

Infant mortality in Kalamazoo

What we know...



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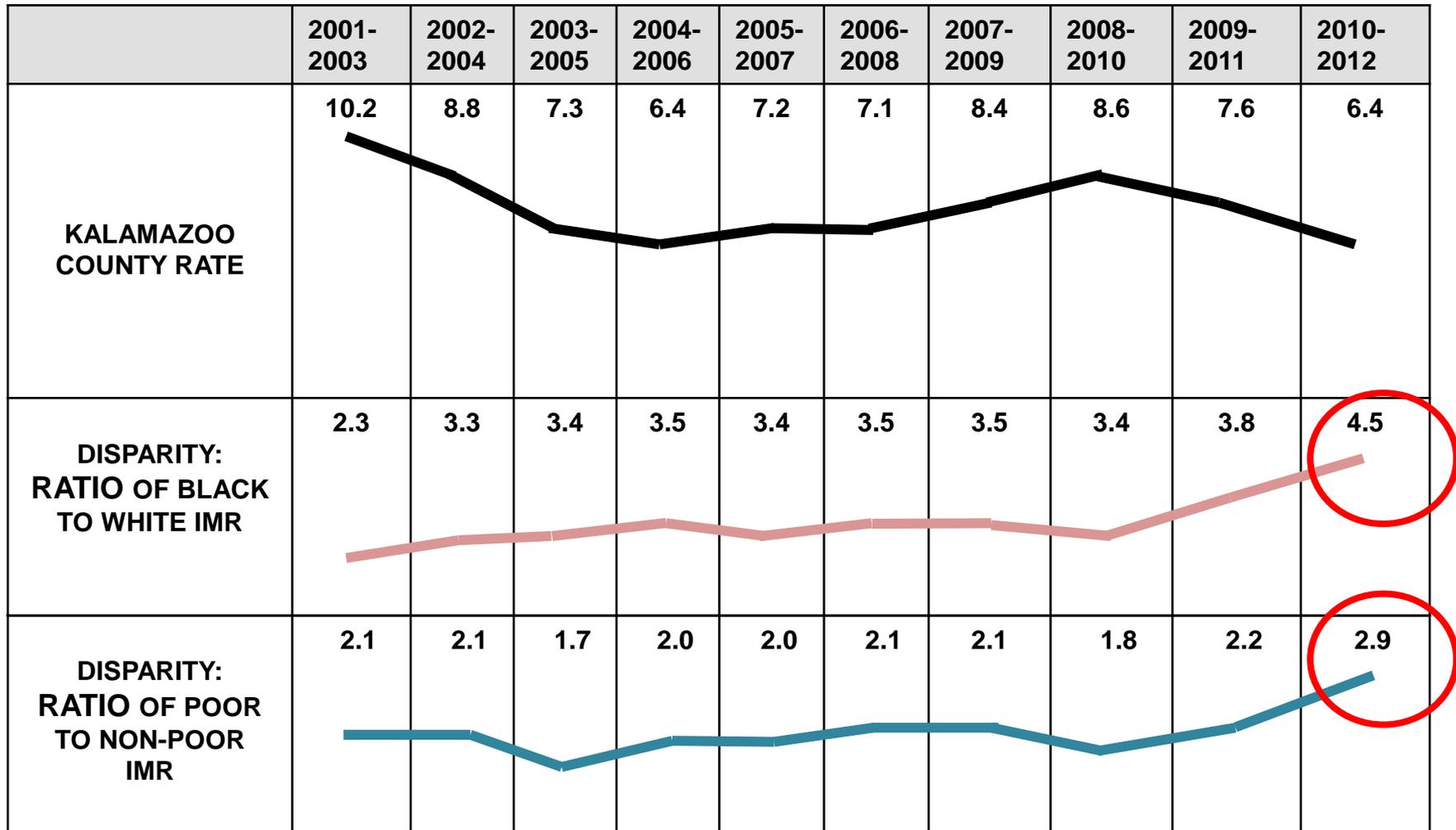
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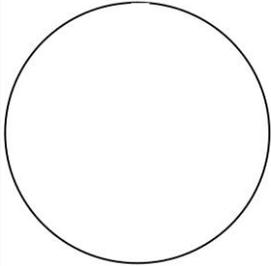
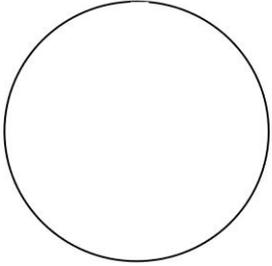
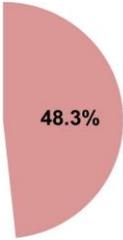
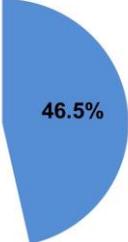
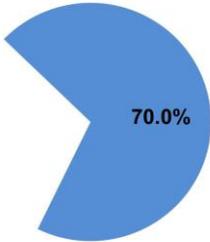
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Kalamazoo County Infant Mortality Trends

