

Jackson County Fetal and Infant Mortality Review Report 2018



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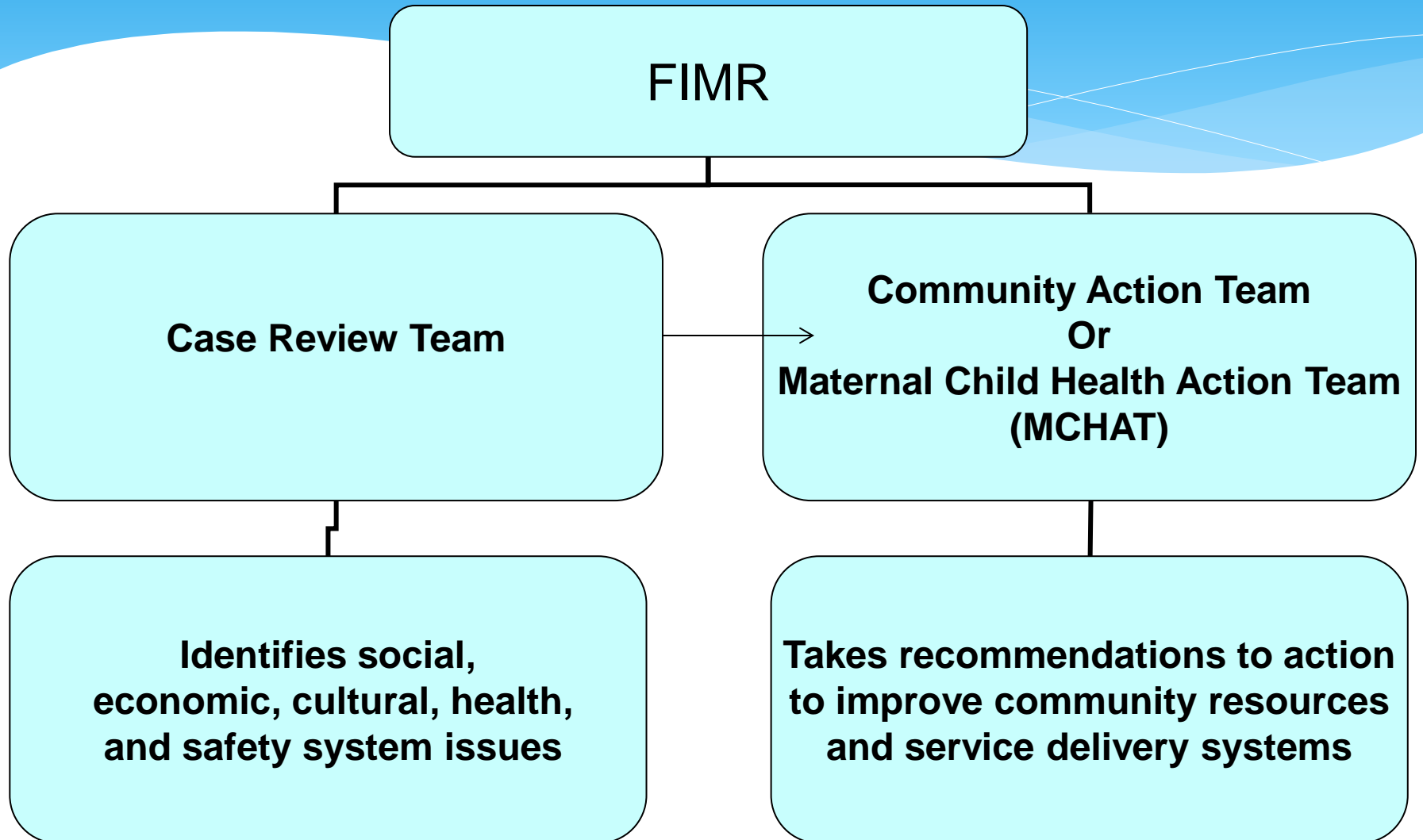
What Is Fetal Infant Mortality Review (FIMR)?

- * 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



FIMR

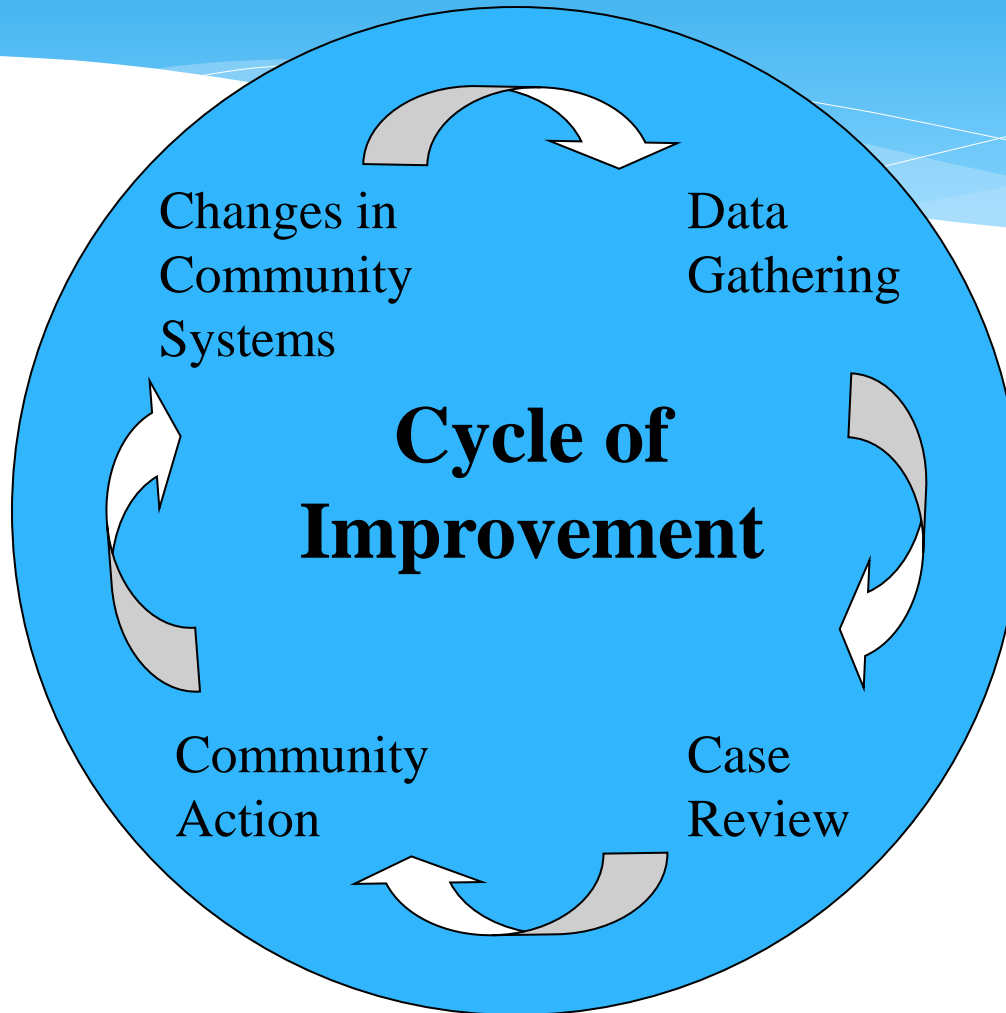
Case Review Team

**Identifies social,
economic, cultural, health,
and safety system issues**

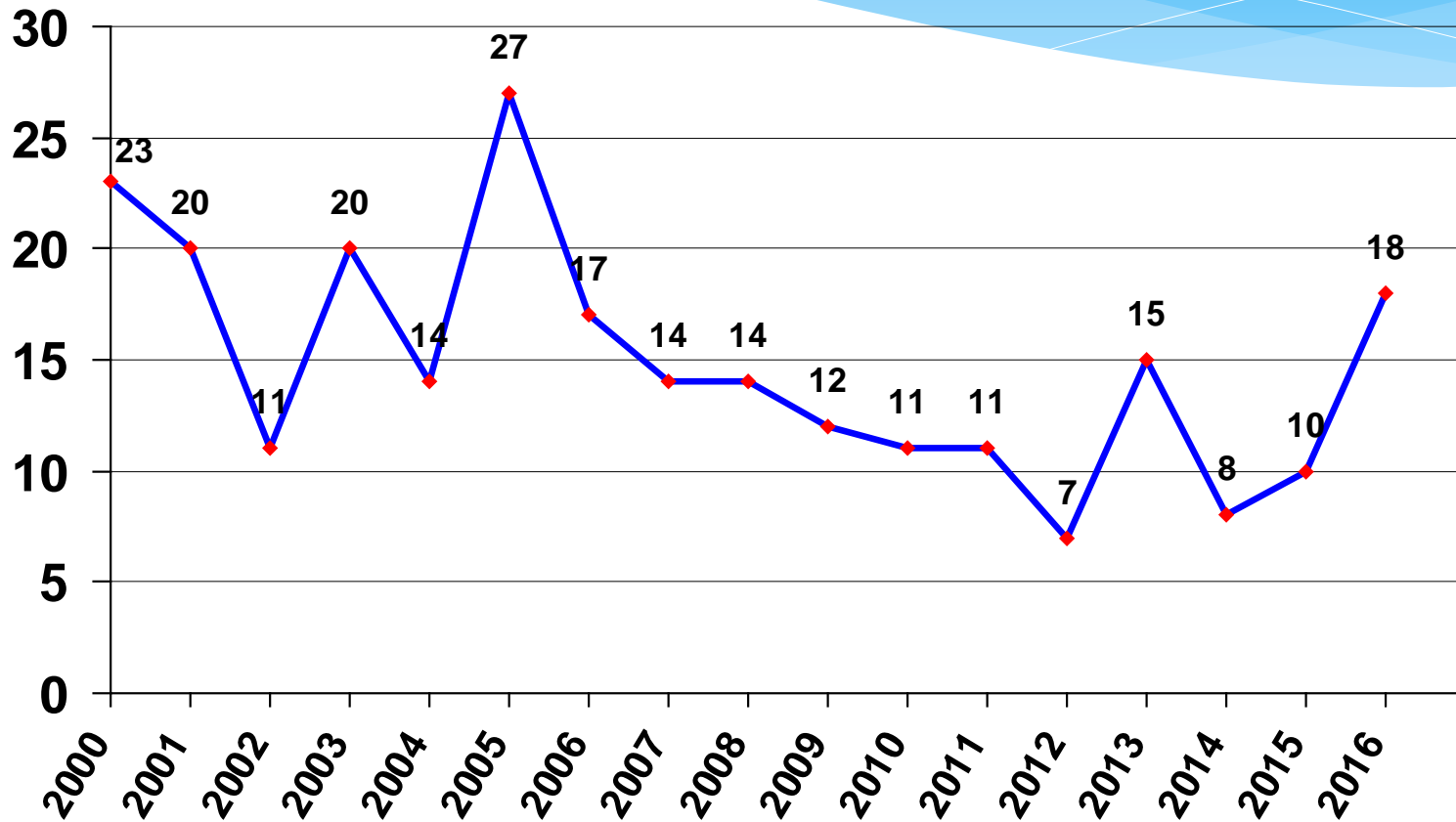
**Community Action Team
Or
Maternal Child Health Action Team
(MCHAT)**

