

# Strategies for Reducing Fetal and Infant Mortality in Alaska, 2004-2011



**CHERYL PRINCE, PHD, MPH, MSN<sup>1</sup>**  
**MARILYN PIERCE-BULGER, FNP, CNM, MN<sup>2</sup>**

<sup>1</sup>MCH EPIDEMIOLOGY UNIT, WOMEN'S, CHILDREN'S, & FAMILY HEALTH  
ALASKA DIVISION OF PUBLIC HEALTH

<sup>2</sup>ALASKA NURSE CONSULTANT, NICHD HEALTHY NATIVE BABIES PROJECT

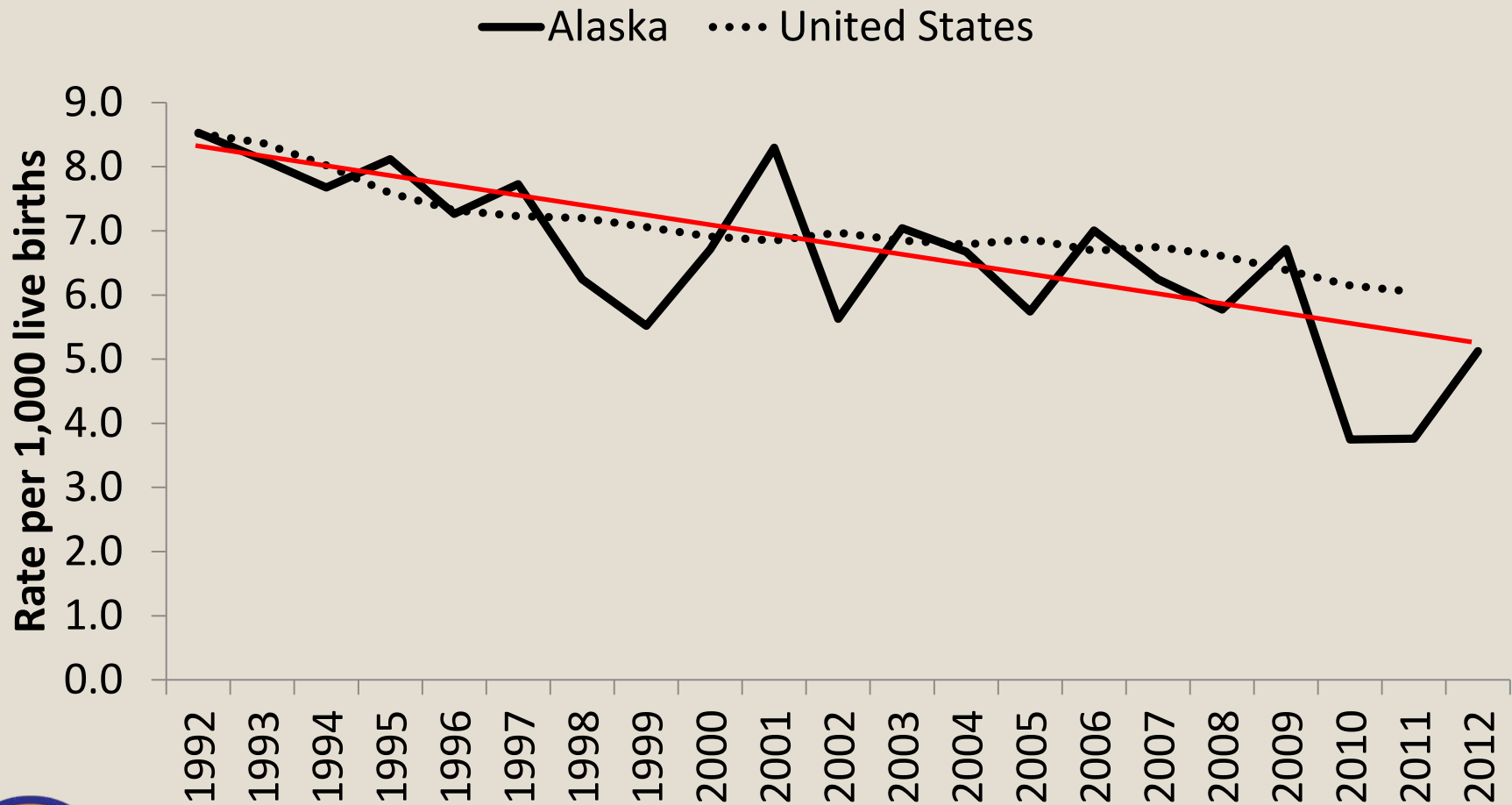


SEPTEMBER 25, 2014



# Declines in infant mortality rates

## Alaska and the United States, 1992-2012



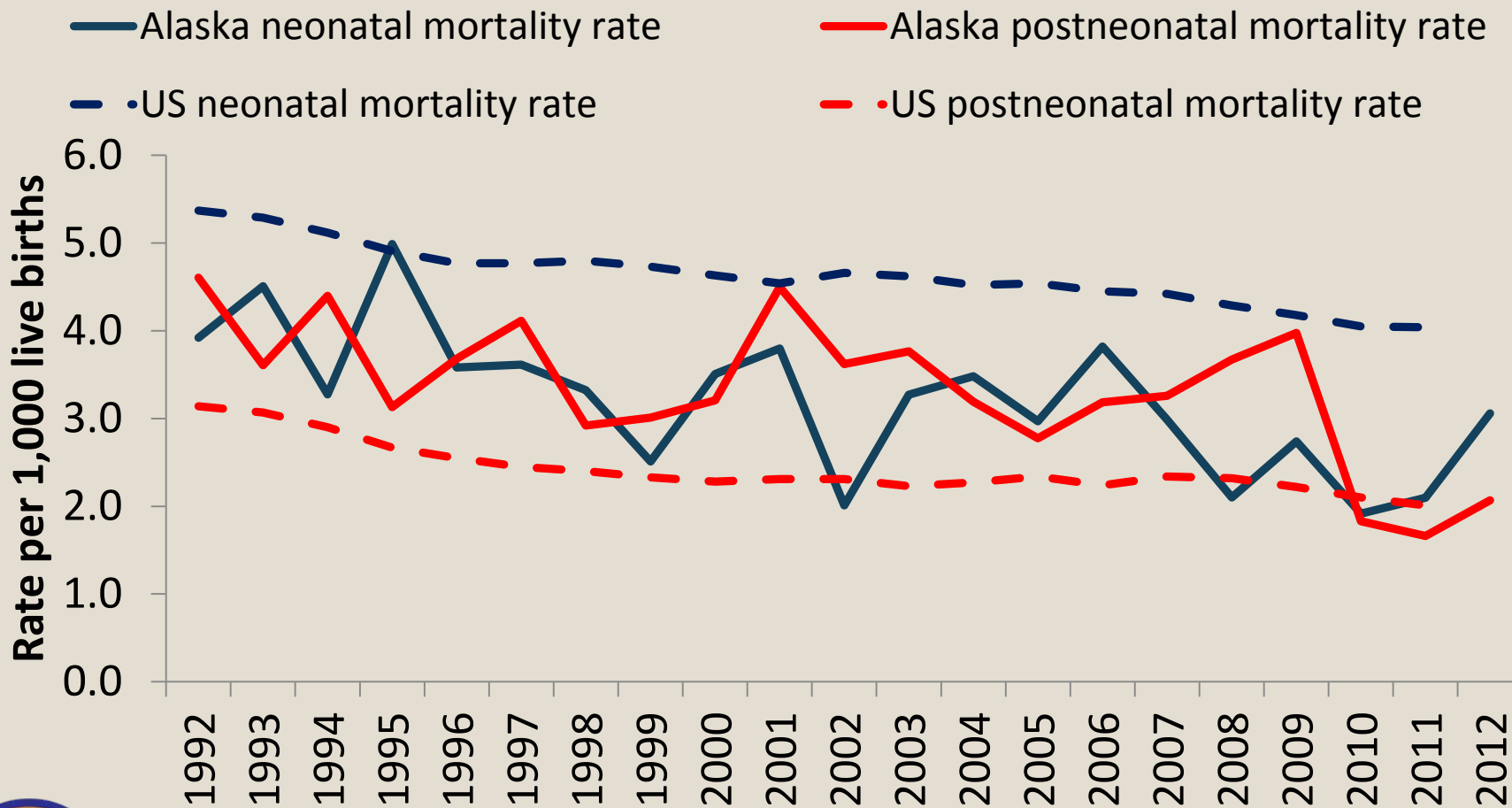
# Perinatal Periods of Risk (PPOR)