Infant Mortality Rates per 1,000 Live Births, Three-year moving Averages

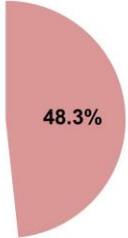
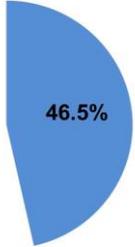
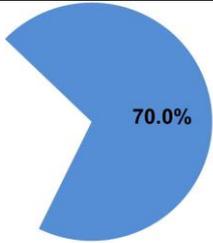


Infant Mortality, 2010-2012 Period

	BIRTHS		DEATHS		IMR Rate*
	#		#		
Total, Kalamazoo Cnty	9,305		60		6.4
Births to Black Women, Kalamazoo Cnty	1,547		29		17.6 BI (: 3.9 Wh)
Births to Poor Women, Kalamazoo Cnty	4,328		42		9.7 Poor (: 3.4 Non)

*Three-year moving average rate among this population

Overlap between Black Race and Poverty

	BIRTHS		DEATHS	
	#		#	
Births to Black Women, Kalamazoo Cnty	1,547		29	
Births to Poor Women, Kalamazoo Cnty	4,328		42	

BIRTHS

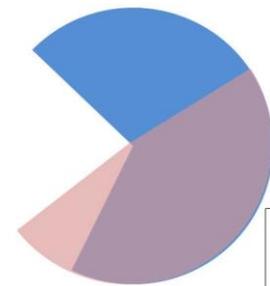
DEATHS



84.5% of Black women giving birth are poor



Black & Poor



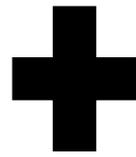
83.3% of Black infants dying are poor



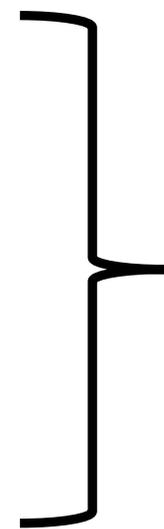
Black & Poor

BOTH Poverty and Race contribute risk...

Poverty
2.0X ↑



Black Race
1.7X ↑



Low Birth Weight*



...but kind
of risk? ...and does it
vary?

*Source: Kothari, C.L., Paul, R., Wiley, J., Hanneken, J., Baker, K., Lenz, D., Dormitorio, B., James, A., Curtis, A. *The relationship of socioeconomic and racial factors, both individual and community level, to infant birth weight.* American Public Health Association Annual Conference, 2014. New Orleans, Louisiana.



Perinatal Periods of Risk (PPOR)



500-
1499 g



Infant birth weight

1500+ g



Perinatal Periods of Risk (PPOR)



Fetal Neonatal Post
 neonatal

500-
1499 g



Age at death

1500+ g



Perinatal Periods of Risk (PPOR)