**Takes recommendations to action
to improve community resources
and service delivery systems**

The FIMR Process

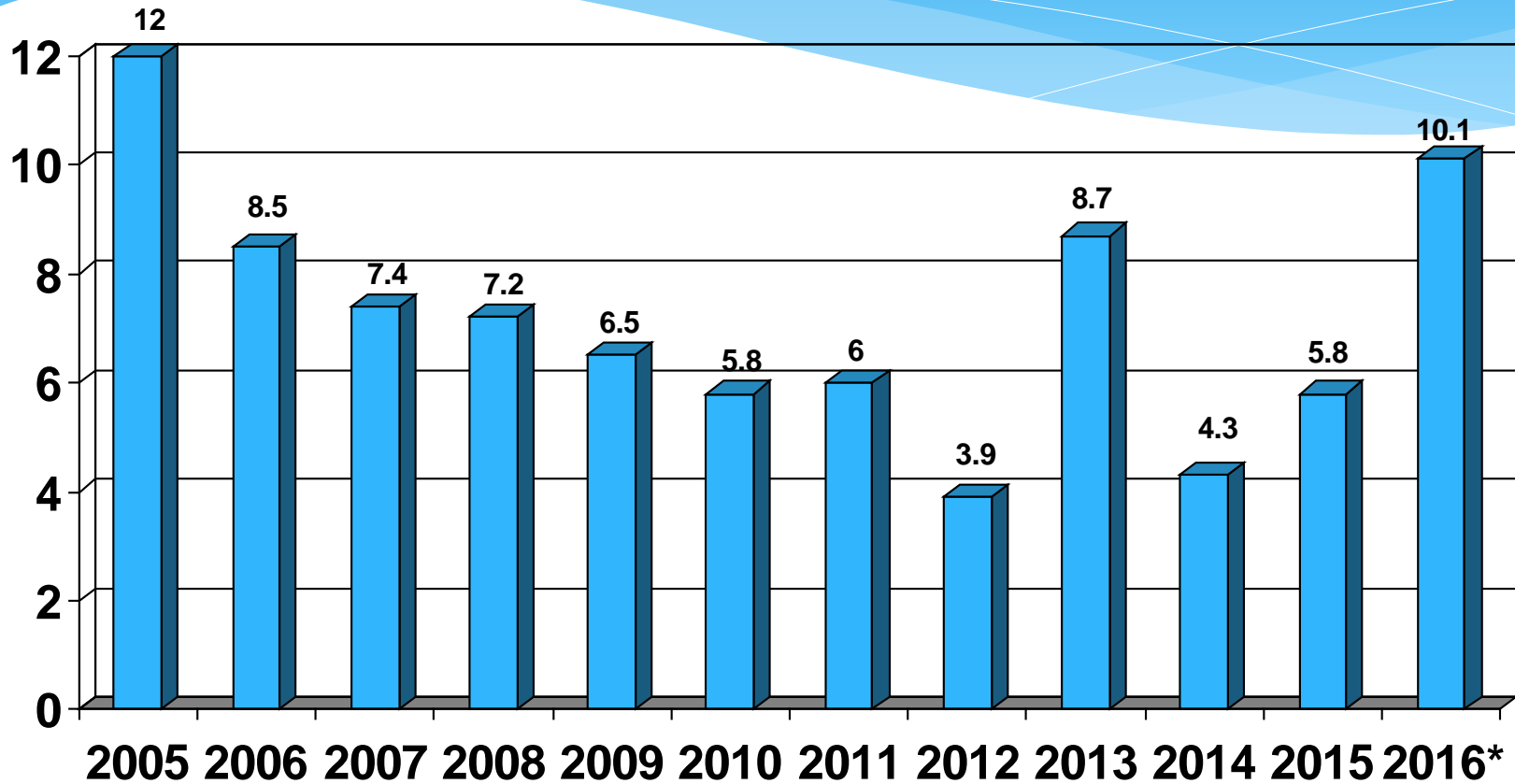


Number of Infant Deaths 2000-2016



* FIMR began in 2003

Jackson County Infant Mortality Rate 2005-2016

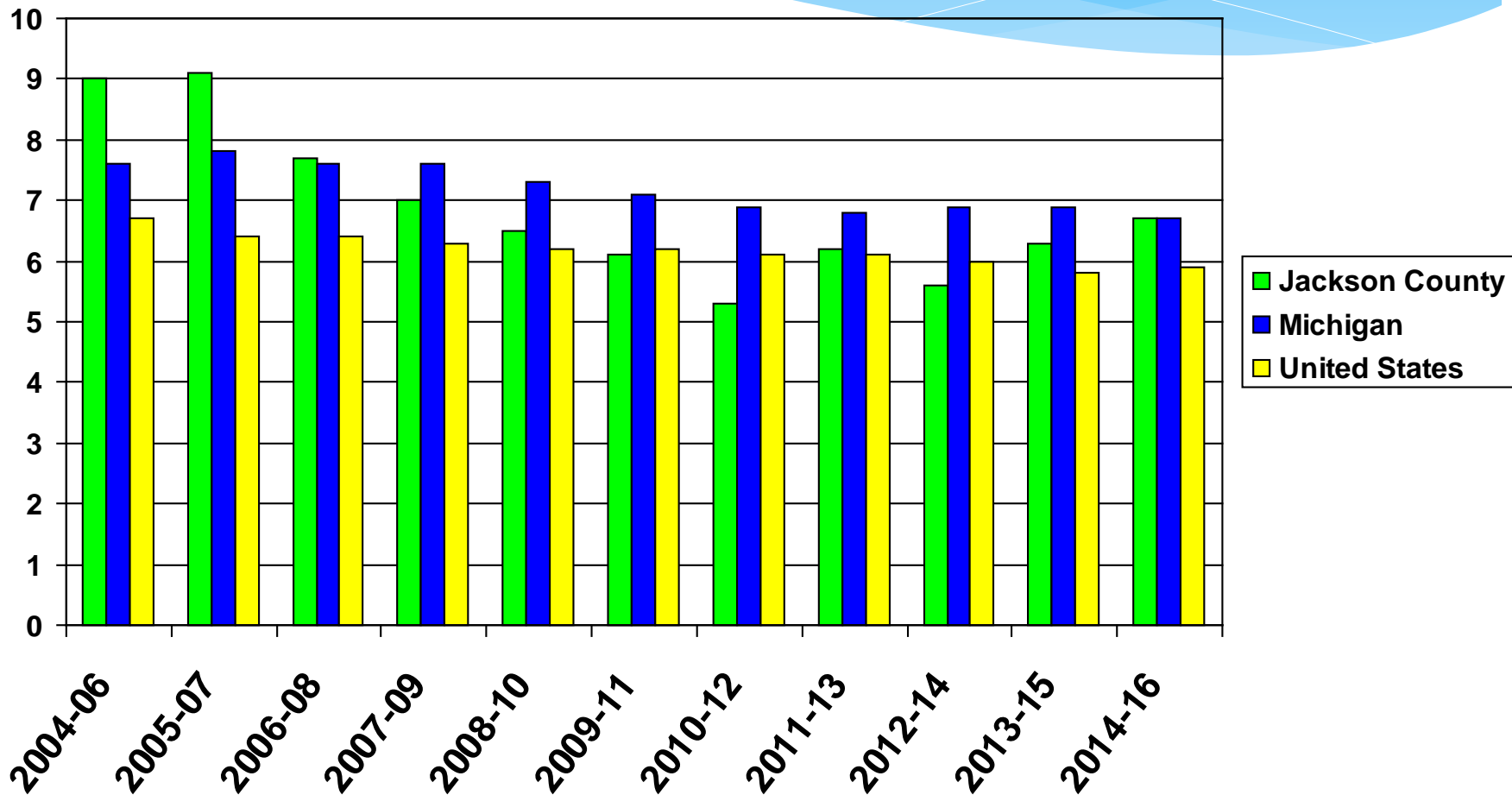


Rates are per 1,000 live births

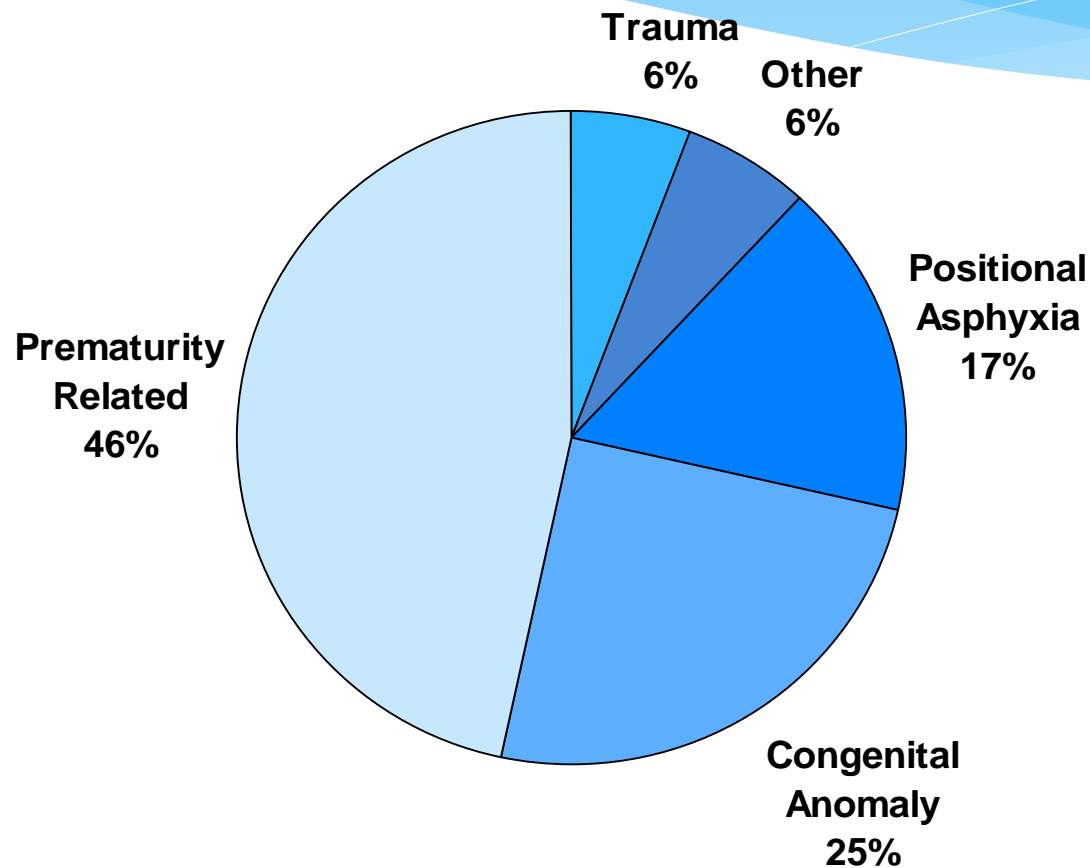
* 2016 rate is Provisional

Jackson County IMR

