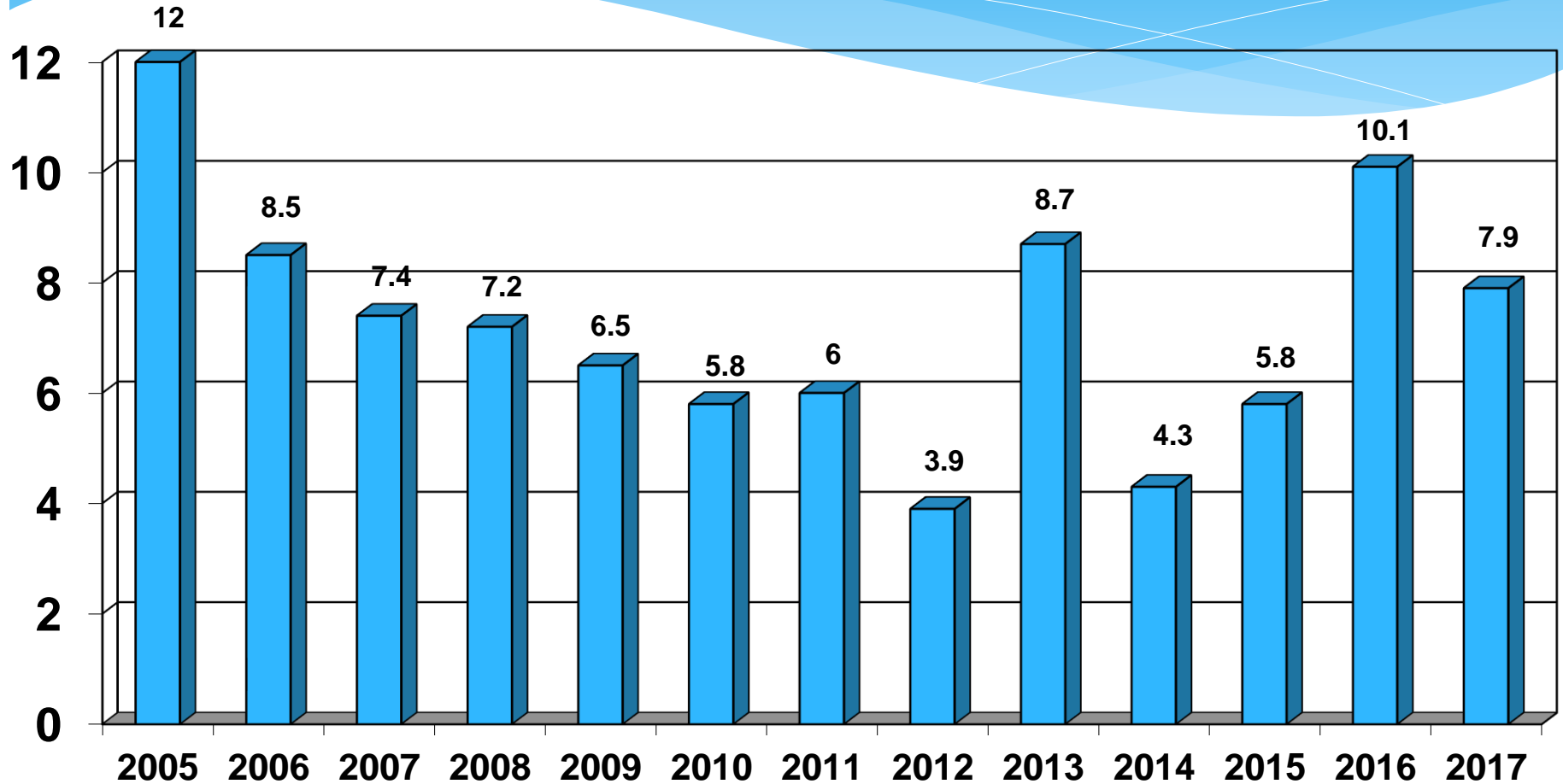
Jackson County Number of Infant Deaths 2000-2017



* FIMR began in 2003

Jackson County Infant Mortality Rate

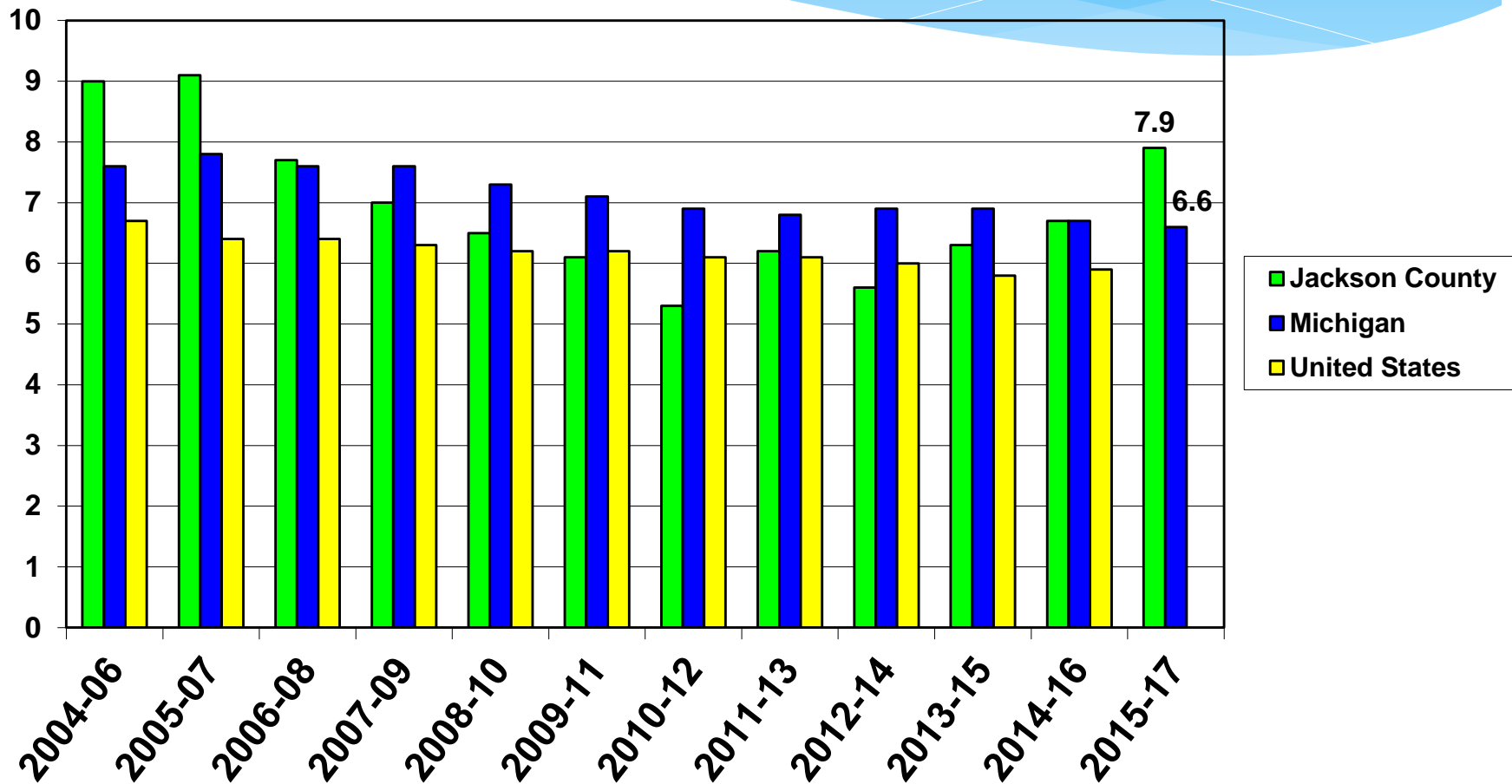
2005-2017



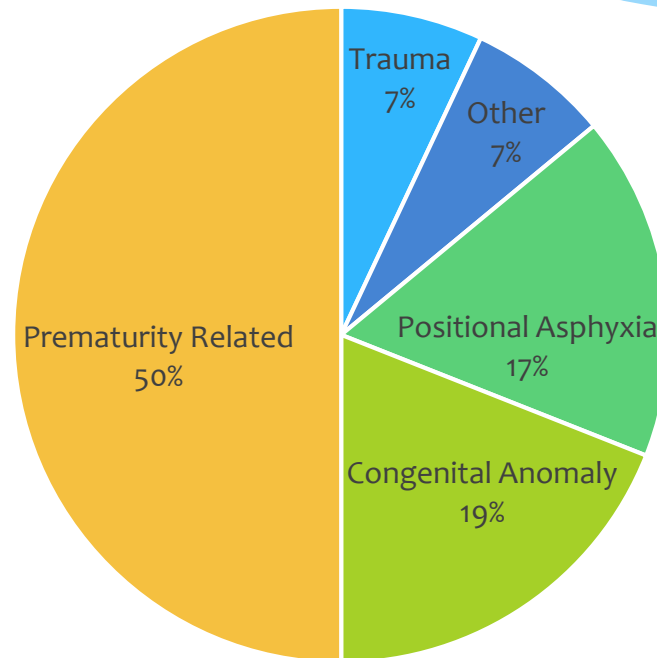
Rates are per 1,000 live births

Jackson County IMR

Compared to Michigan and US, 2004-2017



Percent of Jackson County Infant Deaths by Cause, 2015-2017 (n=42)