Fetal Neonatal Post neonatal

500-
1499 g

**Maternal
Preconception/
Prenatal Health**

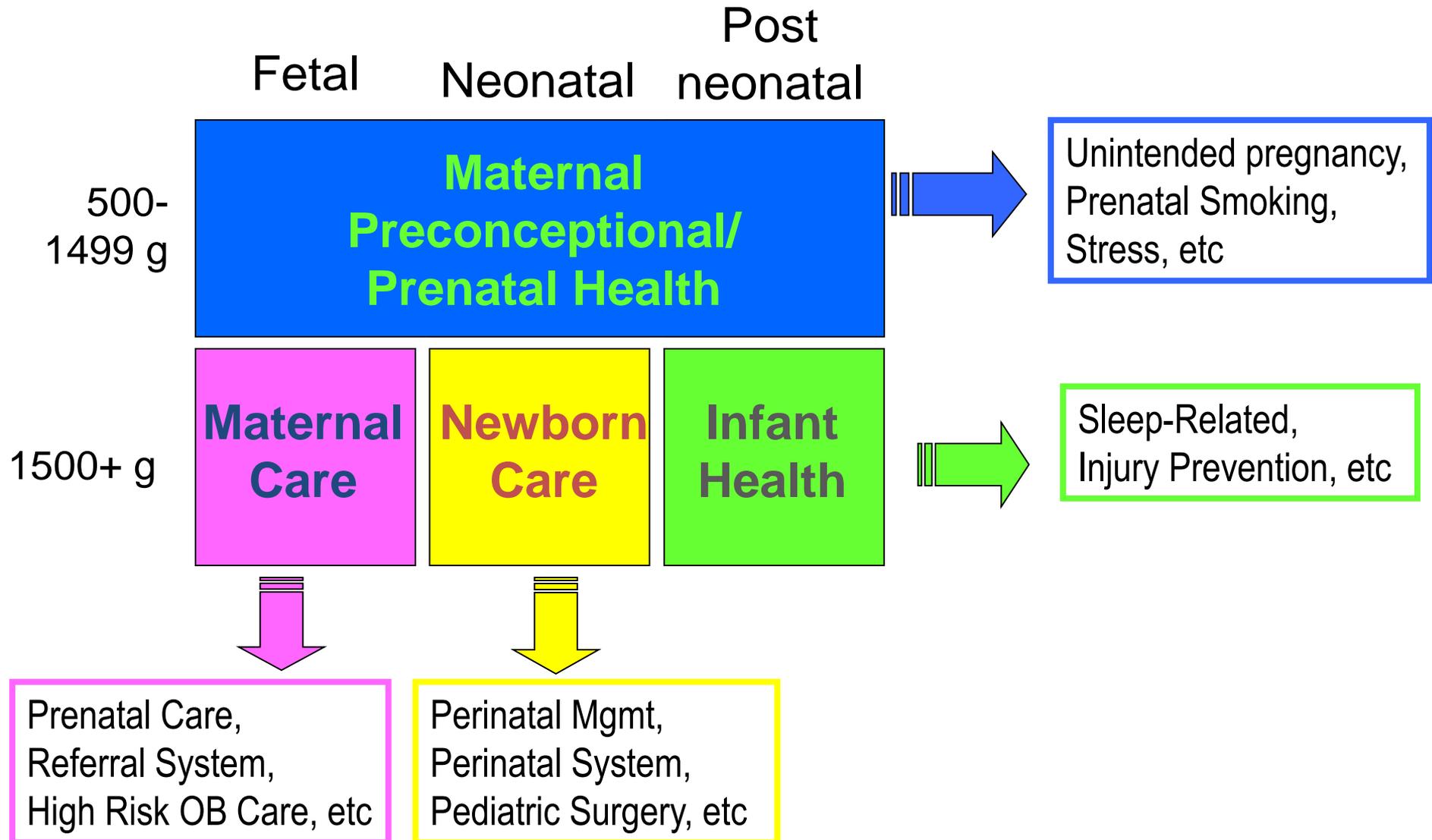
1500+ g

**Maternal
Care**

**Newborn
Care**

**Infant
Health**

Perinatal Periods of Risk (PPOR)