Compared to Michigan and US, 2004-2016

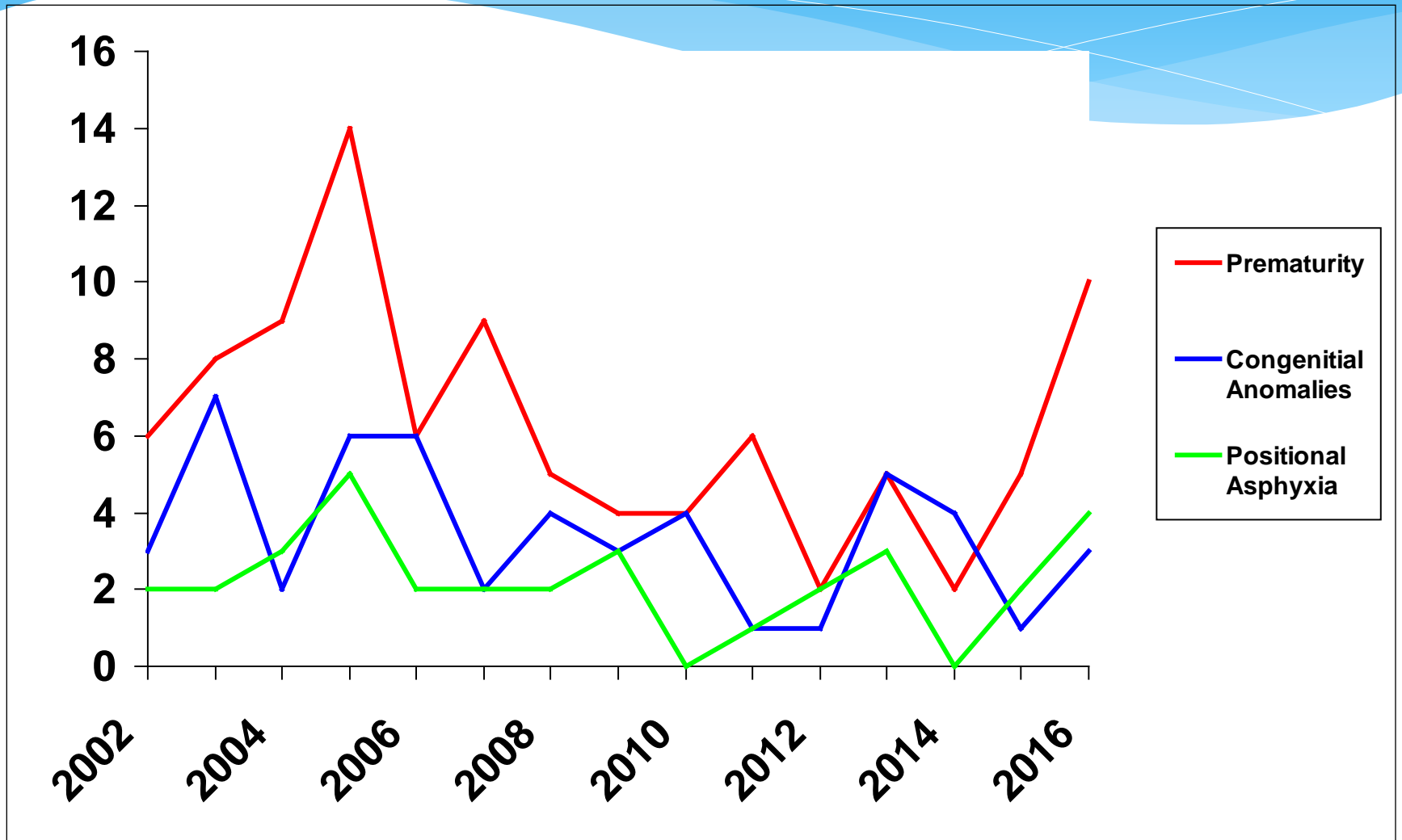


Percent of Jackson County Infant Deaths by Cause, 2014-2016 (n=36)

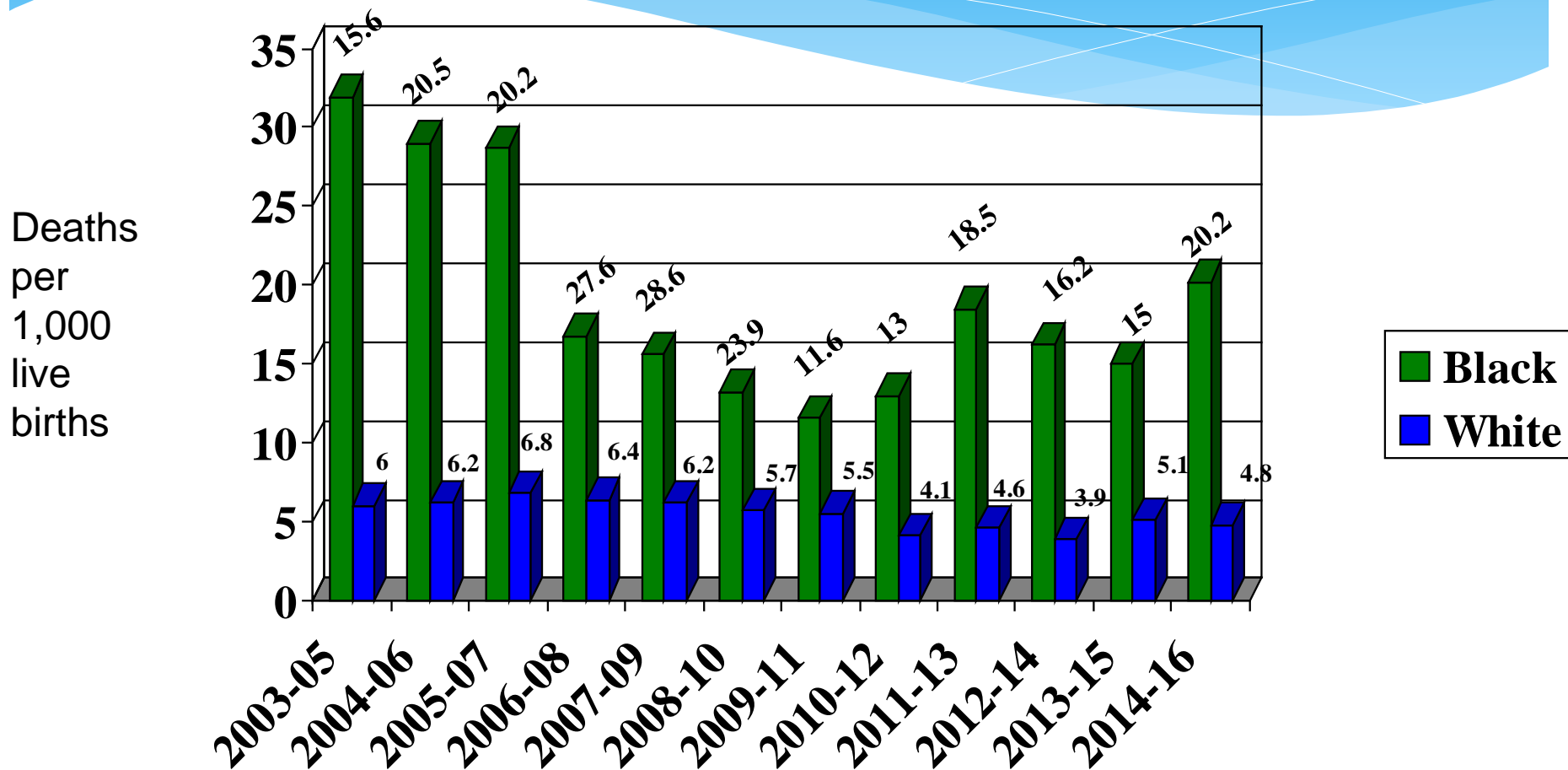


Other = 2014, undertermined (possibly sleep), 2015, accident/fire Trauma = homicide

Jackson County Infant Death by Leading Causes 2002-2016

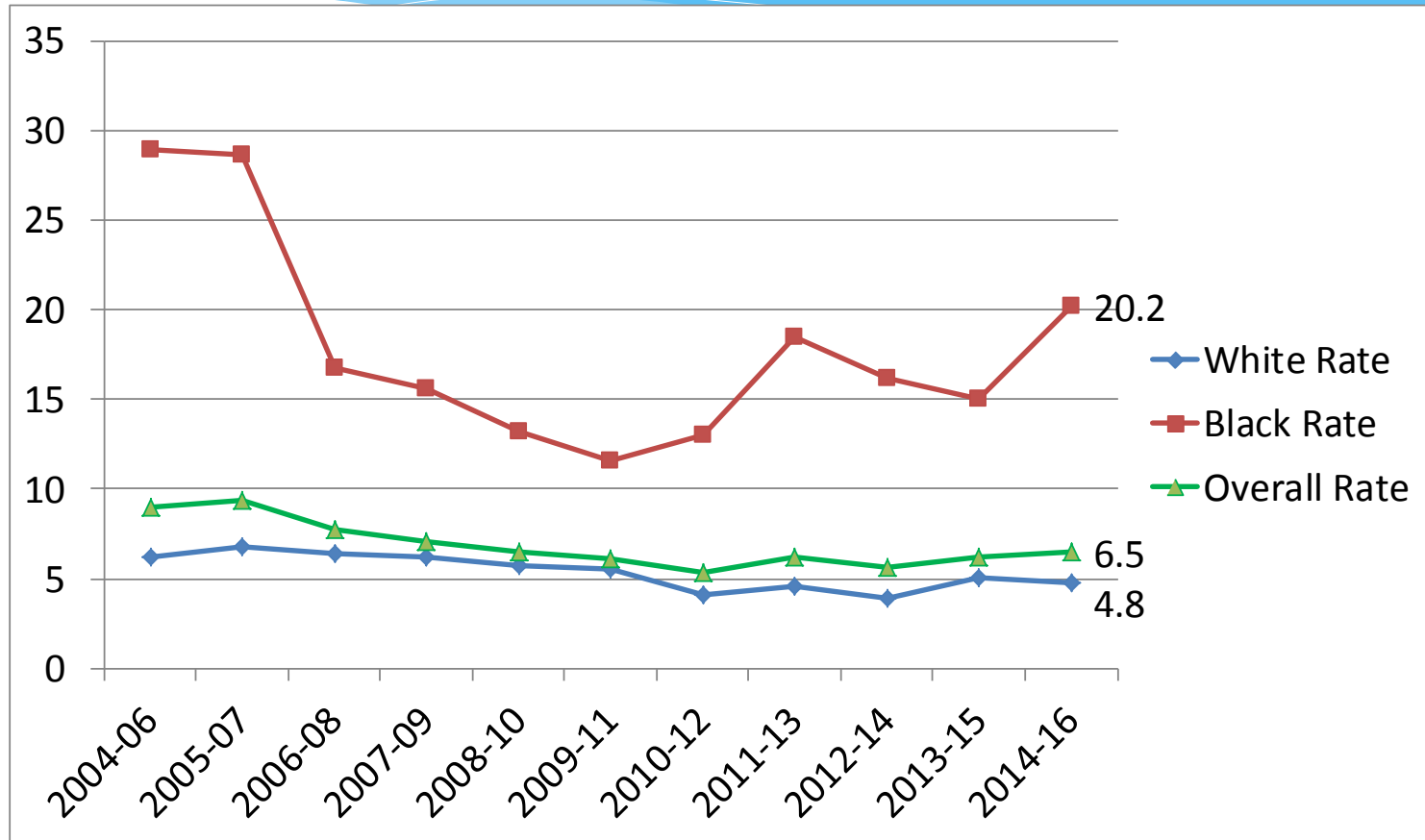


Jackson County/Michigan Black/White IMR (2003-2016)