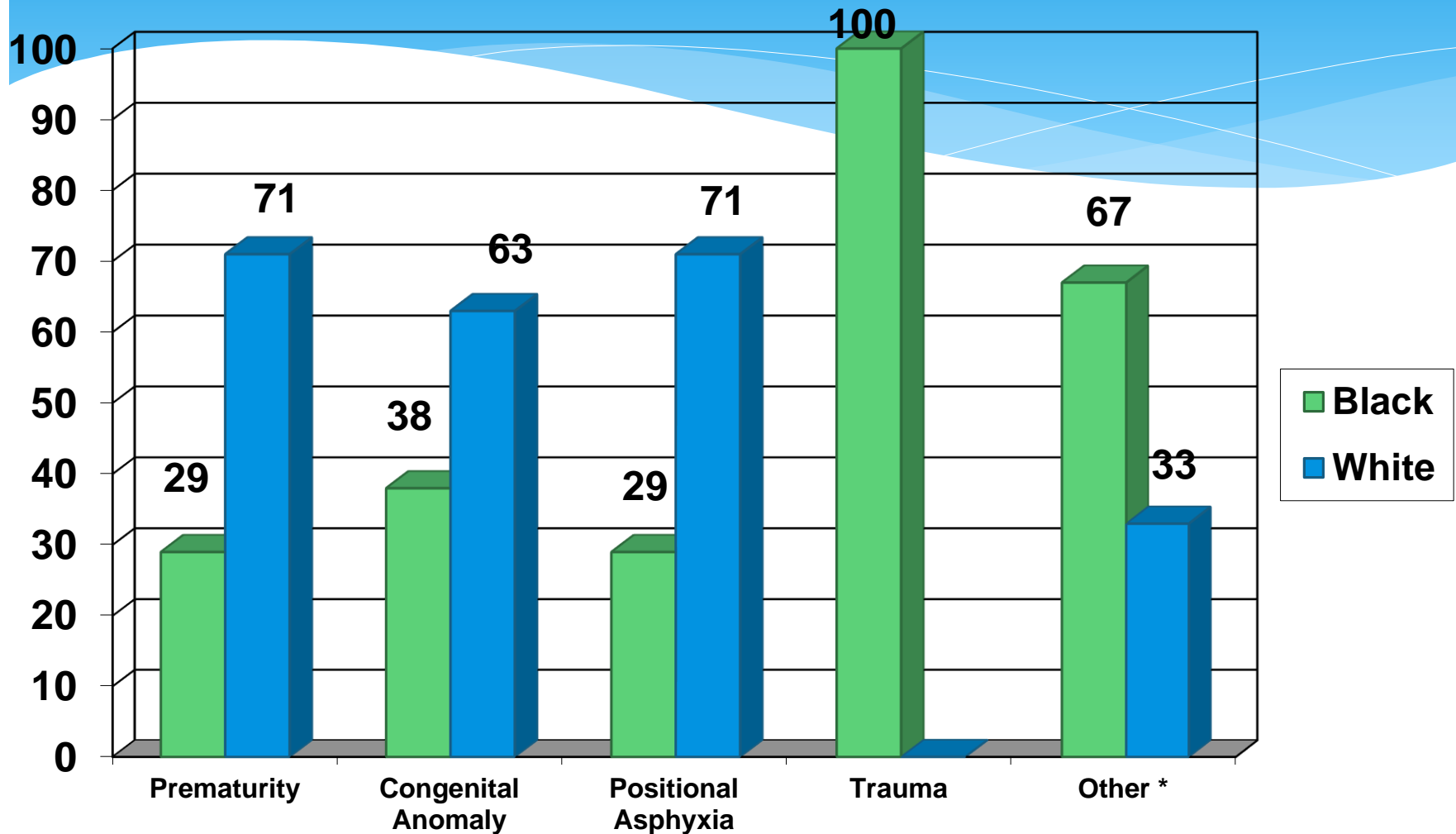


■ Trauma ■ Other ■ Positional Asphyxia ■ Congenital Anomaly ■ Prematurity Related

Other = 2015, accident/fire, 2016 Trauma/homicide, 2017 Myocarditis, Trauma (auto accident)