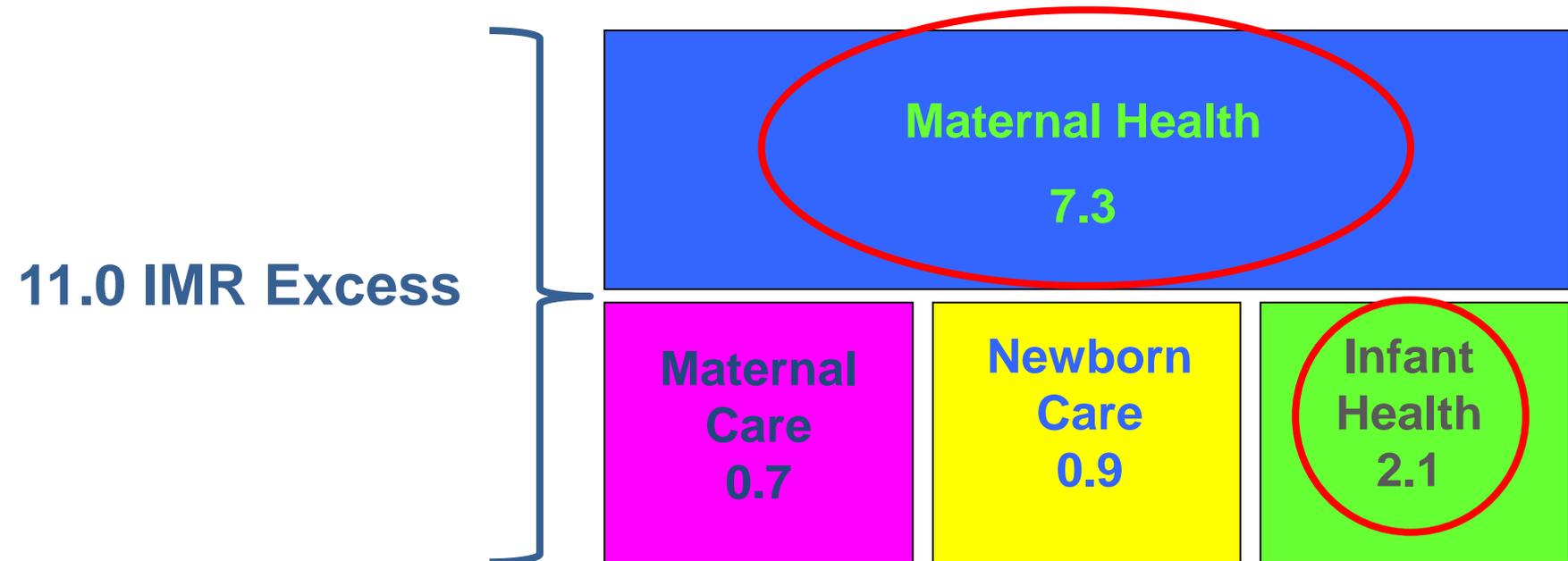


**“Excess
Mortality”
BLACK RACE**

PPOR (2003-2012)