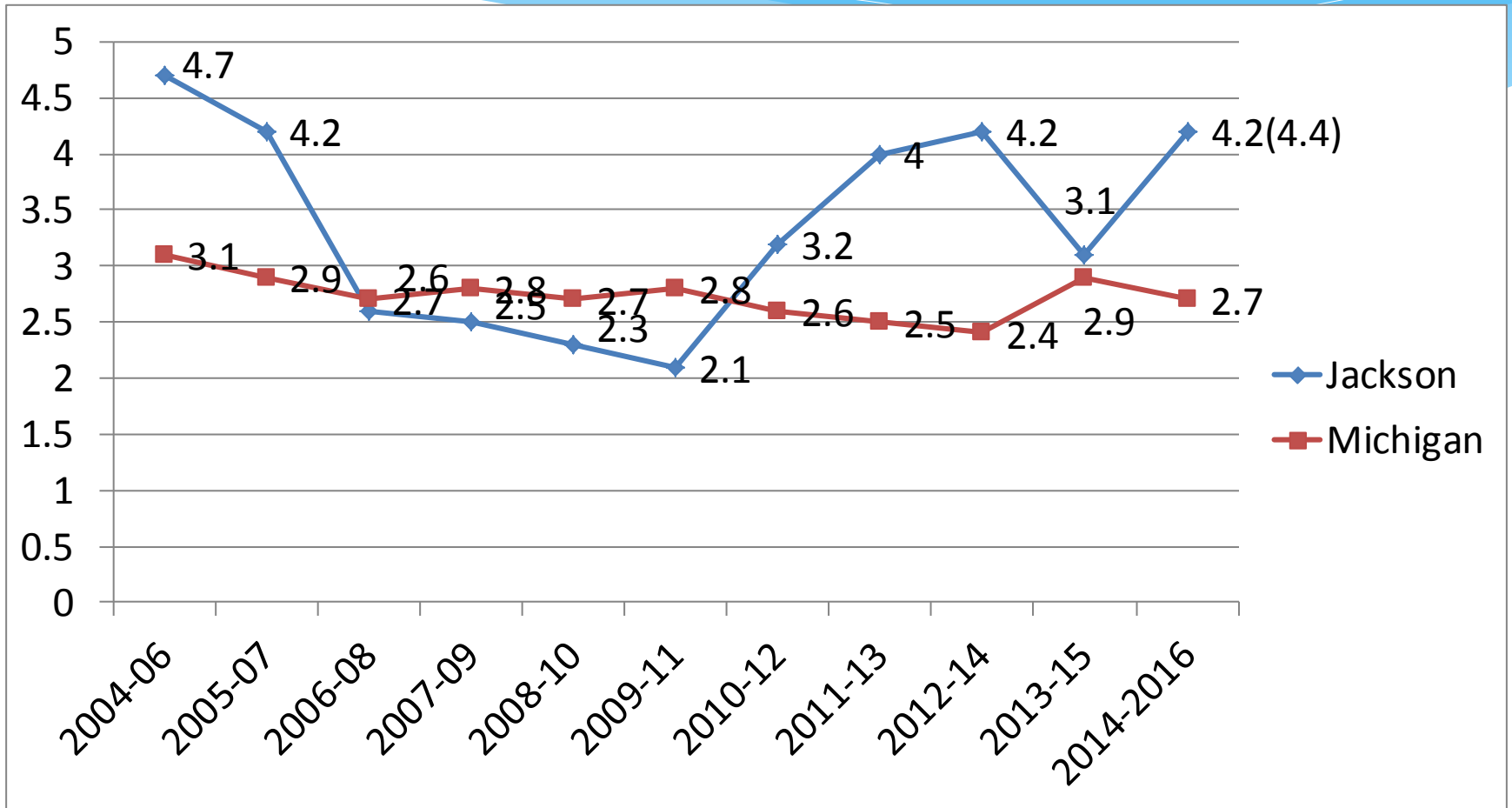


❖ African American or black rate is both Mother and Father are listed as African American on birth certificate

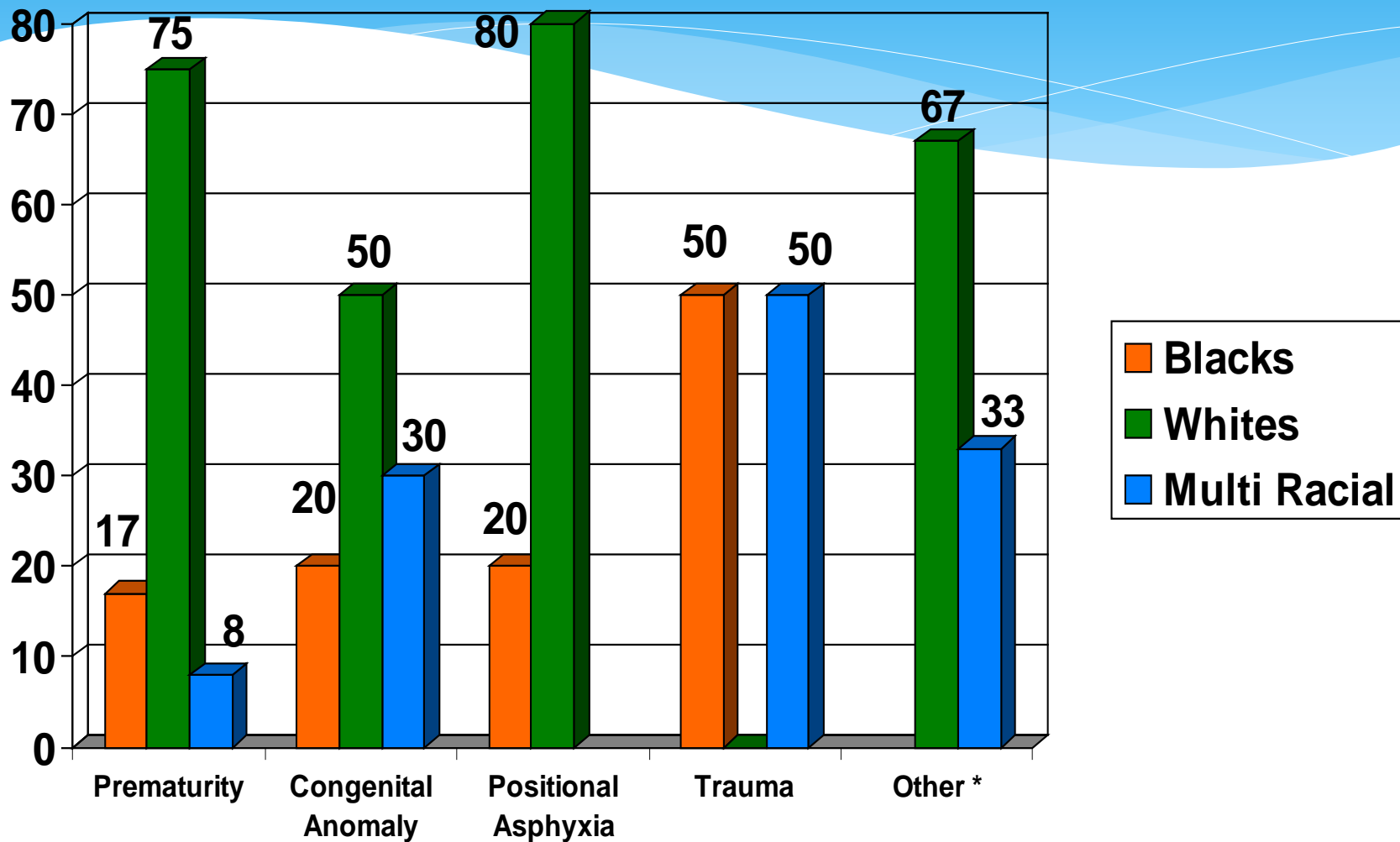
Jackson County IMR by race (2004-2016)



Risk ratio for Black/White IMR disparities (2004-2016)

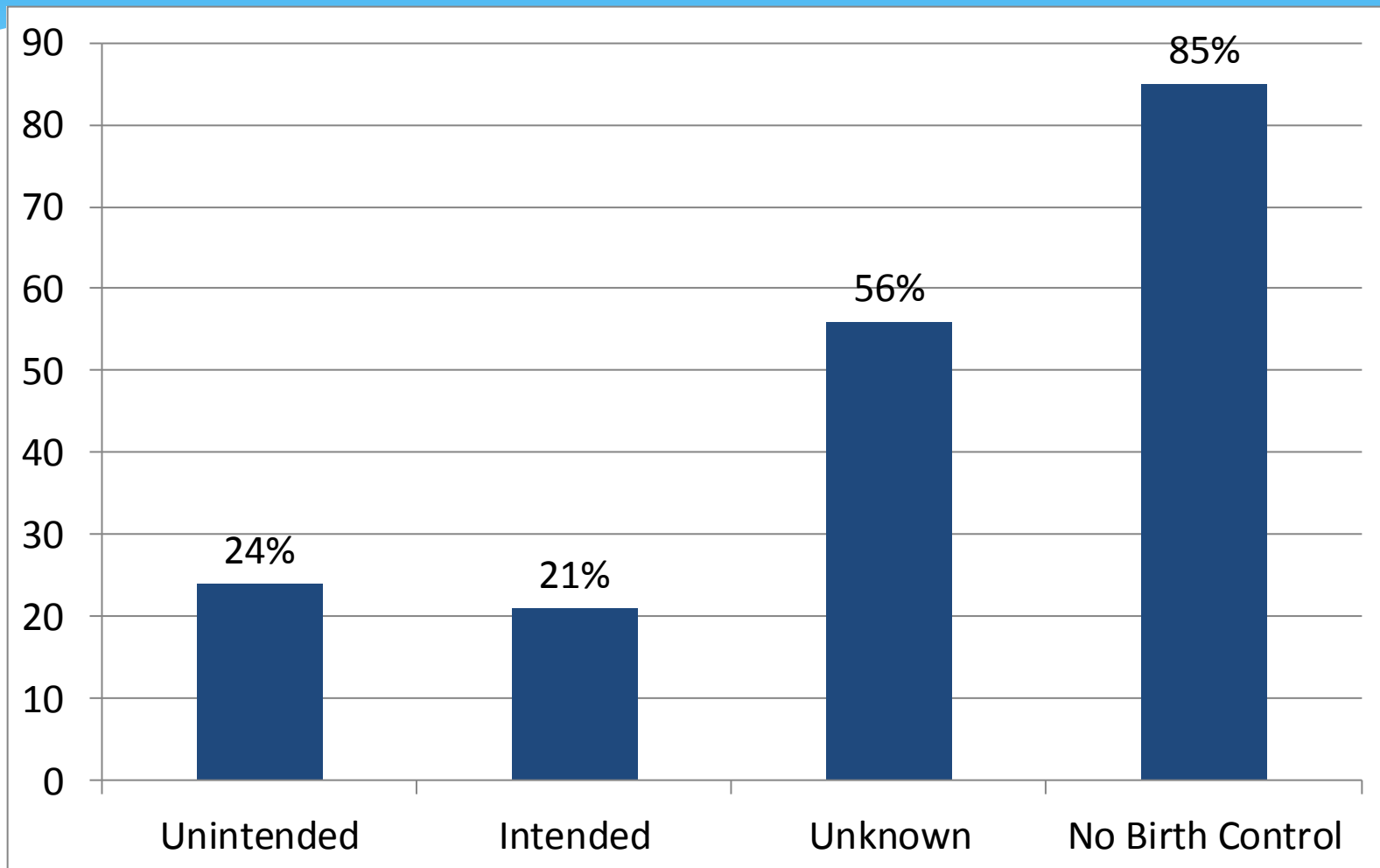


% Deaths by Race and Cause of Death, 2013-2015 n=32



* Other includes Bronchopneumonia, Undetermined, and Accidental (fire)