% Cause of Death by Race

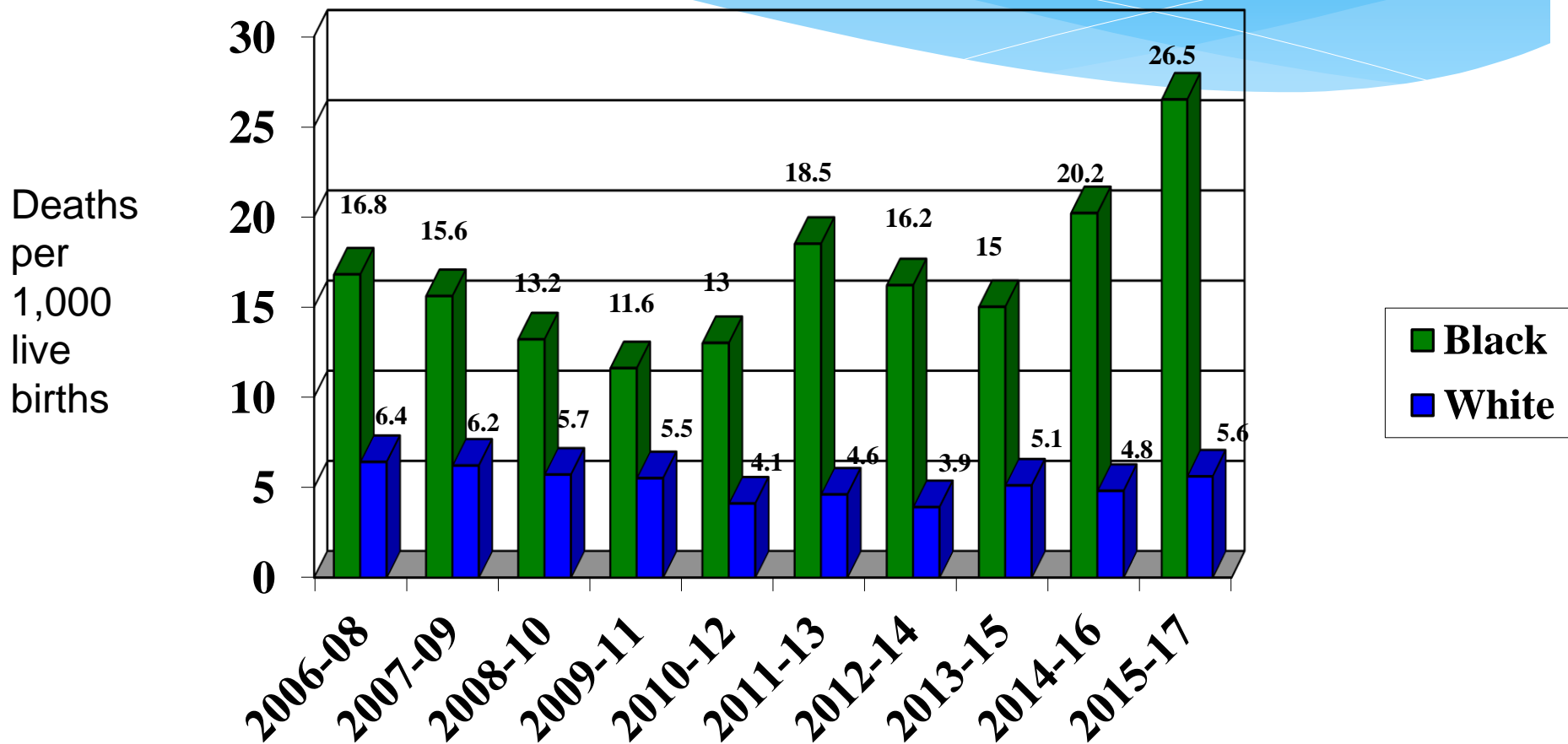
2015-2017 n=42



* Other includes Accidental (fire), Chorioamnionitis /Funisitis & Myocarditis

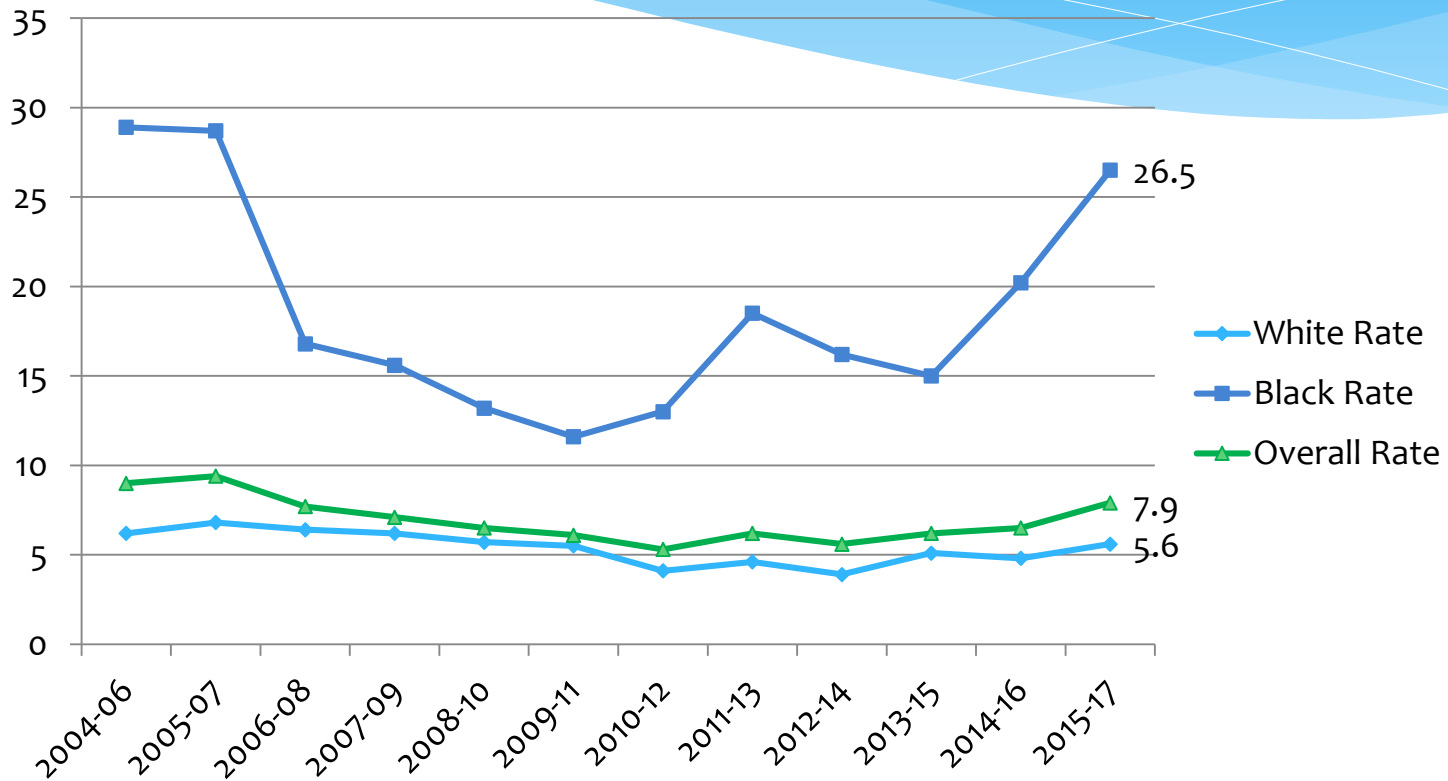
Black/White IMR (2006-2017)

Jackson County

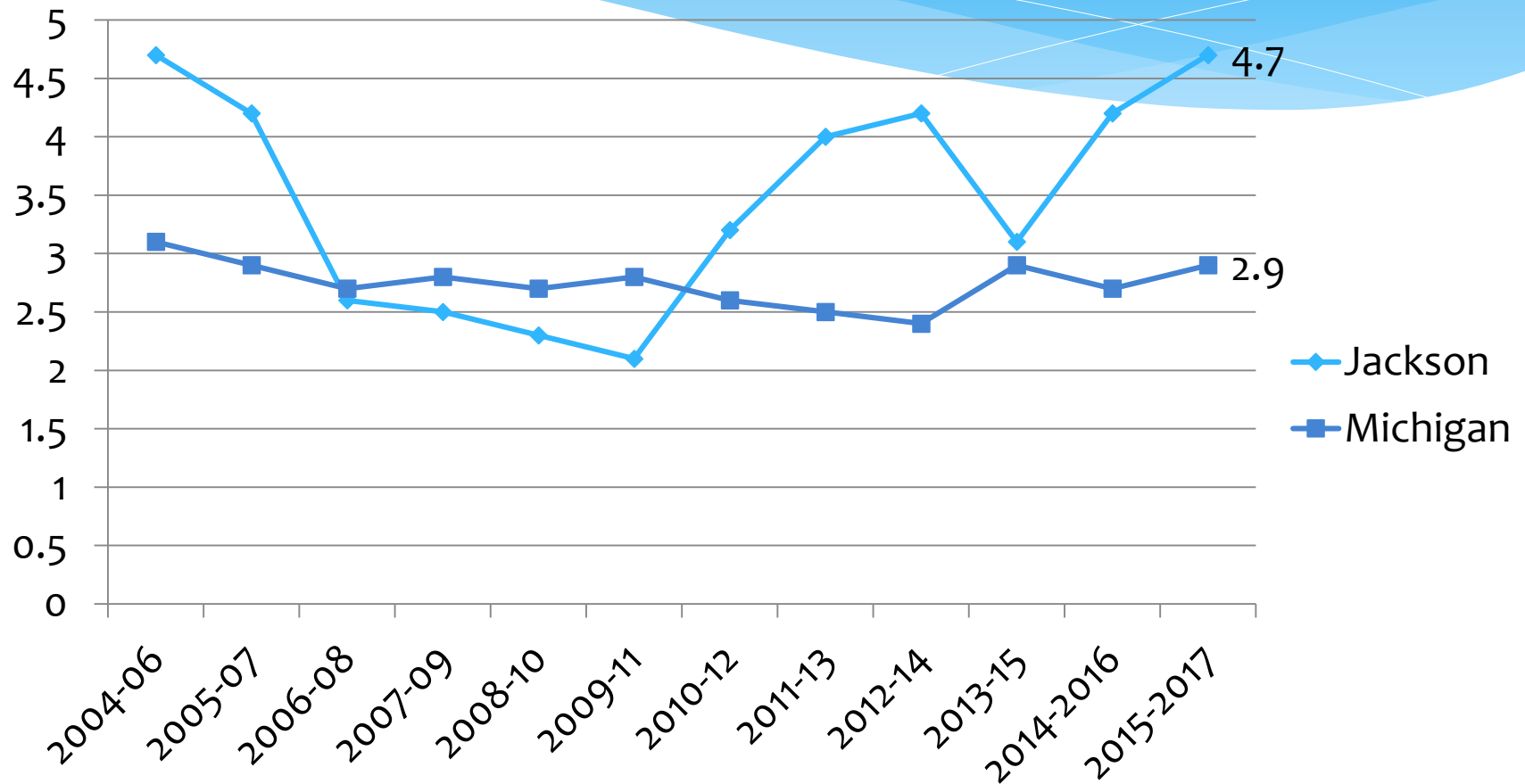


❖ Race is determined by race listed first/only on baby's death certificate

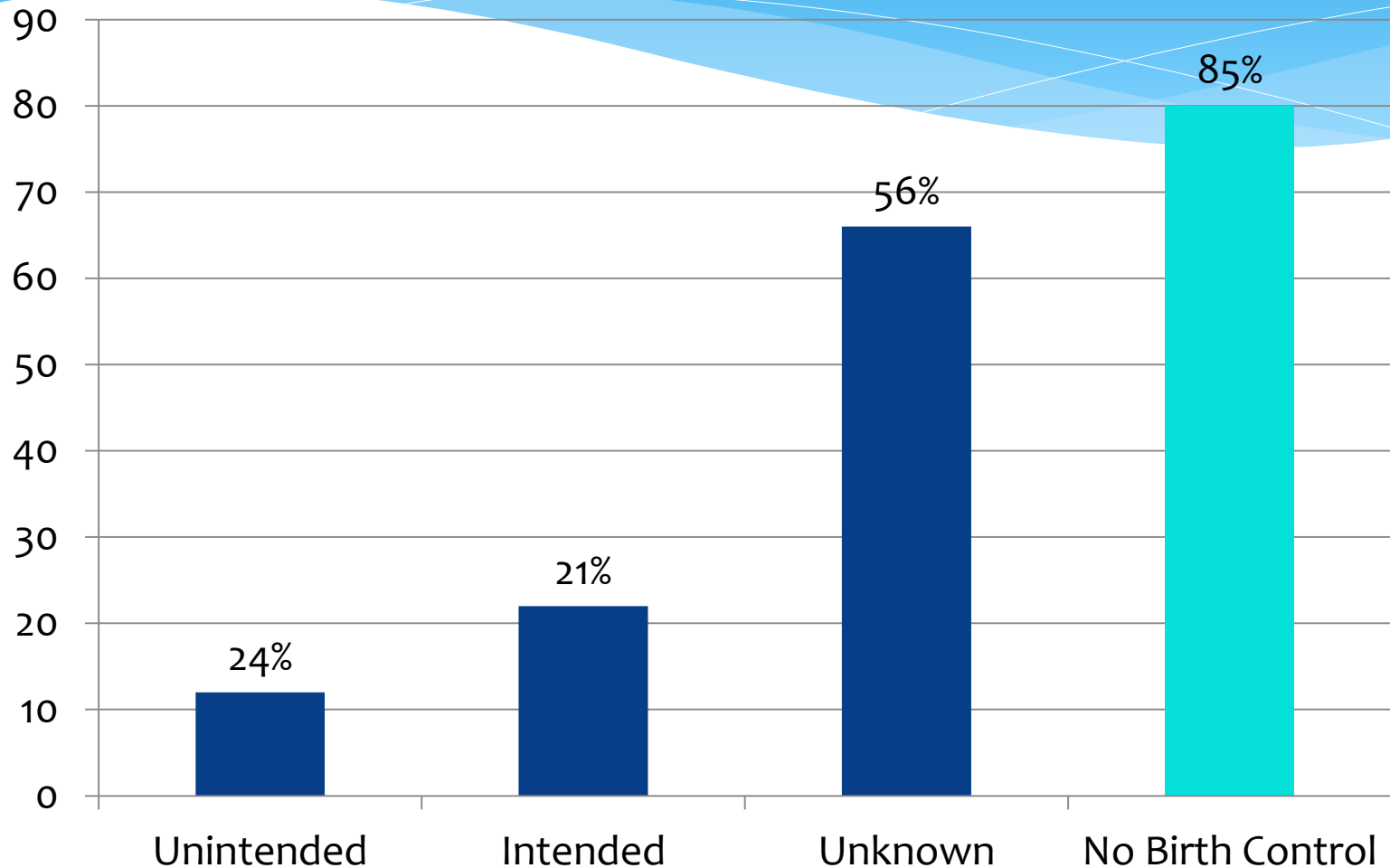
Jackson County IMR by race (2004-2017)