Excess Mortality: Black Women

<u>Black women</u>	-	<u>Reference</u>	=	
15.2 IMR	-	4.2 IMR	=	11.0 IMR



Perinatal Periods of Risk Assessment

TRENDS in Excess Mortality of Black Women

1997-2006

Maternal Health/
Prematurity

5.1

Maternal
Care
2.0

Newborn
Care
0.2

Infant
Health
2.9

2003-2012

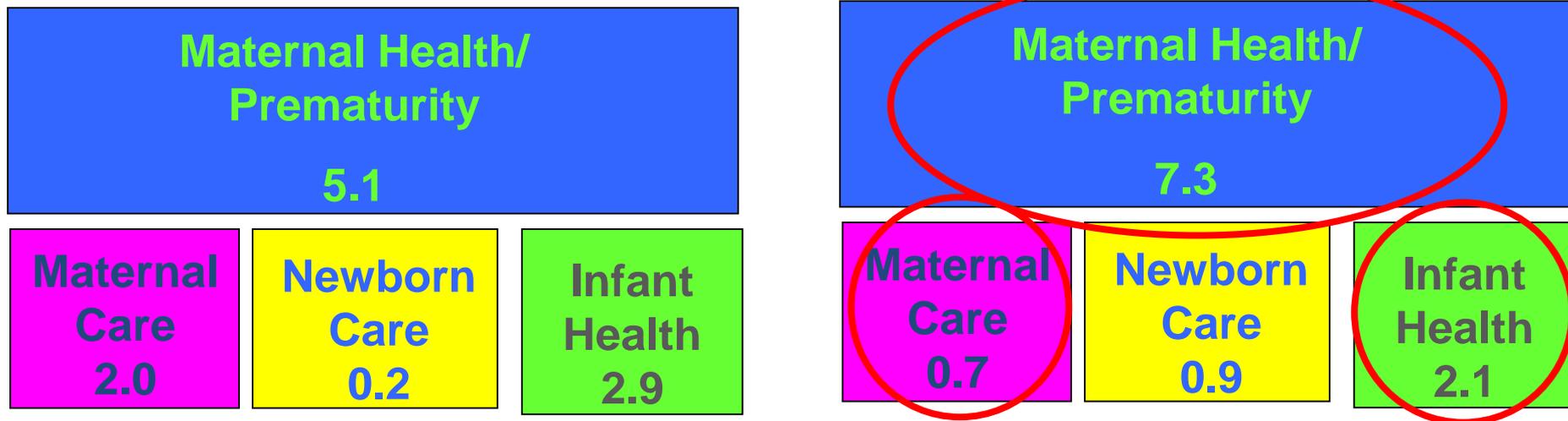
Maternal Health/
Prematurity

7.3

Maternal
Care
0.7

Newborn
Care
0.9

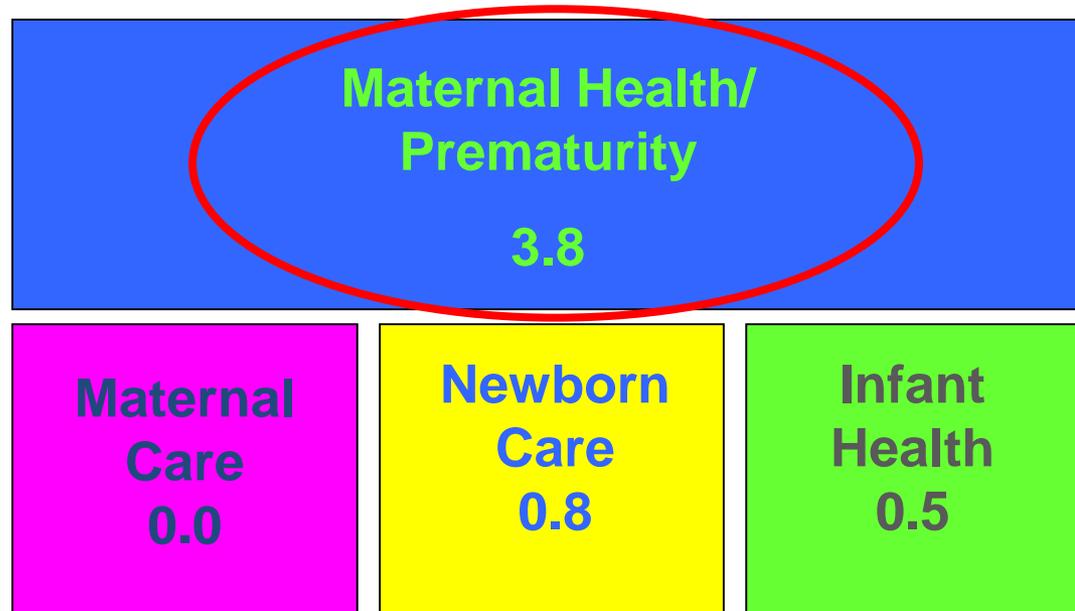
Infant
Health
2.1



**BLACK
“Excess
Mortality” After
Accounting for
POVERTY**

Perinatal Periods of Risk Assessment (2003-2012)

Excess Mortality: Black women – Poor Women



PPOR Summary

- The majority of mortality risk associated with Black race is related to **women's health before and during pregnancy**
 - Some of this risk is associated with Poverty
 - Some is not
 - It has gotten worse over time, along with disparities
- The other notable mortality risk is in the area of **infant health and safety**
 - Most of this risk has to do with being Poor
 - This risk category has gotten better over time

Infant Deaths, 2010-2012

of Infant Deaths (N=60)

||||- ||||- ||||-
||||- ||||- ||||-
||||- ||||- ||||-
||||- ||||- ||||-

Linked "Cause" data (n=52)