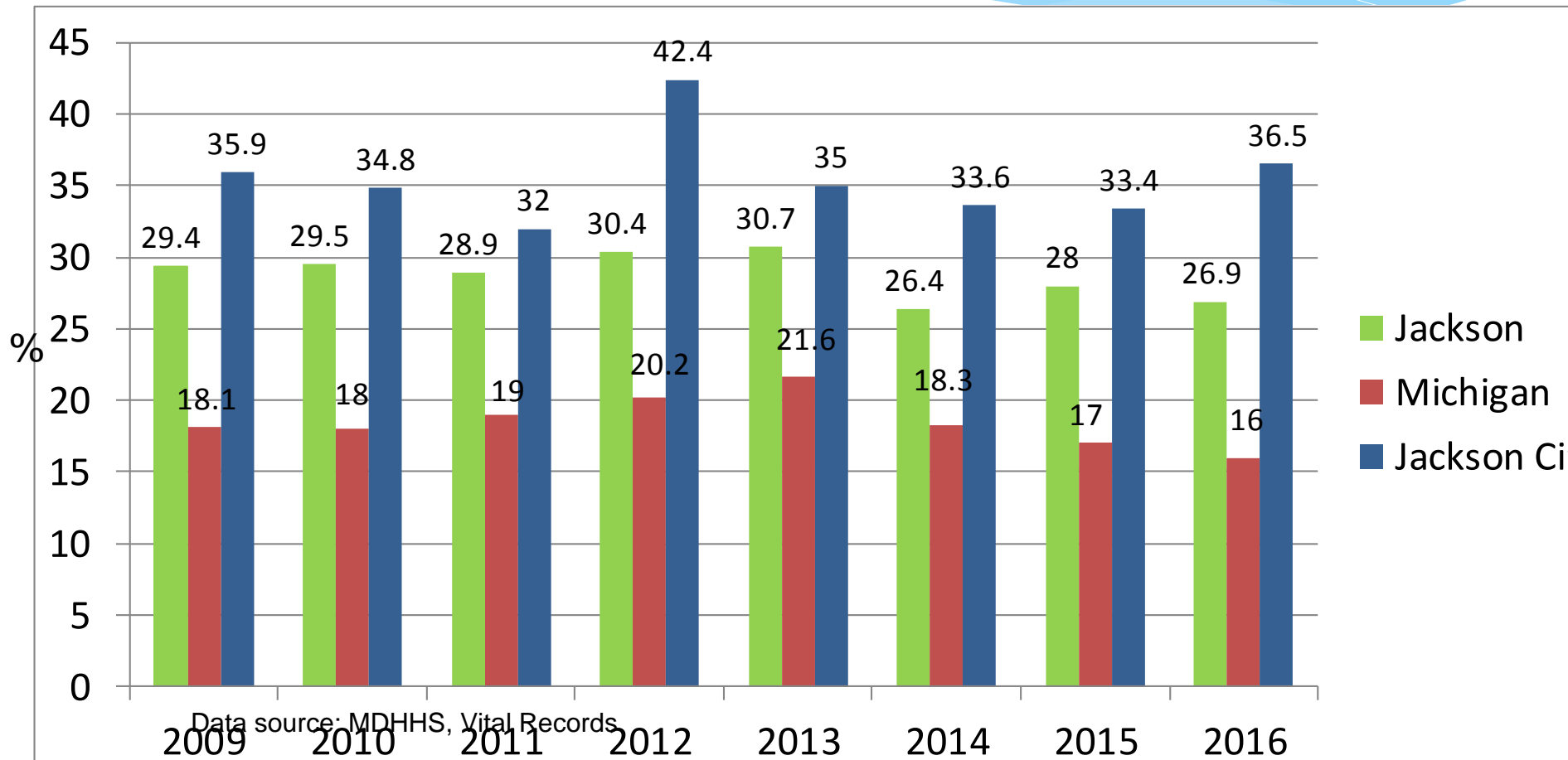
Pregnancy Intention of *infant deaths* 2014-2016 (n=34)



Natality and Pregnancy Data

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

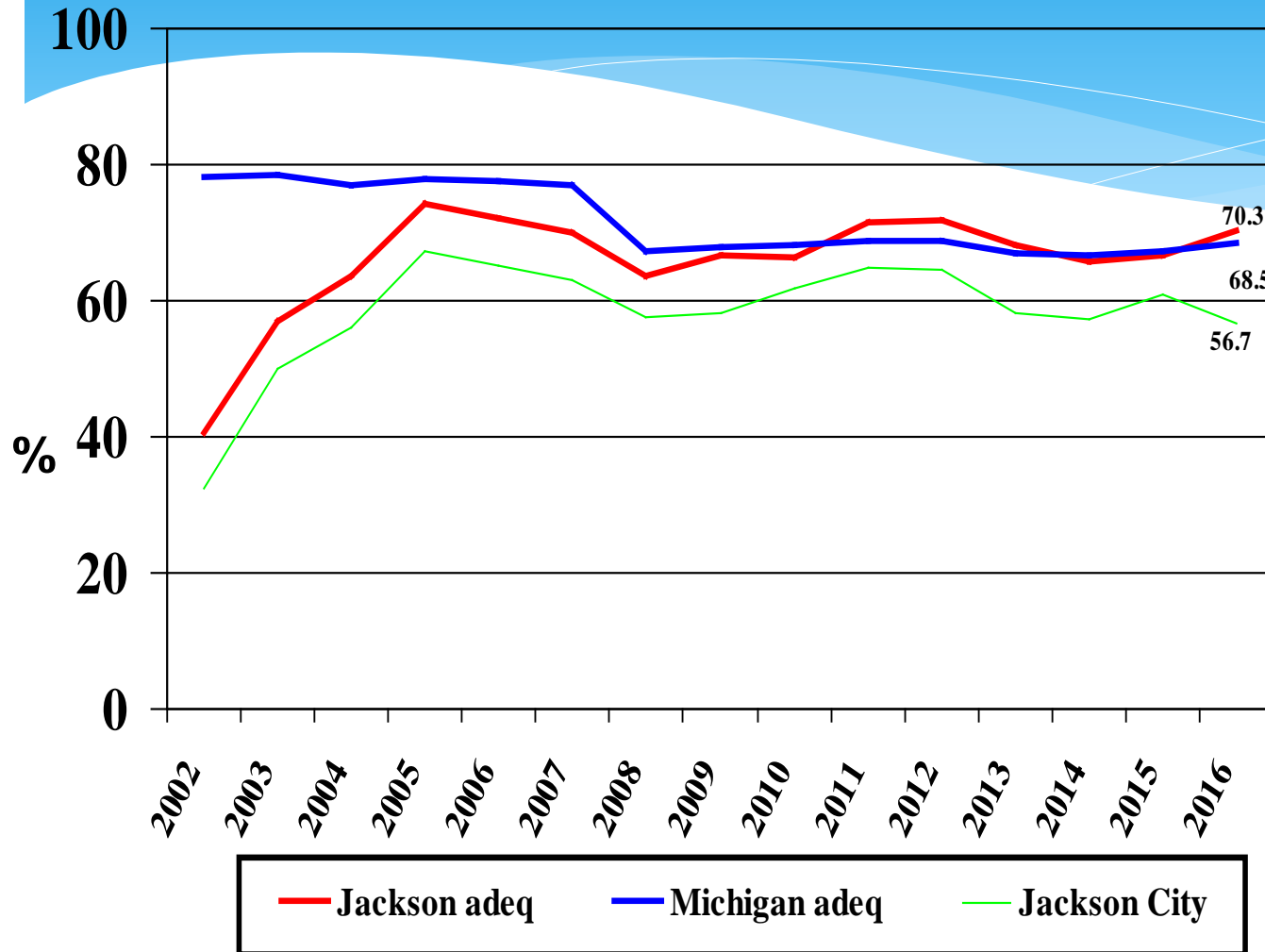
Percent births to mothers who smoked during pregnancy



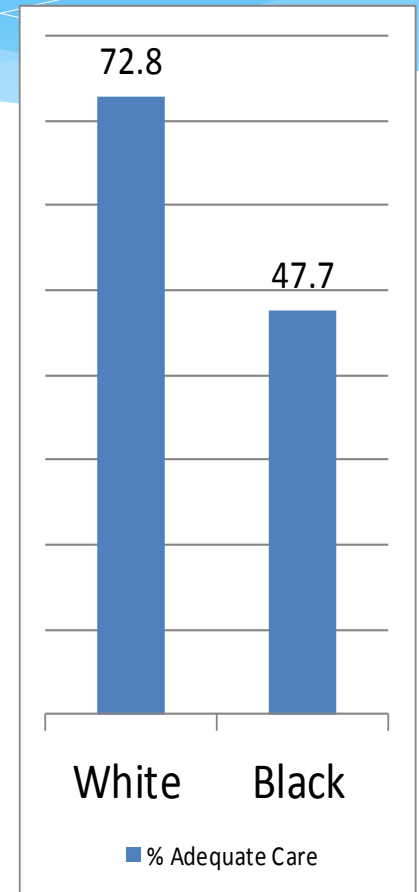
Adequate prenatal care

(*Kessner index)