Risk ratio for Black/White IMR disparities (2004-2017)



Pregnancy Intention of *infant deaths* 2015-2017 (n=41)

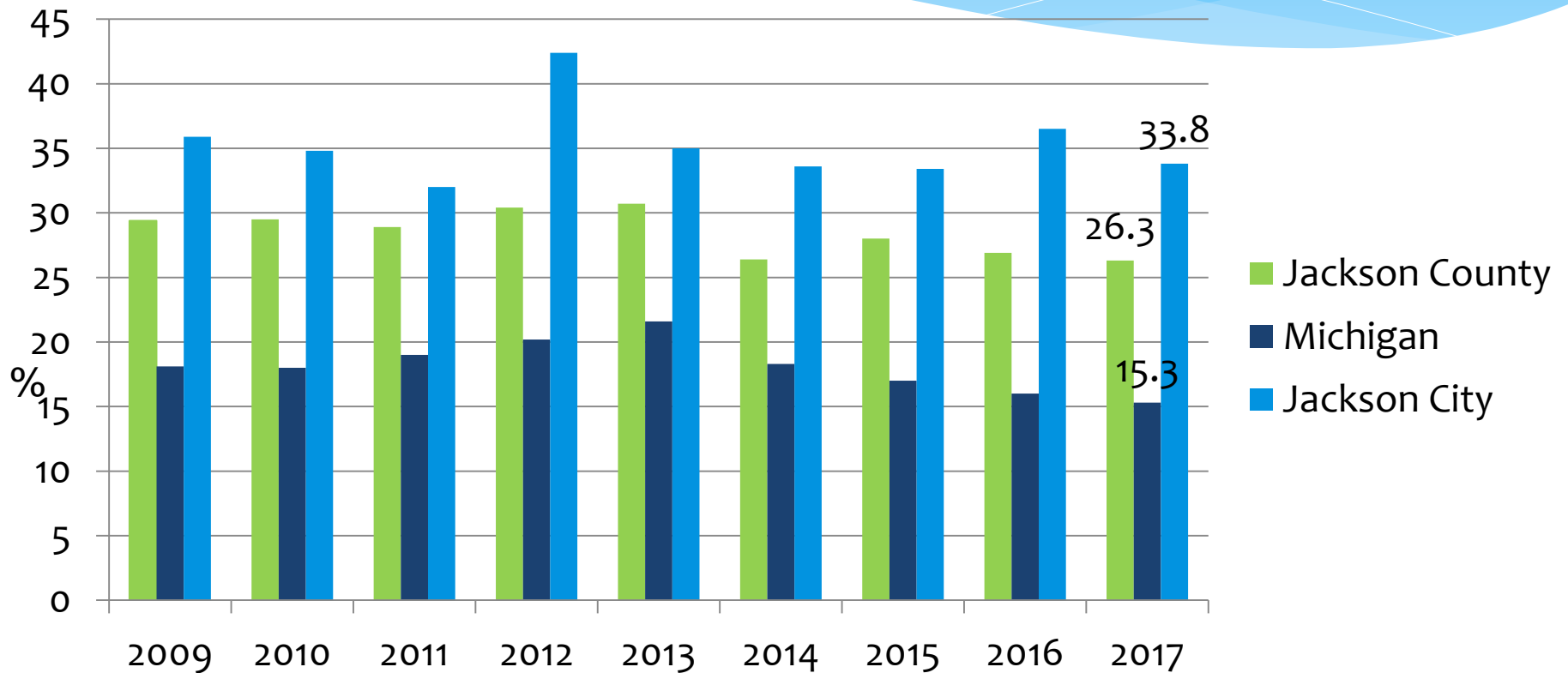


Natality and Pregnancy Data

The following slides look at prenatal care trends and live births in Jackson County compared to Michigan

Data Sources: Michigan Vital Statistics and Jackson County FIMR case review

Percent births to mothers who smoked during pregnancy

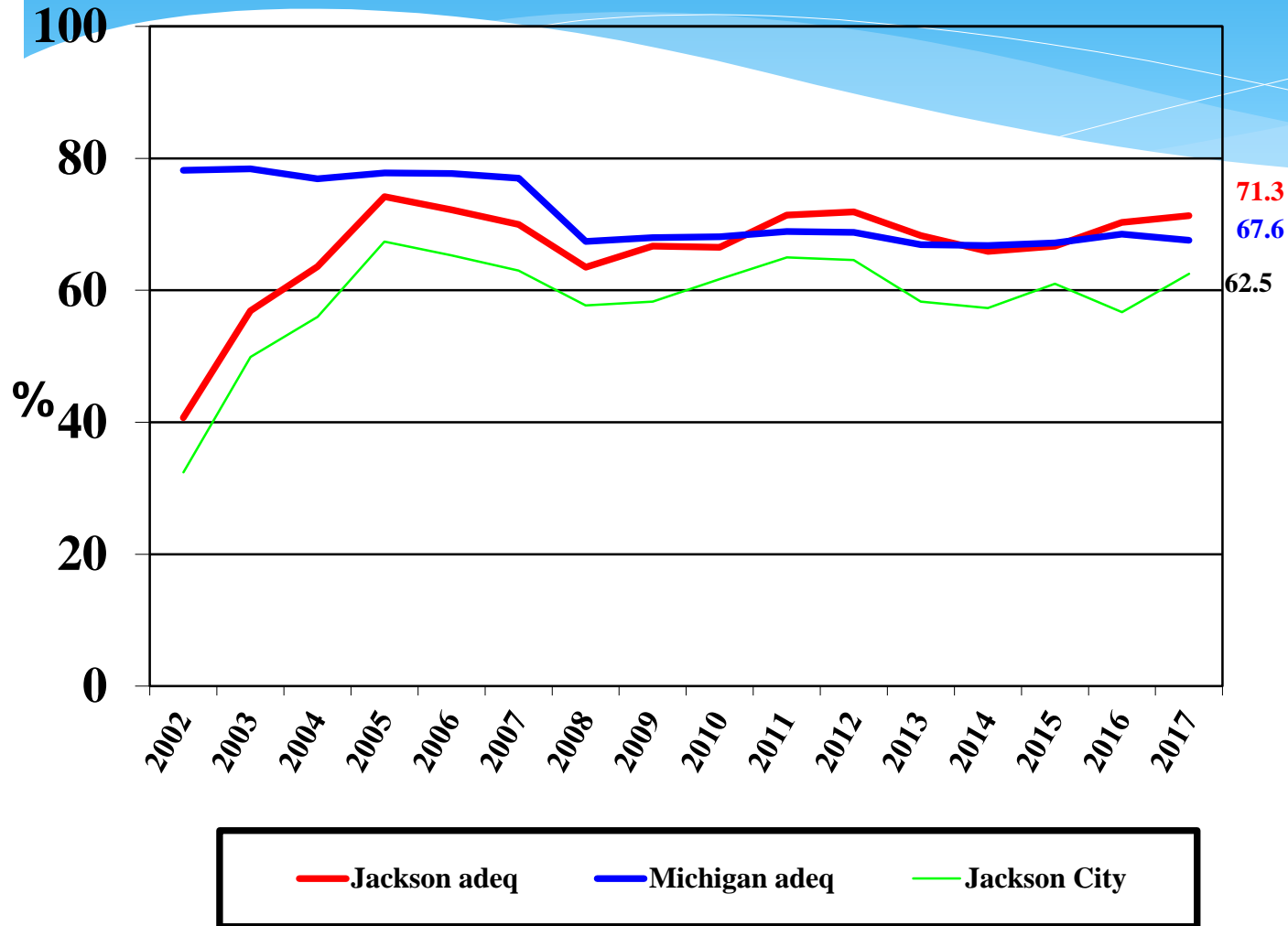


Data source: MDHHS, Vital Records

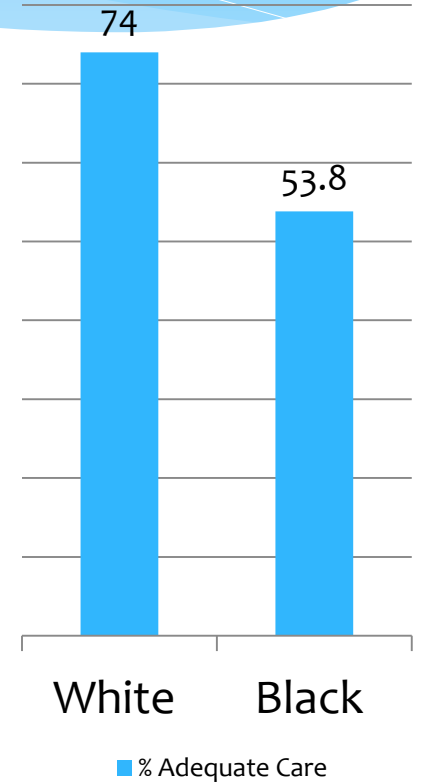
Adequate prenatal care

(*Kessner index)