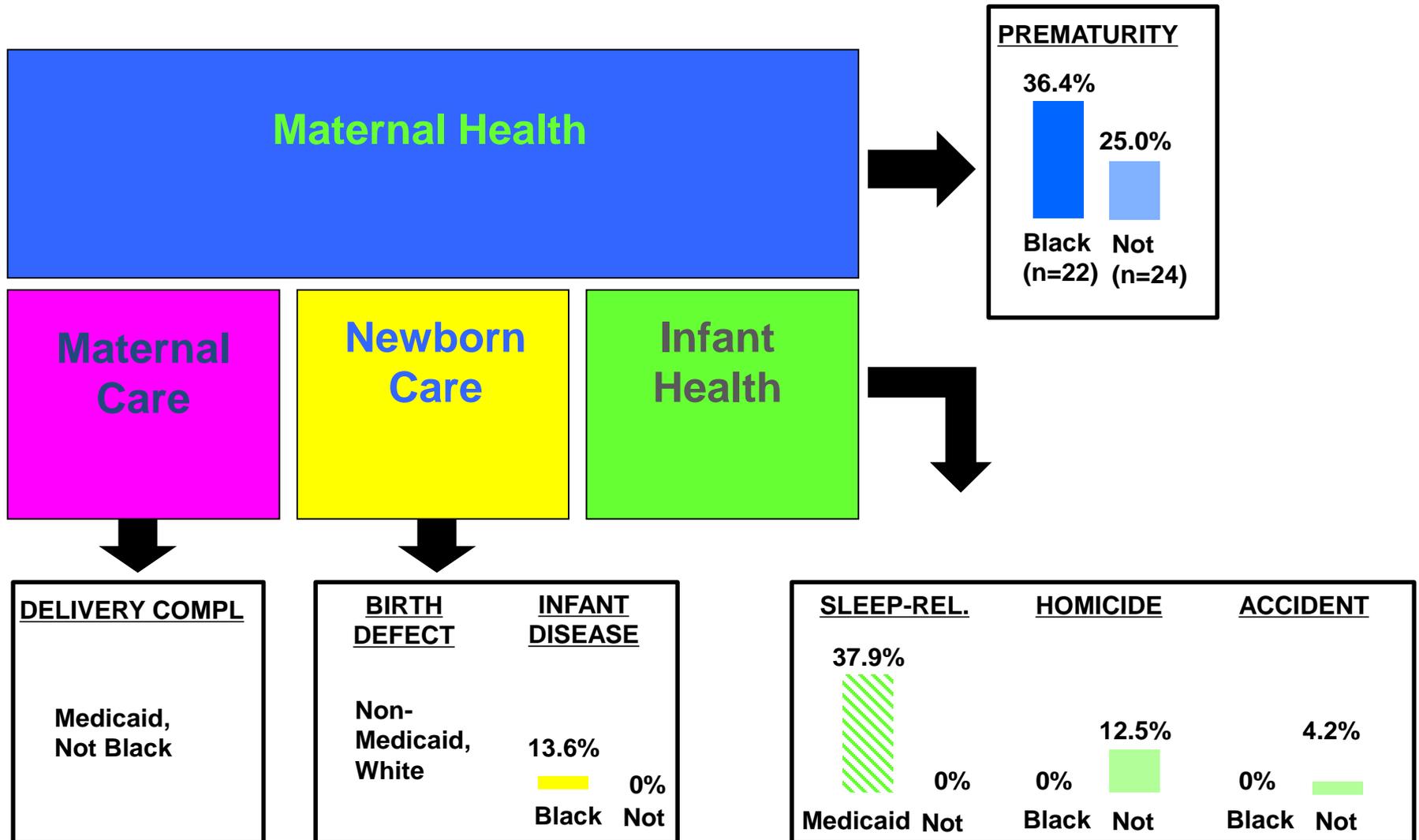
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Race & Poverty data (n=38)

||||- ||||- ||||-
||||- ||||- ||||-
||||- |||

Causes of Infant Death, 2010-2012

-By Race & Poverty-



SAFE SLEEP – CDC-funded study, MI

Kalamazoo County Sleep-Related Infant Deaths

Sleep-related infant deaths are defined in Michigan as deaths to infants less than 1 year of age that occur suddenly and unexpectedly, including Suffocation/Positional Asphyxia, Sudden Infant Death Syndrome (SIDS), Undetermined/Sudden Unexplained Infant Death (SUID), and other causes wherein the sleep environment was likely to have contributed to the death.

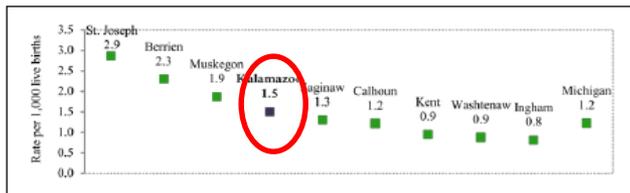


14

From 2010 to 2012, there were 14 sleep-related infant deaths in Kalamazoo County

Mortality Rate

The sleep-related infant mortality rate in Kalamazoo County is **1.5 deaths per 1,000 live births**, which is higher than the overall rate in Michigan (1.2 deaths/1,000 live births)



Of the sleep-related infant deaths in Kalamazoo County:



The infant death male to female ratio is 1:1



Over 60% died before the age of 3 months



Over 60% were African American



Approximately 1 in 7 were born preterm (less than 37 weeks)