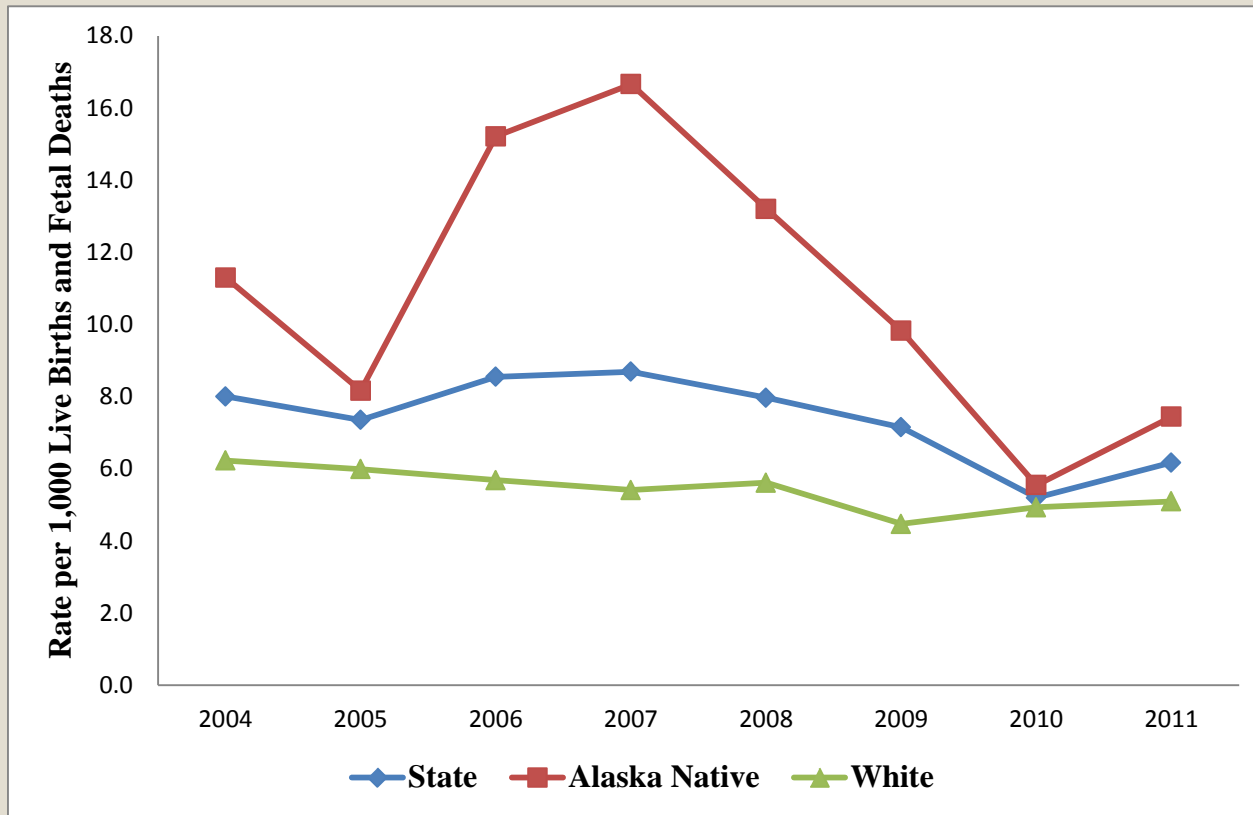
## Definitions

- Infant mortality rate – # of infant deaths  
(birth to 1<sup>st</sup> birthday) per 1000 live births
- Neonatal mortality rate – # of neonatal deaths  
(birth to 27 days) per 1000 live births
- Postneonatal mortality rate – # of postneonatal deaths  
(28 to 364 days) per 1000 live births