Jackson County compared to Michigan



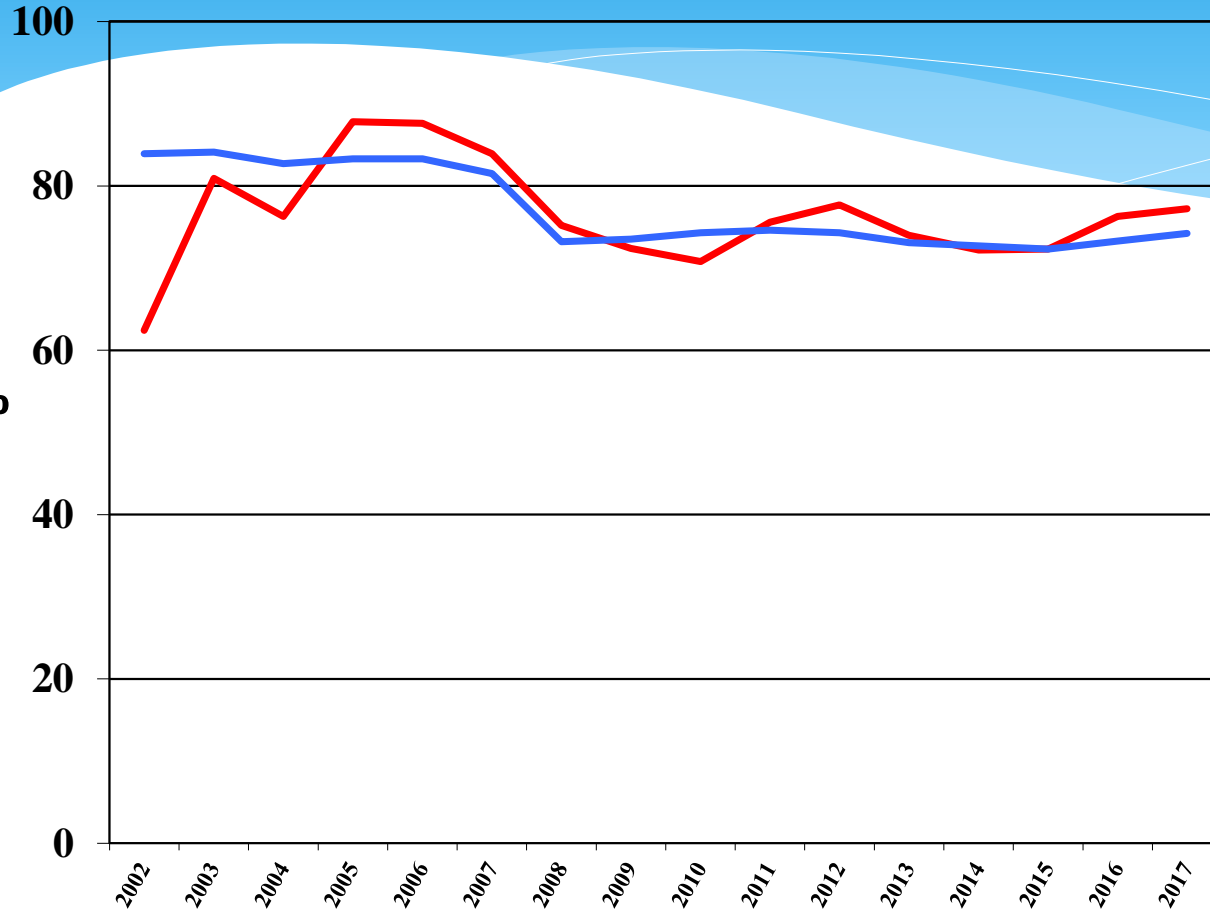
Jackson County Adequate Care by Race (2017)



*The Kessner index classifies care based on entry into care, the number of prenatal visits and the length of pregnancy

Entry into care during 1st trimester

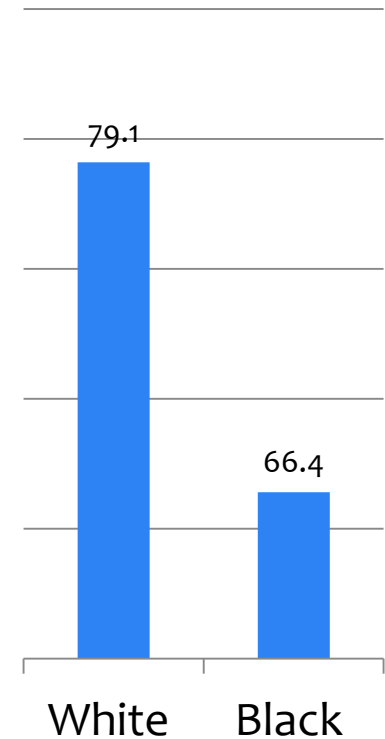
Jackson County compared to Michigan



Jackson County Entry into Care first trimester By Race (2017)