Jackson County compared to Michigan



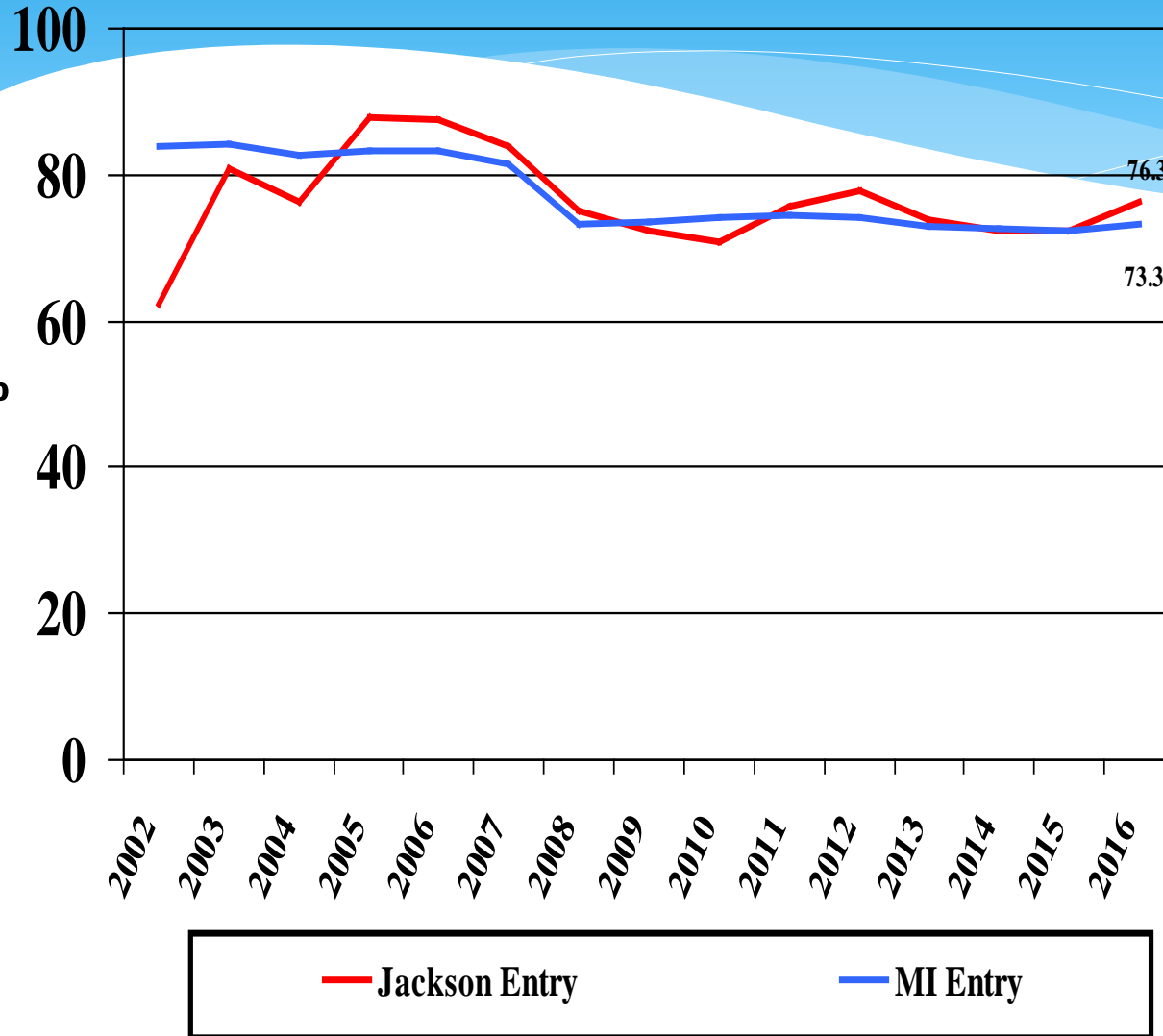
Jackson County Adequate Care By Race (2016)



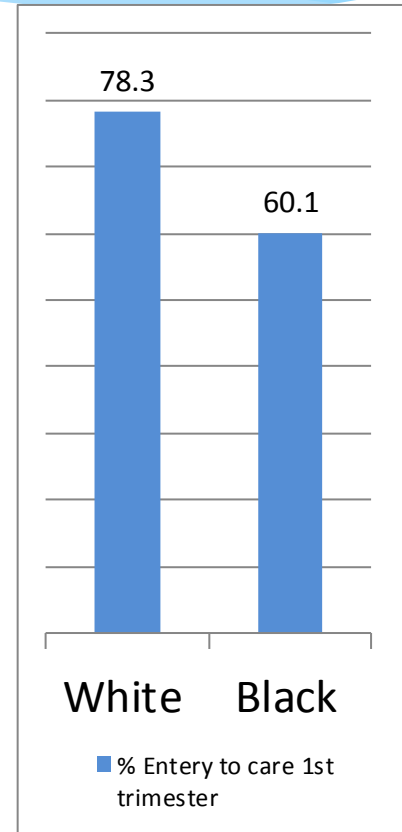
*The Kessner index classifies care based on entry into care, the number of prenatal visits and the length of pregnancy

Entry into care during 1st trimester

Jackson County compared to Michigan



Jackson County Entry into Care first trimester By Race (2016)

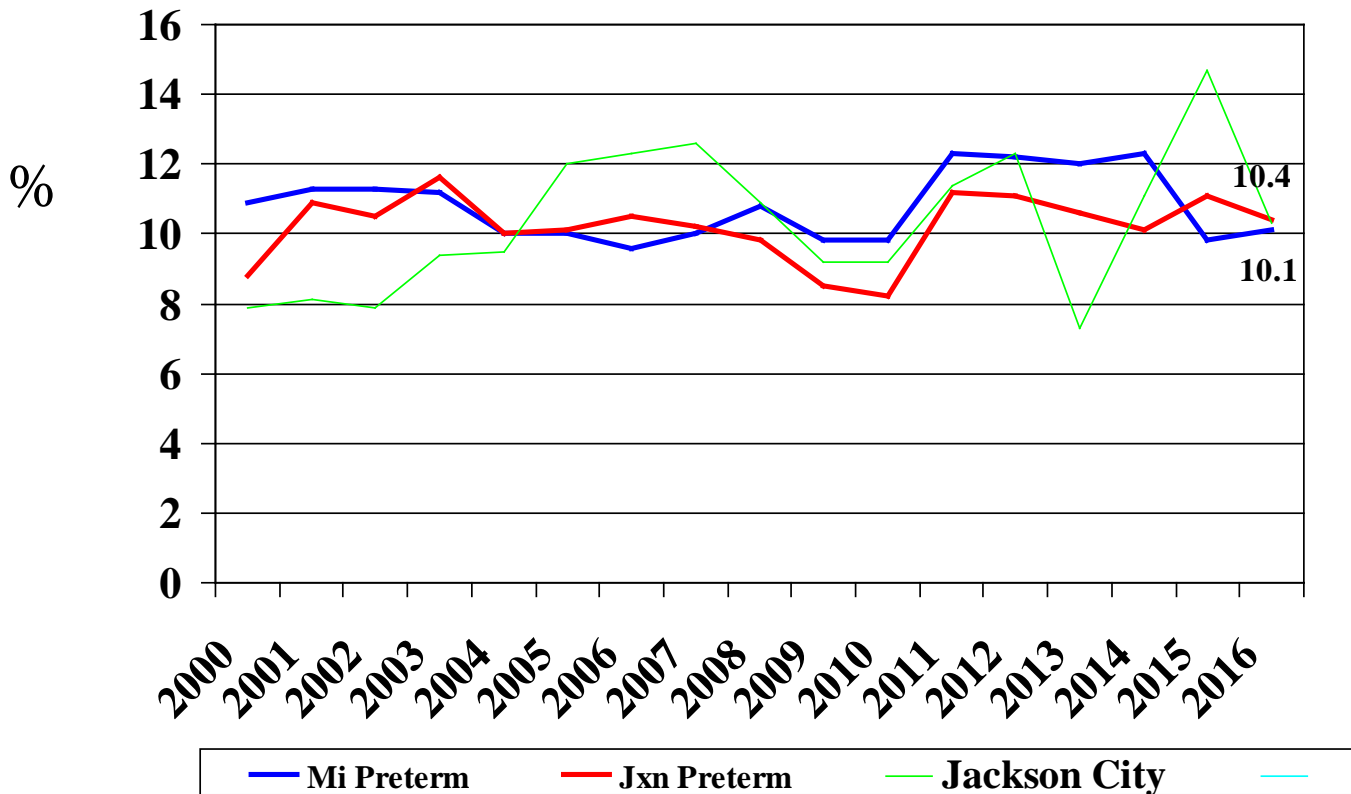
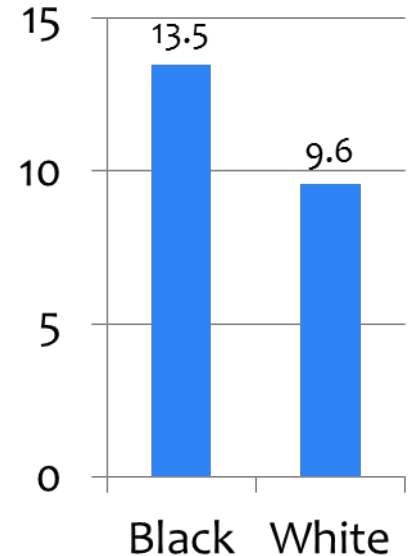


Preterm Live Births

Jackson County, city and MI
2000-2016

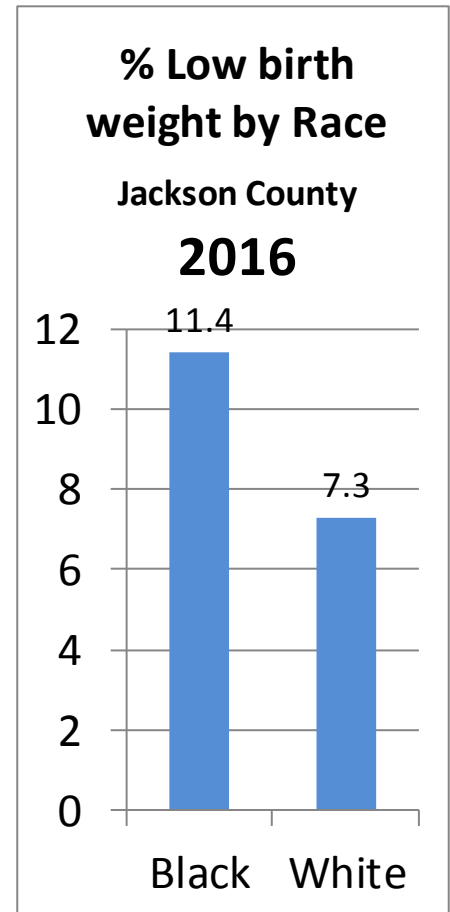
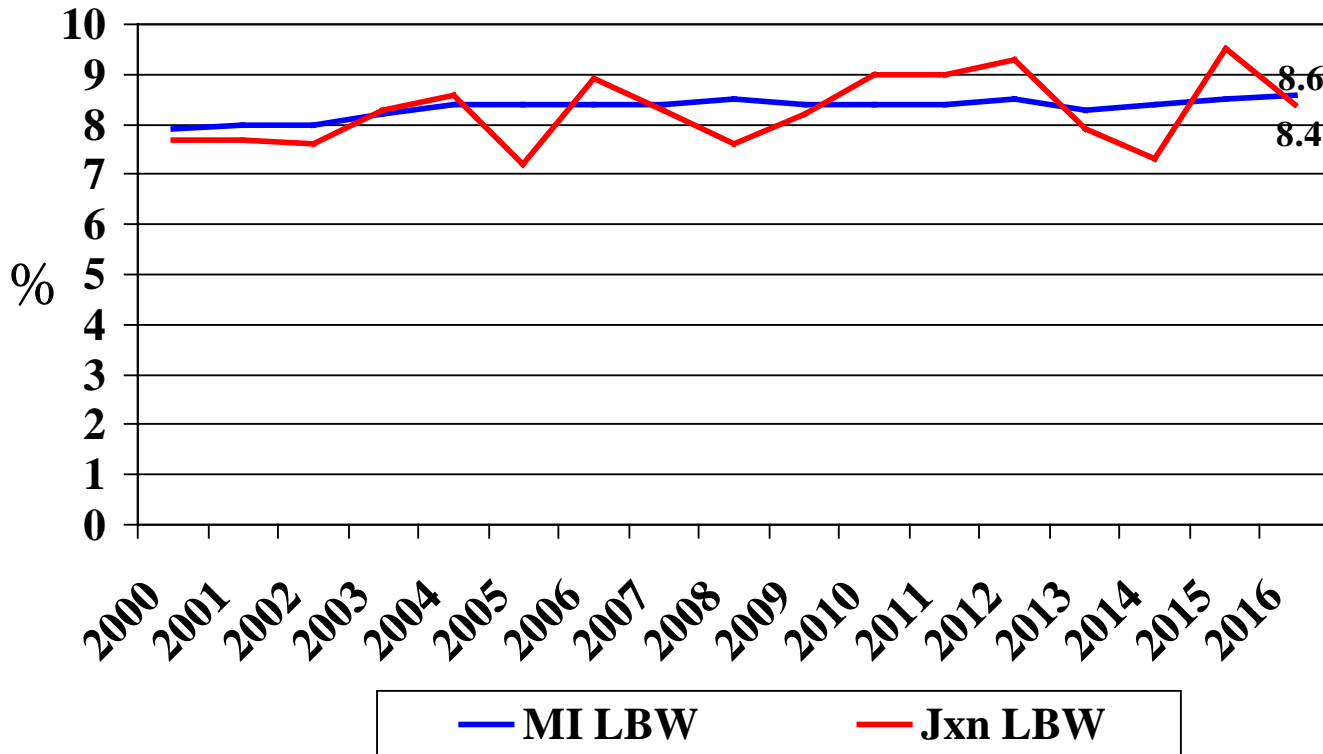
% Preterm by Race