# Rates by infant's age at death, Alaska and the United States, 1992-2012



# Trends in FIMR by Race, Alaska, 2004-2011



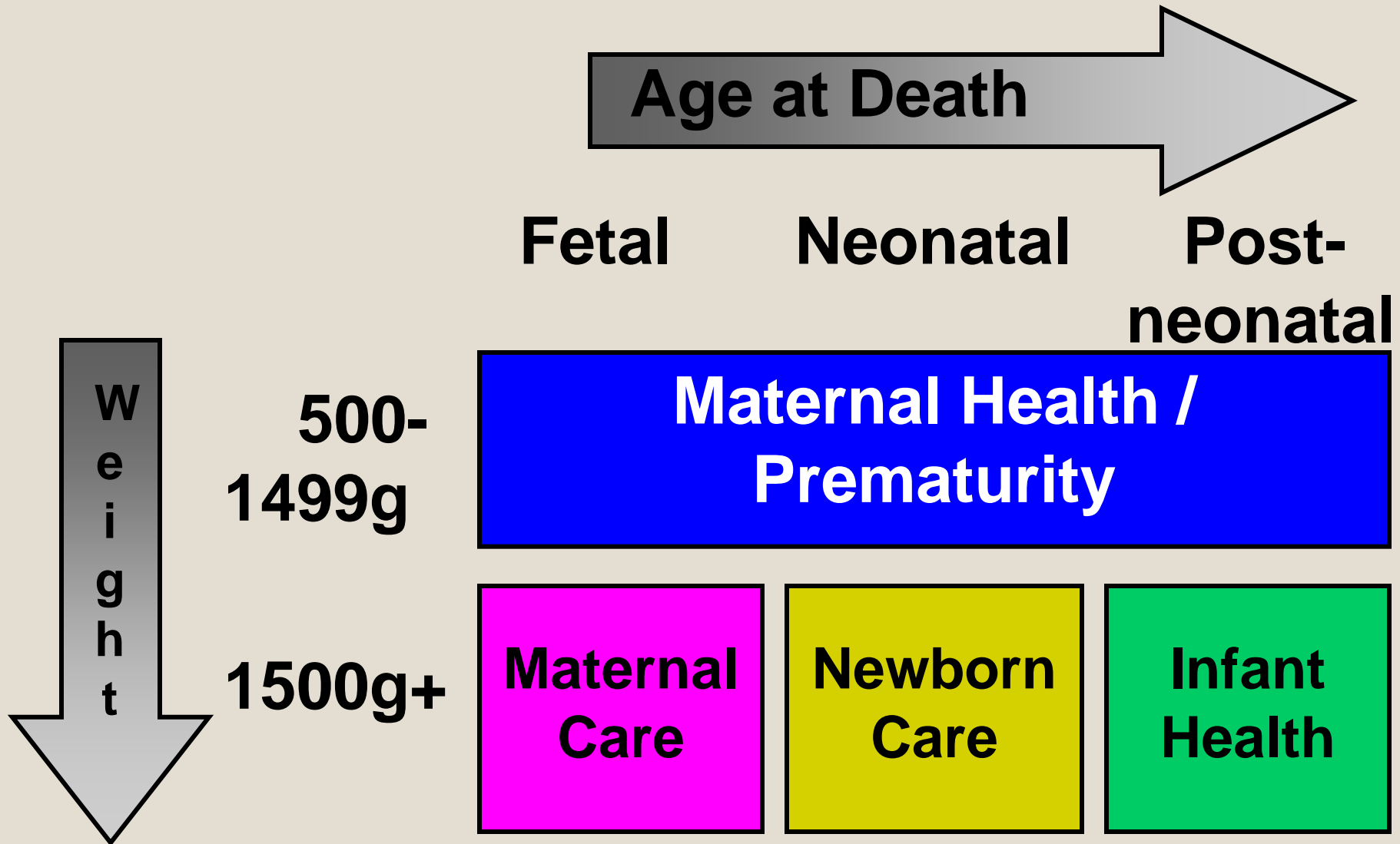
# Perinatal Periods of Risk (PPOR)



## More Definitions

- Late fetal death – greater than 23 weeks gestational age
- Fetal and infant mortality rate (FIMR) - # of fetal and infant deaths per 1000 live births and fetal deaths
- Excess mortality rate – rate that exists after subtracting background rate of a reference group
- VLBW – very low birth weight - less than 1500 grams

# Perinatal Periods of Risk (PPOR)



# Alaska PPOR mortality rates, per 1,000 births 2007-2009



Total Fetal-Infant Mortality rate (FIMR): **7.9** per 1,000

Birth Weight	Fetal Deaths	Neo-natal	Post-Neonatal
500-1499 g	1.9		
1500+ g	1.7	1.3	3.1



# Calculating Excess Mortality

## AK 2007-09

FIMR= 7.9 per 1,000

Birth Weight	Fetal Deaths	Neo-natal	Post-Neonatal
500-1499 g	1.9		
1500+ g	1.7	1.3	3.1