77.2

74.2



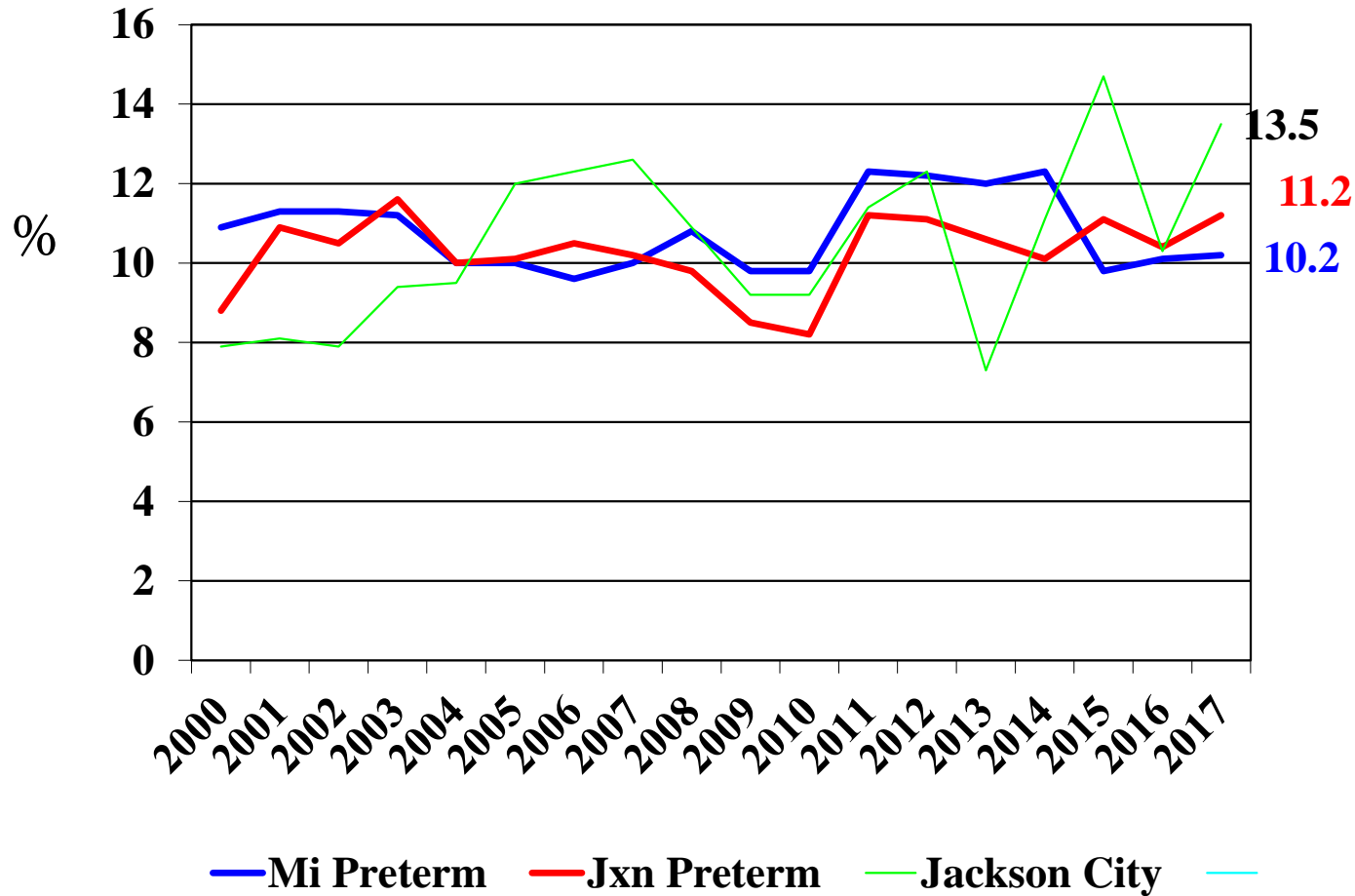
■ % Entry to care 1st trimester

Preterm Live Births

Infants born prior to 37 completed weeks of gestation

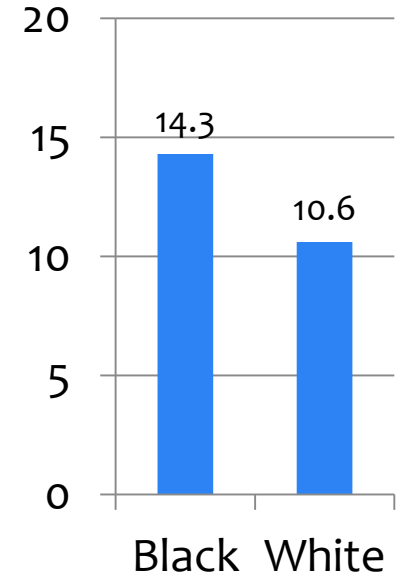
Jackson County, city and MI

2000-2017



% Preterm by Race

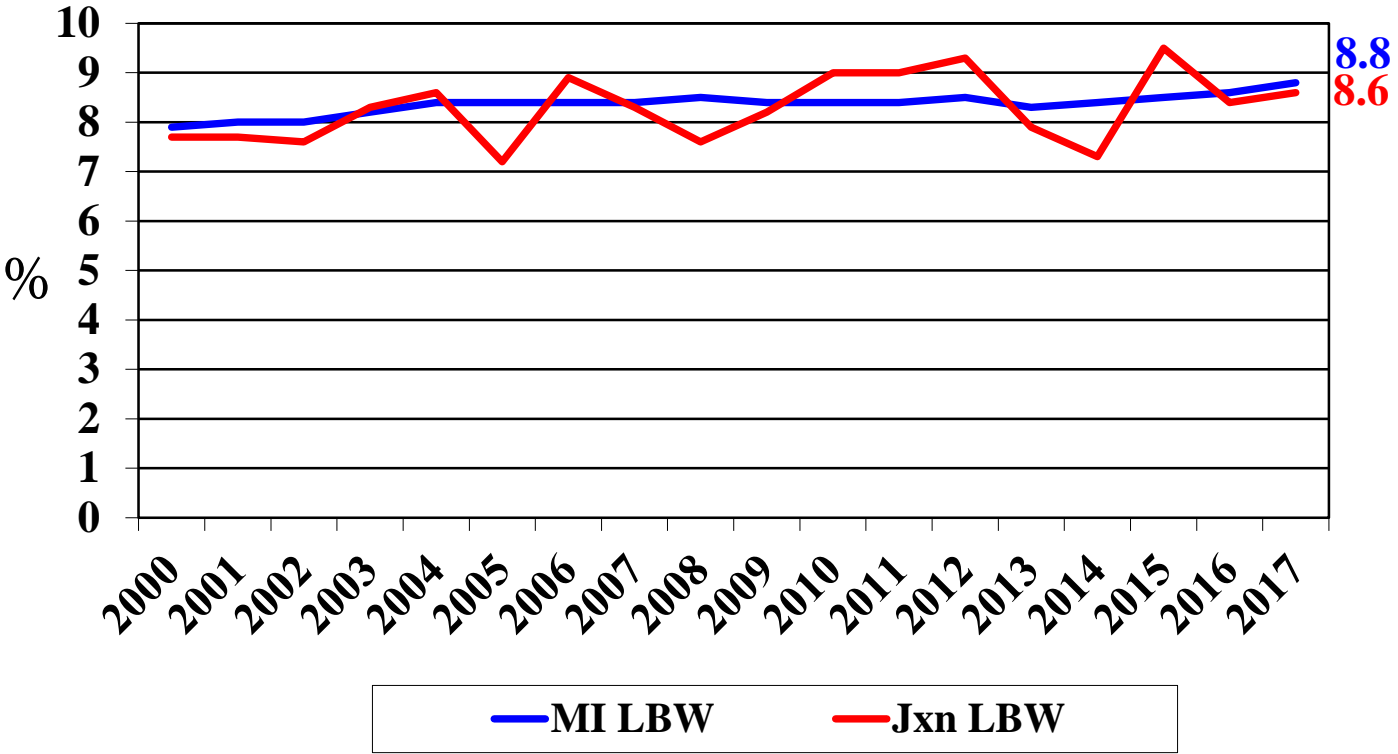
Jackson County
2017



Low Birth Weight (<2500g)

Jackson County Compared to MI

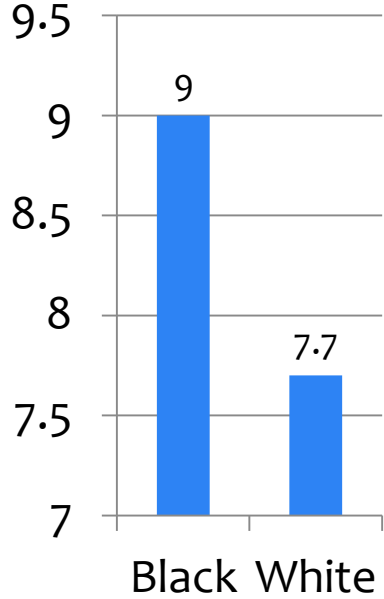
2000-2017



% Low birth weight by Race

Jackson County

2017

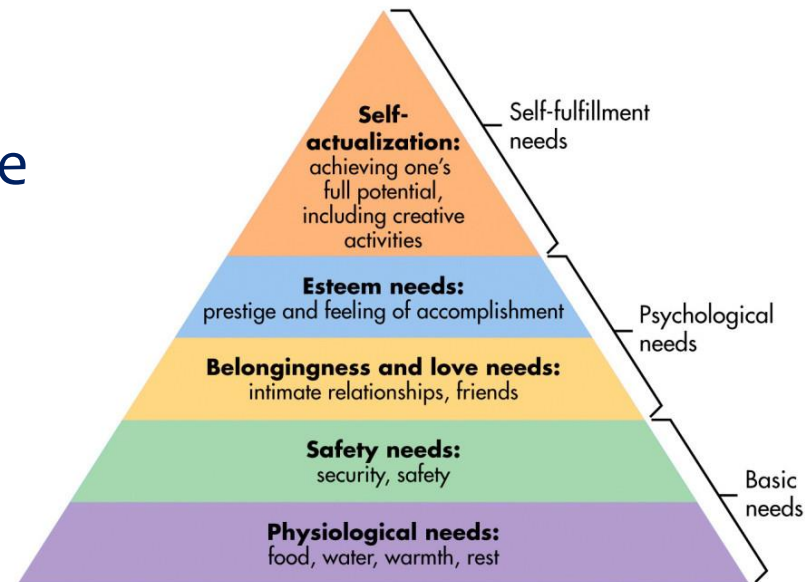


Why aren't all women accessing the care they need?

- * It's important to remember that the **Social Determinants of health (SDOH)**, meaning living and working conditions (income, wealth, influence, and power) impact health status rather than individual risk factors.

Multiple stressors in one's life can prevent women from prioritizing care over basic needs. If women have **social chaos** and/or trauma in the home it is far more difficult to focus on healthy pregnancy outcomes.

Maslow's hierarchy of needs



The impact of stress on pregnancy

- * **Adverse childhood experiences (ACES)** have tremendous impact on lifelong health and opportunity. The higher the number of ACEs that people have, researchers learned, markedly increases their risk for poor health outcomes, as well as social and economic consequences.
- * **Chronic Stress:** High levels of stress that continue for a long time may cause health problems like high blood pressure and heart disease. When you're pregnant this type of stress can increase the chances of having a premature baby or low birthweight baby who are often at risk for health problems

Can Racism contribute to these poor outcomes?