Jackson County
2016



Low Birth Weight

Jackson County Compared to MI
2000-2016

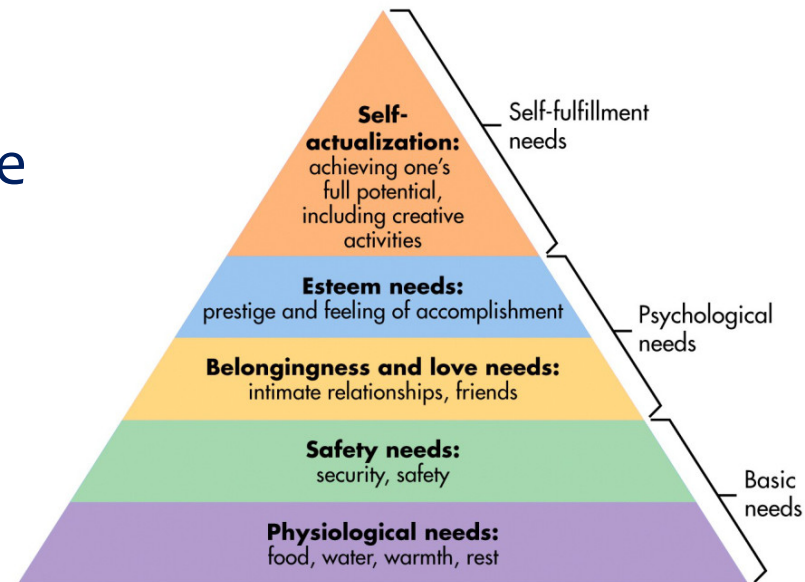


Why aren't all women accessing the care they need?

- * 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.
- * **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

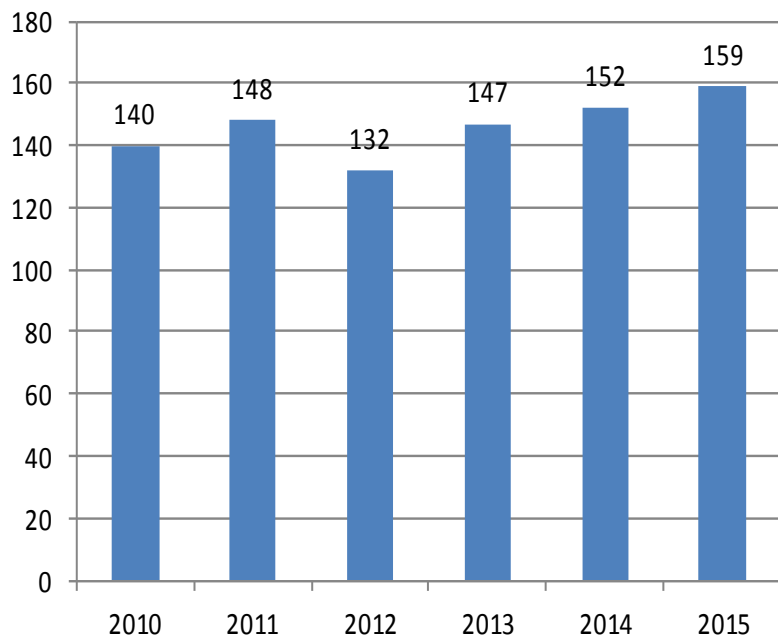
Can Racism contribute to these poor outcomes?

Unnatural Causes, How the Bough Breaks

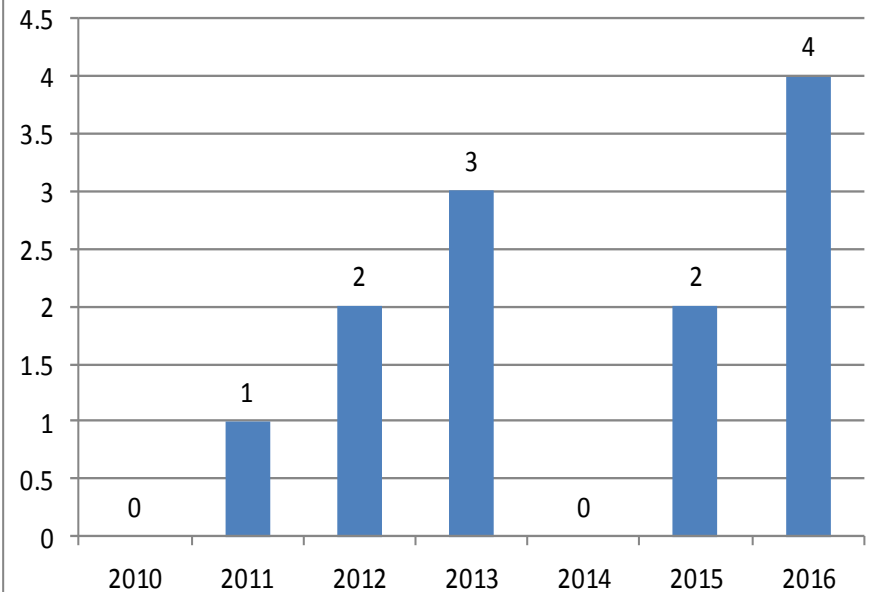
https://www.unnaturalcauses.org/video_clips_detail.php?res_id=70

Sleep Related Deaths (Jackson County)

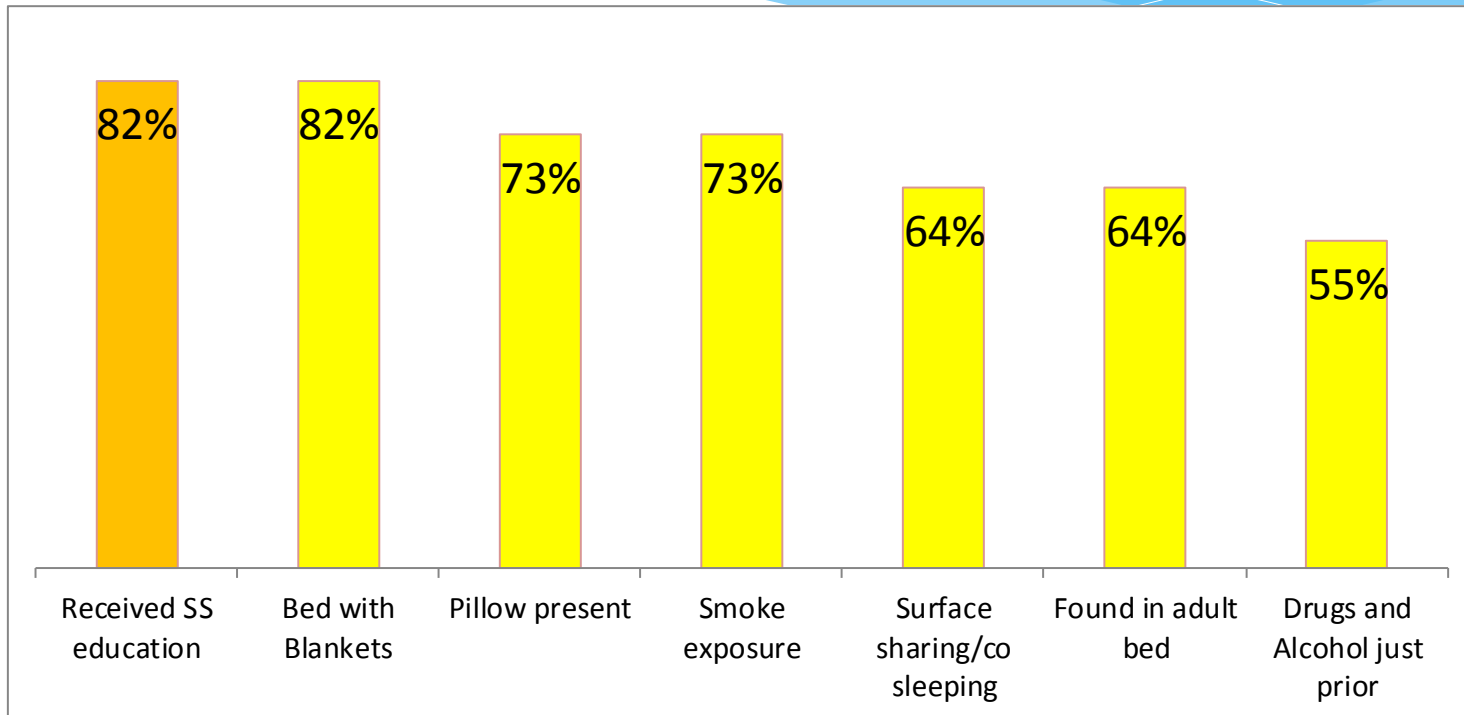
Michigan SUID deaths



Jackson County Asphyxia/Compression deaths



Sleep Related Deaths (Jackson County)