## Reference Group

FIMR= 5.0 per 1,000

Birth Weight	Fetal Deaths	Neo-natal	Post-Neonatal
500-1499 g	2.0		
1500+ g	1.2	0.9	0.8

Total Excess of 2.9 deaths per 1,000

Birth Weight	Fetal Deaths	Neo-natal	Post-Neonatal
500-1499 g	-0.1		
1500+ g	0.5	0.3	2.3

# Perinatal Periods of Risk (PPOR)



## **Focus of Further Analysis:**

- Postneonatal deaths
- Infants weighing 1500 grams or more
- Alaska Native and White
- Urban (Anchorage, Fairbanks, Mat-Su) vs. Rural

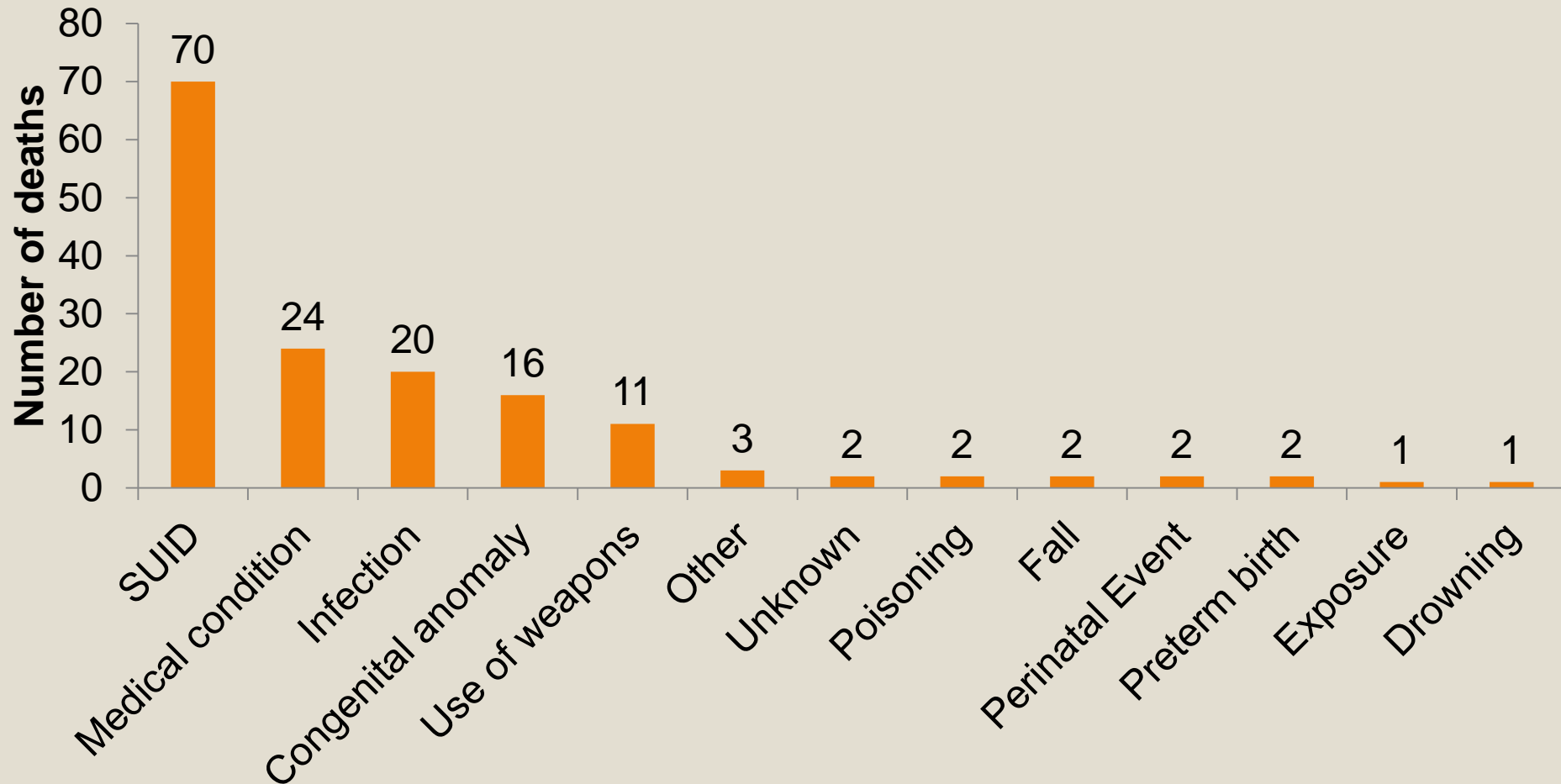
# FIMR by Maternal Race and Residency at Birth Alaska, 2004-2011