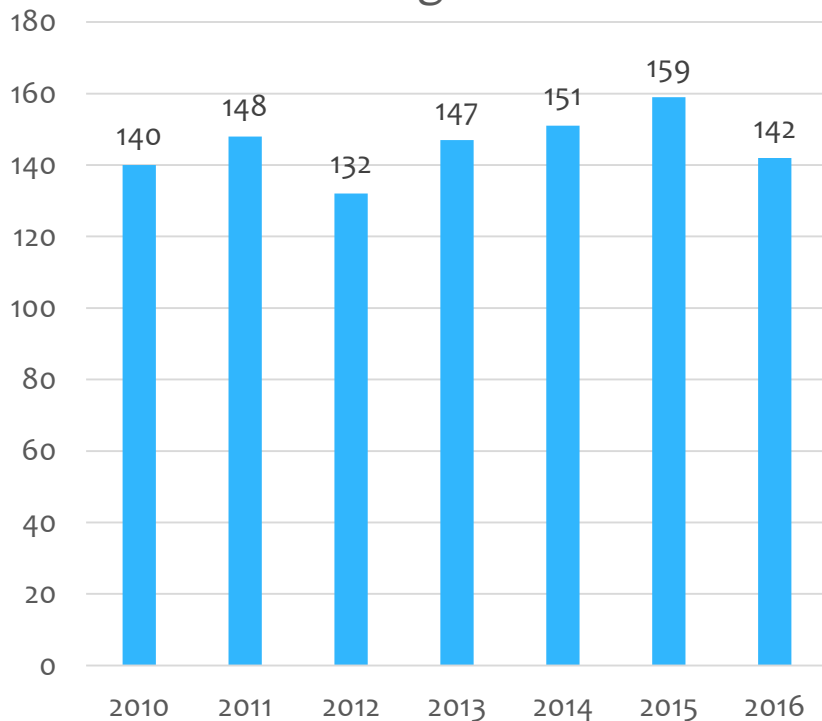
Unnatural Causes, How the Bough Breaks

https://www.unnaturalcauses.org/video_clips_detail.php?res_id=70

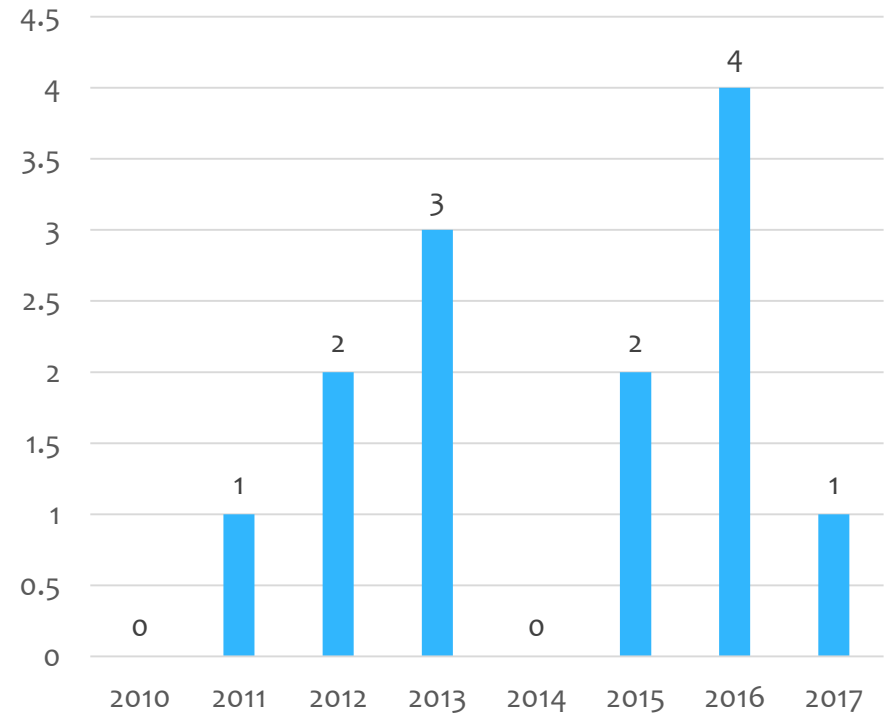
Sleep Related Deaths

2010-2017

Michigan

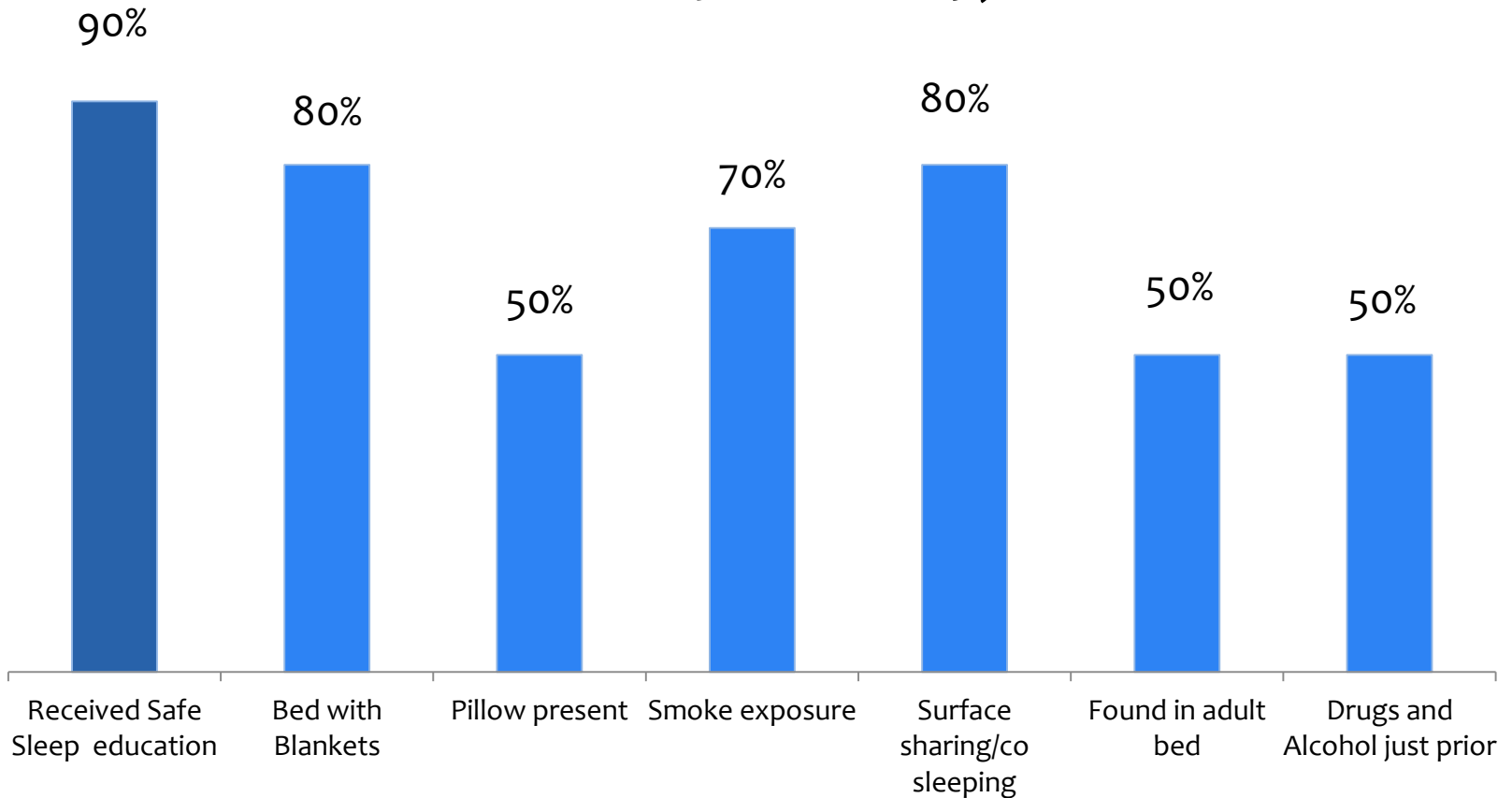


Jackson County



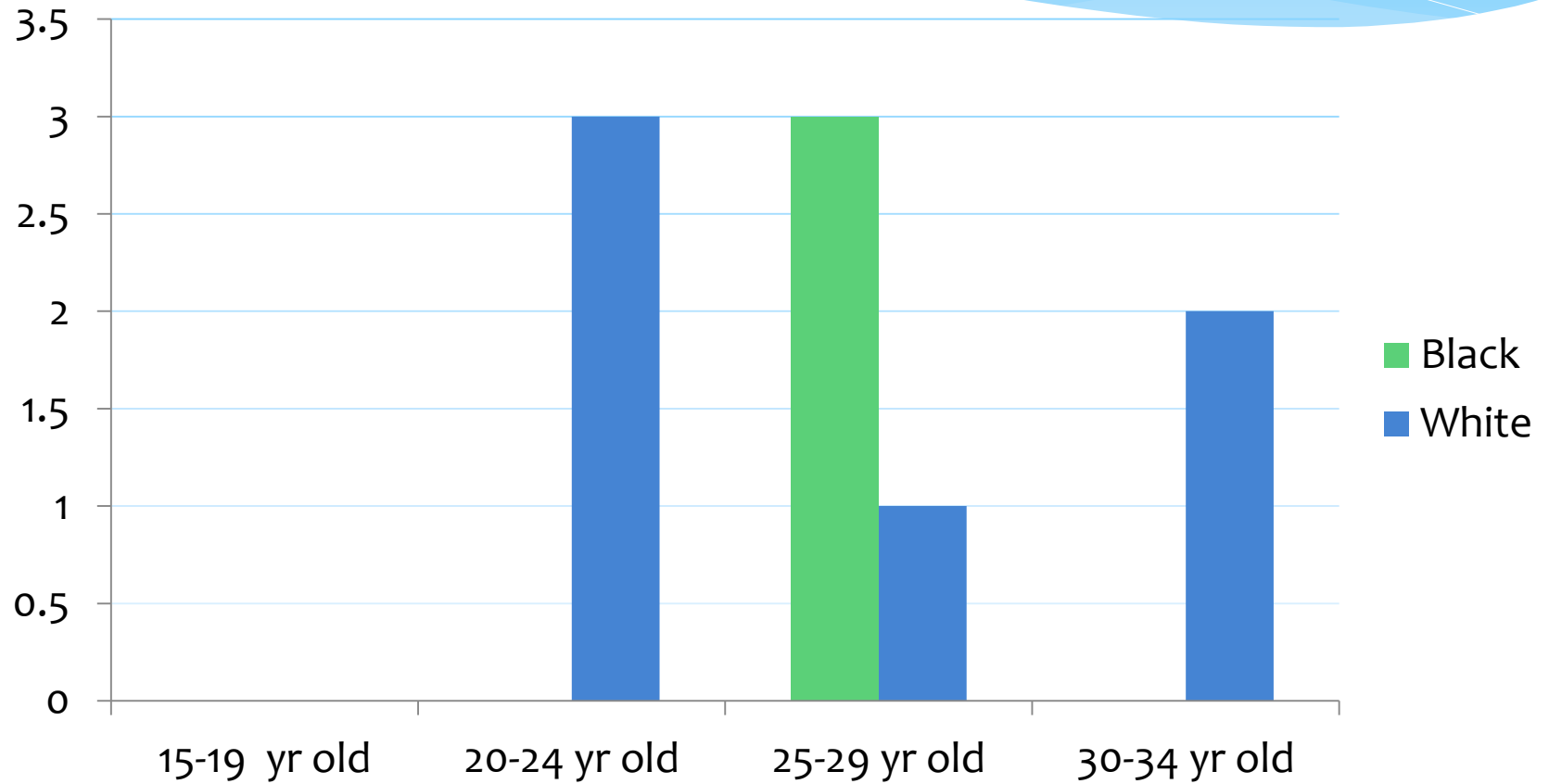
Sleep Related Deaths (Jackson County)