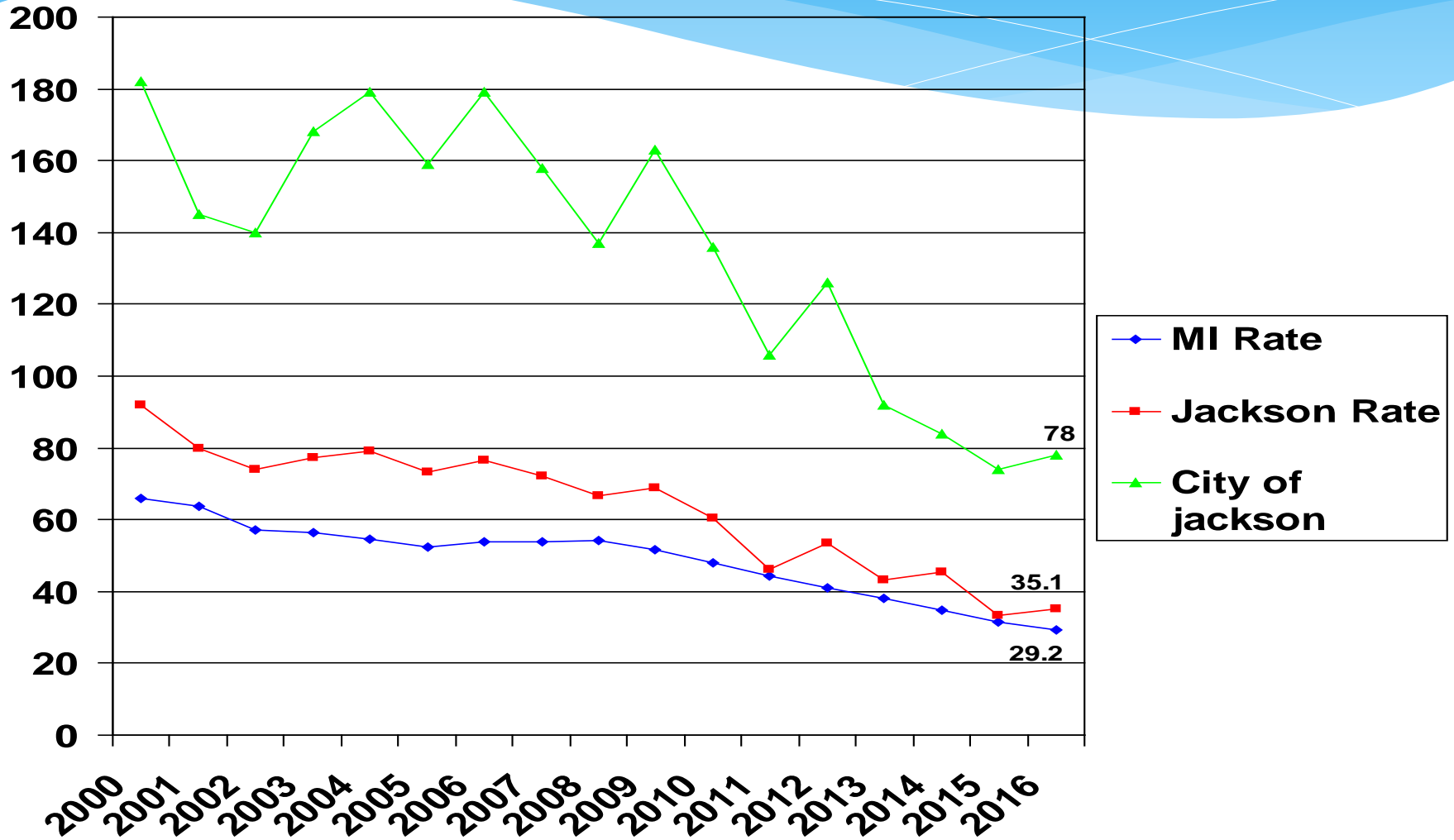


For Sleep related deaths between 2012-2016

- ❖ In 64% of the sleep related deaths babies were co-sleeping
- ❖ 64% of the babies were in an adult bed
- ❖ 82% of babies were put to bed with blankets
- ❖ In 55% of the cases parent used drugs or alcohol just prior to the death
- ❖ 73% of babies were put to bed with a pillow
- ❖ 82% reported receiving safe sleep education
- ❖ 73% report mom smoked or there was smoking in the home

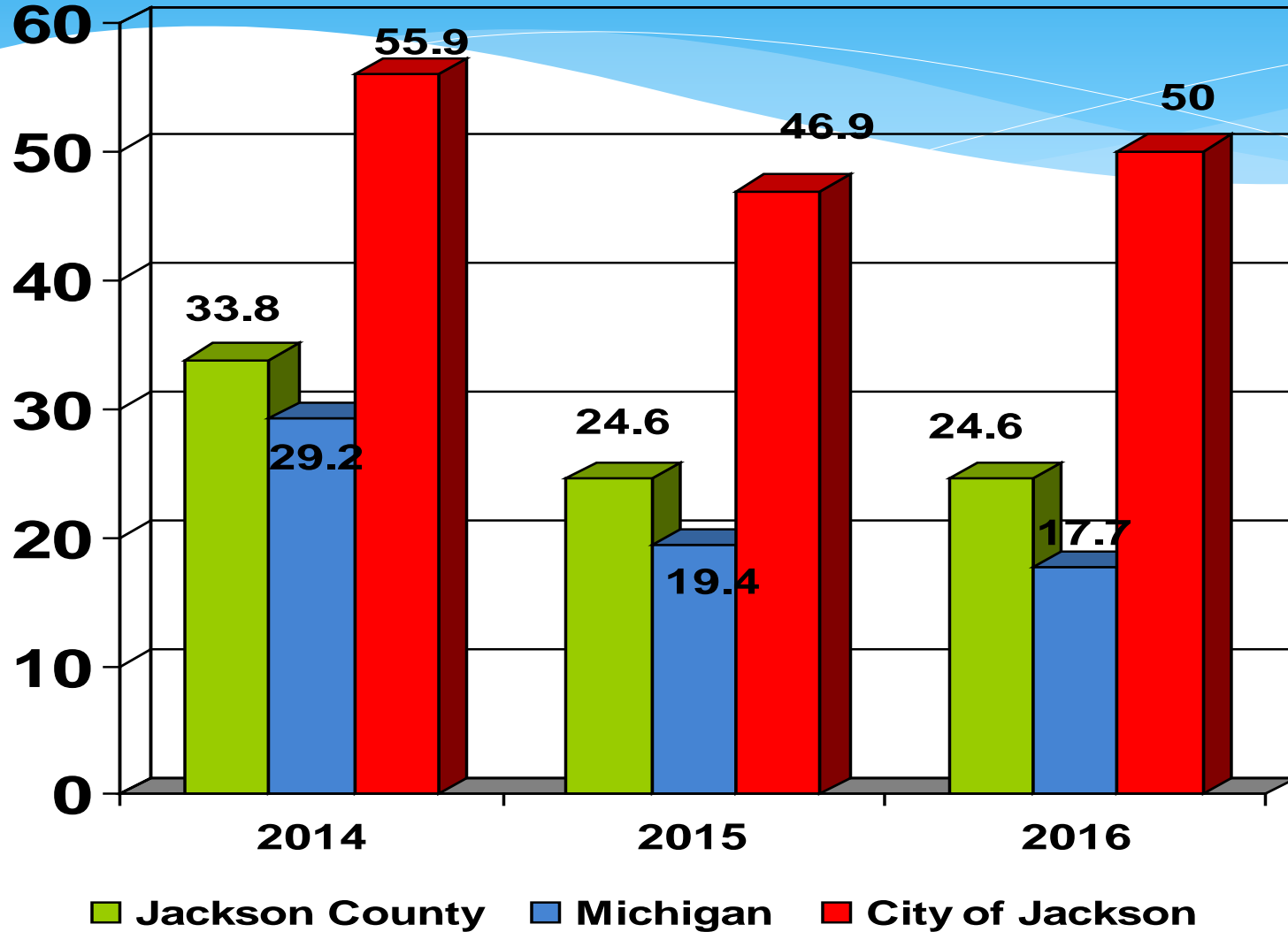
2000-2016 Teen Pregnancy Rates

Rates per 1000 females, aged 15-19)



2014-2016 Teen Birth Rates

(Rates per 1000 females, aged 15-19)



Jackson County infant deaths/live births

Maternal Characteristics

2014-2016 (3 year average)	2016		2016	2016
% Infant Deaths (n=34)	% infant Deaths (n=17)		% live births Jackson	% live births Michigan
44%	35%	Obese (BMI > 29)		
29%	12%	1 st pregnancy as teen		
26%	12%	< 12 th grade education	13.4%	11.4%
65%	53%	Mother Unmarried	49.7%	41.5%

Maternal/Prenatal Characteristics

2014-2016 3 year average % Infant Deaths (n=34)	2016 % infant Deaths (n=17)		2016 % live births Jackson	2016 % live births Michigan
65%	71%	Adequate Prenatal Care	70.3	68.5
71%	89%	Entered Prenatal care 1 st trimester	76.3%	73.3%
53%	41%	Kept 6 Week postpartum visit		
71%	79%	Low Birth weight baby (<2500grams)	8.4%	8.6%
88%	82%	Preterm (less than 37 weeks)	10.4%	10.1%

Social/Economic Characteristics

2014-2016 3 year average % Infant Deaths (n=34)	2016 % infant Deaths (n=17)		2016 % live births Jackson	2016 % live births MICHIGA N
62%	65%	Multiple Stressors / Social Chaos		
21%	24%	Drug Use		
44%	35%	Mental Health / Depression Issues		
41%	47%	Smoking	26.9%	16%
68%	65%	Medicaid		

Systems Issues and Recommendations

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

Identified System Issues (2014-2016 cases n=34)

- * Lack of PNV/folic acid prior to conception (22)
- * Lack of dental care assessment. Referral and follow-up (22)
- * Lack of preconception and interconception care/education (18)
- * Social Chaos during pregnancy (11)
- * Did not keep postpartum visit (11)
- * Smoked during pregnancy (10)

Top Recommendations 2014

- * Gather accurate birth abstract information
- * Improve post-partum care follow up in the areas of depression, immunizations & contraception education.
- * Conduct follow up on referrals during pregnancy for smoking cessation, mental health and substance abuse

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 (n=17)

- * Increase postpartum visits and follow up (41%)
- * Complete drug testing on moms with pre-term delivery or multiple missed appointments (ideally all delivering moms) (29%/18%=47%)
- * Complete mental health evaluation prior to discharge from hospital with referrals if needed (24%)
- * Proper care and assessment for “late to care” moms (24%)
- * Continued efforts in the community to make meaningful closed loop referrals (18%)

Maternal Child Health Action (MCHAT) Team Accomplishments

- * Community Navigation Specialist (pathways program/MHEF) promoting community linkages
 - * 37 referrals, 116 pathways completed
 - * Most commonly used pathways have been: housing, financial, transportation, clothing, and childcare
 - * 43% of referrals were currently pregnant
- * Worked to update 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.
- * Worked with Jackson Tobacco Reduction Coalition (JTRC) to institute SCRIPT (Smoking Cessation and Reduction in Pregnancy Treatment) in our Maternal Infant Health Program.

Emerging concepts

- * Opioid use in pregnancy and the burden of Neonatal Abstinence Syndrome
- * Using an equity lens to addressing racial disparities



- * Impact of trauma experiences on birth outcomes

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 the top causes of infant death through some of the following:*
 - * **Interconception Care**
 - * *Folic acid, chronic disease management, depression screening, pregnancy planning, dental care and weight management*
 - * **Inter-agency referrals**
 - * **Substance abuse assessment and treatment**
 - * **Focus on social determinates of health and the impact on birth outcomes**

Summary (cont.)

- * Our community action team (MCHAT) must address these issues in a collaborative way looking at root causes and implementing system changes for long term effects.*
- * Improved maternal and infant outcomes require strategies that focus on specific factors across the life course.*
- * 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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