FIMR	2004-06	2007-09	2010-11	Rate Ratio 04-06/10-11	Rate Ratio 07-09/10-11
White Urban	6.2	4.9	5.0	1.2	1.0
White Rural	5.1	6.0	4.9	1.0	1.2
Alaska Native Urban	8.9	8.6	5.1	1.7	1.7
Alaska Native Rural	13.0	15.7	7.2	1.8, p<0.001	2.2, p<0.001

# Alaska's Excess Infant Mortality – what are they dying from?

(2007-2010 postneonatal deaths, 1500+g birth weight; n=116)

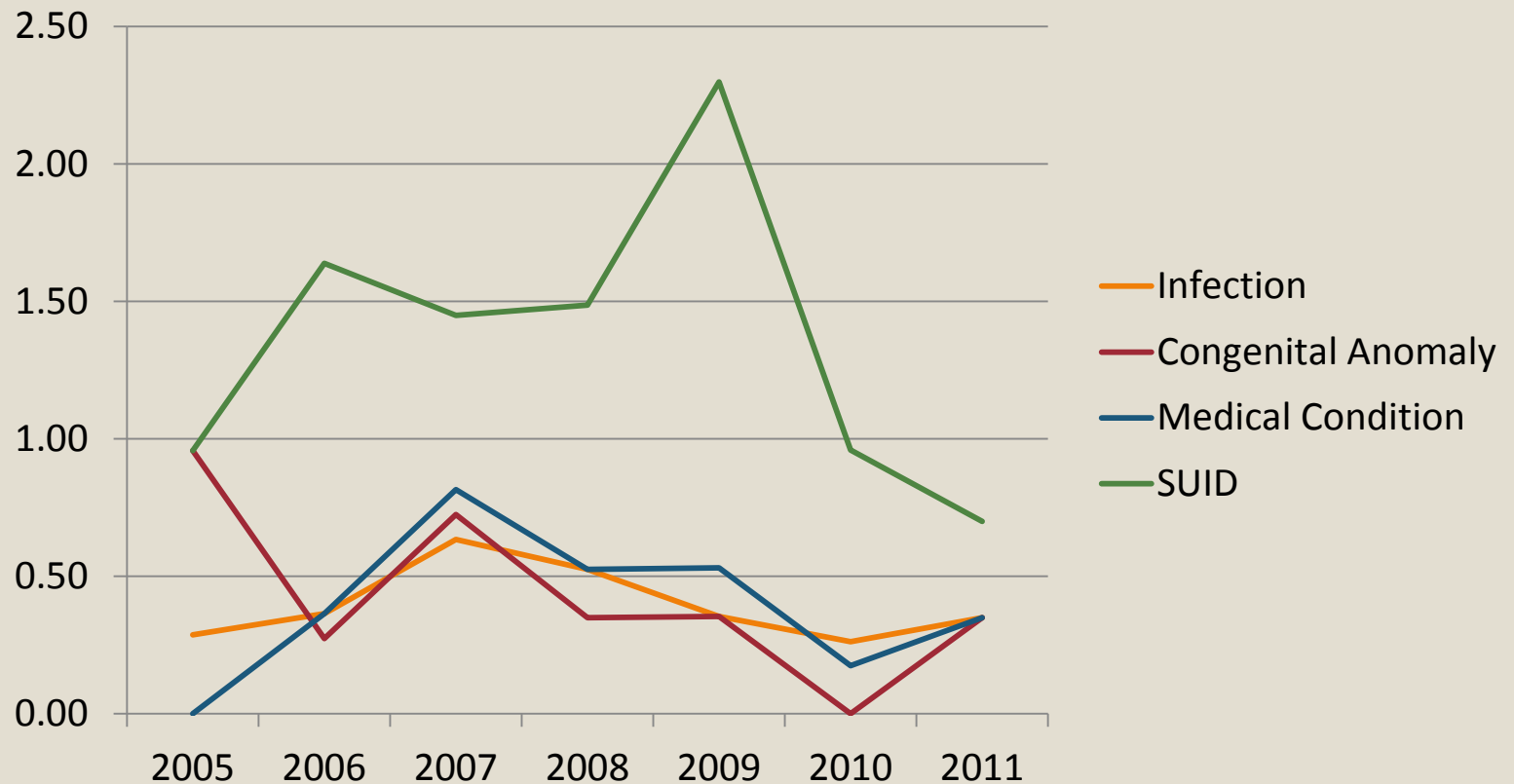


**General causes of death, allowing for multiple causes**

# Alaska Postneonatal Deaths $\geq 1500$ grams



Cause-specific Mortality Rates, per 1000 live births



# Hospital Based Efforts



Keep our babies sleeping safely!