Circumstances surrounding sleep related deaths
from 2013-2017 (N=9)



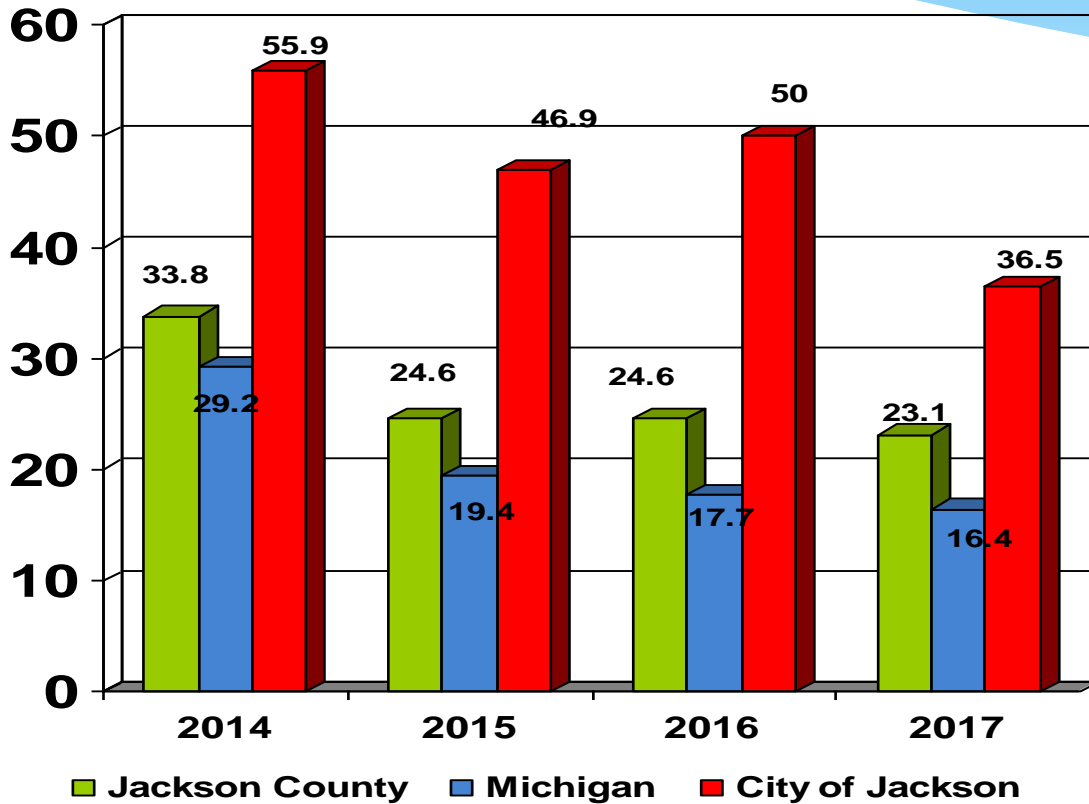
Age of Mom with sleep related death

2013-2017 (n=9)

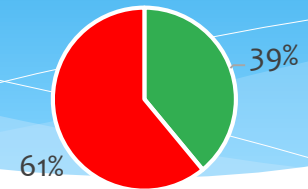


2014-2017 Teen Birth Rates

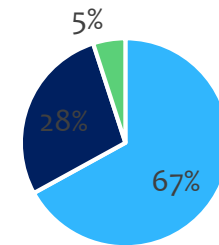
(Rates per 1000 females, aged 15-19)



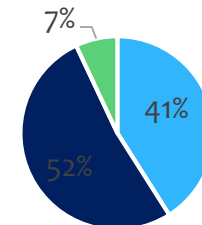
Teen Birth location, 2017



Teen Births by Race Jackson County



Teen Births by Race City of Jackson



White Females Black Females Other

Jackson County infant deaths/live births

Maternal Characteristics

2015-2017 (3 year average)	2017		2017	2017
% Infant Deaths (n=41)	% infant Deaths (n=14)		% live births Jackson	% live births Michigan
39%	36%	Obese (BMI > 29)		
68%	79%	Overweight/obese (BMI > 26.1)		
17%	29%	1 st pregnancy as teen		
17%	21%	< 12 th grade education	13.2%	11.3%
63%	71%	Mother Unmarried	50.6%	41.4%

Maternal/Prenatal Characteristics

2015-2017 3 year average	2017		2017	2017
% Infant Deaths (n=41)	% infant Deaths (n=14)		% live births Jackson	% live births Michigan
68%	64%	Adequate Prenatal Care	71.3	67.6
78%	86%	Entered Prenatal care 1 st trimester	77.2%	74.2%
49%	57%	Kept 6 Week postpartum visit		
73%	64%	Low Birth weight baby (<2500grams)	8.6%	8.8%
81%	72%	Preterm (less than 37 weeks)	11.2%	10.2%

Social/Economic Characteristics

2015-2017 3 year average	2017		2017	2017
% Infant Deaths (n=41)	% infant Deaths (n=14)		% live births Jackson	% live births Michigan
56%	50%	Multiple Stressors / Social Chaos		
22%	29%	Drug Use		
51%	64%	Mental Health / Depression Issues (current)		
34%	36%	Smoking	26.3%	15.3%
59%	57%	Medicaid	45.7%	42.7%

Systems Issues and Recommendations

The following slides look at recurring systems issues and team recommendations from the reviewed infant death cases

Identified System Issues (2015-2017 cases n=41)

- * Lack of dental care assessment. Referral and follow-up (28)
- * Lack of PNV/folic acid prior to conception (25)
- * Social Chaos during pregnancy (23)
- * Lack of preconception and interconception care/education (21)
- * Did not keep postpartum visit (17)
- * Smoked during pregnancy (14)

Top Recommendations

2015

- * Provide drug screen testing on all preterm deliveries
- * Institute standard safe sleep training module for hospital and community staff
- * Provide complete communication between tertiary care and local OB's, and ensure local bereavement services know when a baby from Jackson area has passed
- * Provide prenatal vitamin for all women of childbearing age

Top Recommendations 2016

- * Increase postpartum visits and follow up
- * Complete drug testing on moms with pre-term delivery or multiple missed appointments (ideally all delivering moms)
- * Complete mental health evaluation prior to discharge from hospital with referrals if needed
- * Proper care and assessment for “late to care” moms
- * Continued efforts in the community to make meaningful closed loop referrals

Top Recommendations

2017

- * Institute standard safe sleep training module for hospital and community staff
- * Provide and encourage use of prenatal vitamin for all women of childbearing age
- * Better education on birth control, interconception care, birth spacing & Tdap vaccine
- * Provide drug screen testing on all preterm deliveries
- * Improve birth abstract documentation/Data collection
- * Improved Mental Health Screening and meaningful referral

Maternal Child Health Action (MCHAT) Team Accomplishments

- * Better Community Engagement with surveys conducted by MCHAT members as well as individual interviews with those experiencing the issues.
- * Developed strategies in response maternal interviews that include 1) trainings for office staff/providers on ACEs and Equity and 2) Better patient education and empowerment with targeted population.
- * Updated the local PRAMS survey to include more social determinates of health / equity questions.
- * Continued safe sleep presentations to colleges, non-profits, DHHS, adoption services, rehabilitation organizations etc.
- * Continue to partner with Teen Pregnancy Prevention Initiative (TPPI) and the Jackson Tobacco Reduction Coalition (JTRC) to increase engagement and work toward reducing teen pregnancy and pregnancy smoking rates.

Emerging Concepts

- * Opioid use in pregnancy and the burden of Neonatal Abstinence Syndrome
- * Use of Long Acting Reversible Contraception (LARC) to address pregnancy intention
- * Integrated Services: satellite offices for MIHP/WIC etc.

Summary

- * *As the leading causes of infant mortality in Michigan our primary goal is reduce the number of preterm births, congenital anomalies and positional asphyxia deaths of our infants.*
- * *Infant mortality remains a complex, multi-factorial issue that must be challenged on multiple fronts with emphasis on addressing disparities as well as:*
 - * **Interconception Care**
 - * **Inter-agency referrals**
 - * **Substance Use and Mental Health assessment and treatment**
 - * **Focus on equity, social determinates of health and the impact of Adverse Childhood Experiences/Trauma on birth outcomes**

Summary (cont.)

- * Our community action team (MCHAT) must address these issues in a collaborative way that engages the community, addresses root causes and implements system changes for long term effects.*
- * Improved maternal and infant outcomes require equitable strategies that focus on specific factors across the life course focusing on those populations most affected by the problems.*
- * In order to support better health status of women and girls, communities must ensure access to health care, health information, and health education, in ways that empower individuals and families to become active participants in healthy lifestyles and behavioral choices.*

Questions?

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