Nearly 90% had Medicaid health insurance



Approximately 1 in 5 infants were ever breastfed



Nearly 80% had a mother who smoked during pregnancy

Sleep Environment

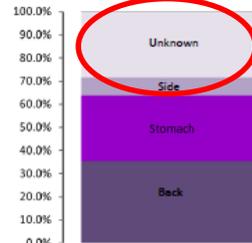
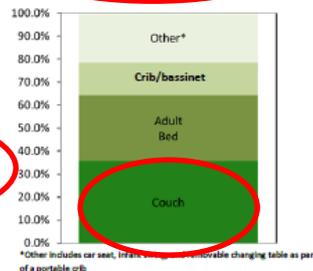
The American Academy of Pediatrics (AAP) recommends that infants: 1) sleep in a safety-approved crib, bassinet, or portable crib with a firm mattress and tight-fitting sheet, 2) sleep on surfaces separate from adults or other children free of blankets, pillows, or toys, 3) be placed on his or her back every sleep time.

65%

of sleep-related deaths in Kalamazoo County involved an infant sleeping on the same surface with another person at the time of death

Approximately 85% of sleep-related deaths in Kalamazoo County occurred in an AAP unsafe safe sleep

Approximately 2 in 3 infants were found unresponsive in a position other than their back



Source: Death data are by county of residence from CDC SUID Case Registry, Michigan Public Health Institute, 2014. Birth data are from Michigan Resident Birth Files, Division for Vital Records and Health Statistics, Michigan Department of Community Health, 2014. Prepared by the Michigan Public Health Institute, Center for Child and Family Health, July 2014. Questions may be directed to Lindsay Gross, MPH: 517-324-7340.

Infant Deaths, 2010-2012

of Infant Deaths (N=60)

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Linked "Cause" data (n=52)

||

Race & Poverty data (n=38)

|||

"Contributor" data (n=29)

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RISK CLUSTERS IN FAMILIES WITH INFANT DEATH

-FIMR, 2010-2012-

- poverty
- being black
- unplanned pregnancy



- substance use / abuse
- violence (domestic violence, child abuse/neglect)
- inadequate medical care



- mental illness
- homelessness

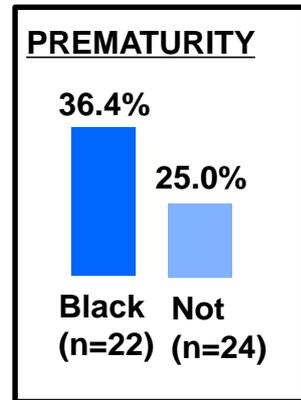


Newborn Care	Infant Health
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Maternal Health

&



MIECHV Assessment, 2012

- Home visiting programs successfully enroll high-risk women (minority, poor, adolescent, single, multiparous, pre-pregnancy diabetes/hypertension)
- Need to target women with previous poor birth outcomes (low birth weight, intrauterine growth retardation, perinatal death)
 -Currently under-enrolled, even though it is the leading predictor of prematurity and low birth weight
- Home visiting programs increase prenatal care
- But this has not been sufficient to improve participants' birth outcomes
- Well-developed maternal-infant & early childhood resources
- But fragmentation within the system
 - ...with medical providers, between the maternal-infant and the early-childhood networks, between maternal-infant programs

Sources: (1) Kalamazoo Maternal, Infant & Early Childhood Home Visiting (MIECHV) Program Exploration and Planning Tool. Prepared by the Kalamazoo Health and Community Services Department, Maternal & Child Health Division, Deb Lenz. Submitted December, 2012.

(2) Kalamazoo County Needs Assessment: Maternal/Infant Health & Home Visiting Programs. Prepared by Catherine Kothari for Kalamazoo MIECHV Committee and for Kalamazoo Health and Community Services Department, Maternal & Child Health Division, Deb Lenz. Submitted August, 2013.

Kalamazoo Infant Mortality Community Action Initiative

Strategic Intent

Preconception to first year

Protecting infants from serious intentional or unintentional injuries and death.

Any contributing factors that influence birth outcomes including cognitive, physical, emotional, and social.

Ensuring infants are reaching cognitive, physical, emotional, and social milestones.

Empowering women to make informed choices and have equal access to resources and information.

Families and community recognize the strength that exists within each family and helps build and grow the protective factors.

Race and Poverty

Infant Safety

Maternal Wellbeing

Infant Wellbeing

Women's Empowerment

Strengthening Families

Reduce the infant mortality rate in racial ethnic minorities to 6.0 (Healthy People 2020 Goal) in Kalamazoo by 2020.