Alaska Infant Safe Sleep Program

**TOOLKIT FOR BIRTHING FACILITIES**

Birthing facilities have a powerful opportunity to show parents how to set the stage for safe sleep from Day 1!

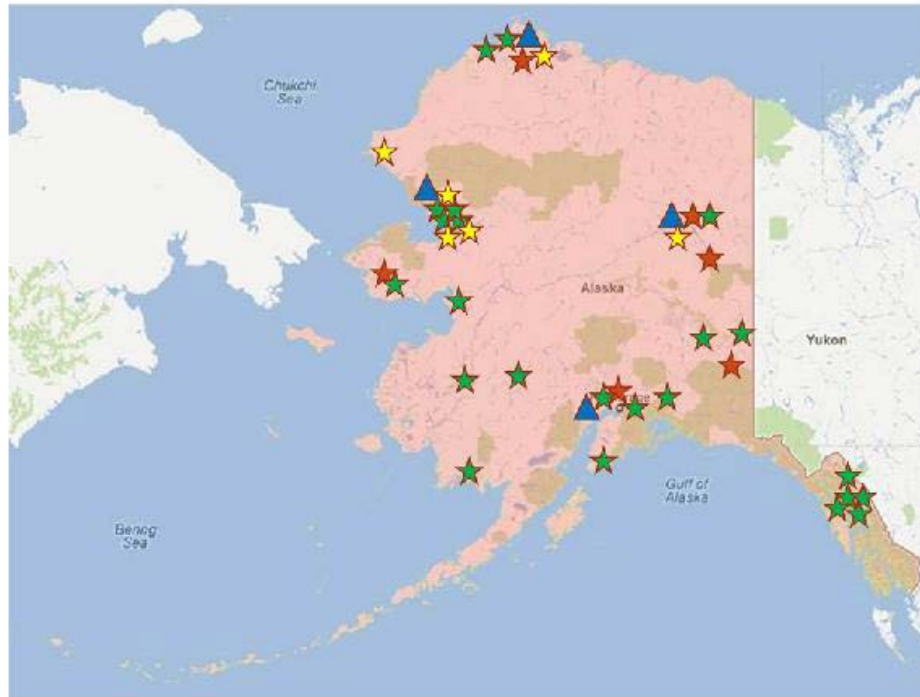
Contact the Section of Women's, Children's, & Family Health at 907.269.3400 or <http://dhas.alaska.gov/dph/wch/Pages/perinatal/> for pamphlets or information.



# Healthy Native Babies Project



## Alaska Area Train-the-Trainer



# Conclusions



- Overall, we are doing a great job in Alaska – low infant mortality in 3 of the 4 PPOR categories

Still room for improvement –  
unsafe sleep environments  
declining, but we still have excess





# So what? What can you do?



- Build protective/resiliency factors in your patients
- Primary education of SUID risk factors can be started even before a child is born
  - Back to sleep
  - Smoke free environment
  - Avoid co-sleeping with impaired adults
  - Firm, obstruction- free sleep environment

# Acknowledgements



- Margaret Young, Alaska Division of Public Health, WCFH, MCH Epi Unit
- William Sappenfield, University of South Florida College of Public Health
- Lyn Kieltyka, Louisiana state MCH Epidemiologist
- Carol Gilbert & Laurin Kasehagen, CityMatCH (PPOR technical assistance)

# Thank You



[CHERYL.PRINCE@ALASKA.GOV](mailto:CHERYL.PRINCE@ALASKA.GOV)

(907) 269-3982

**MATERNAL & CHILD HEALTH EPIDEMIOLOGY UNIT  
SECTION OF WOMEN'S, CHILDREN'S, & FAMILY HEALTH**

**3601 C STREET, SUITE 358**

**ANCHORAGE, AK 99503**

