Fetal and Infant Mortality in Alaska, 2004–11.

C. B. Prince, PhD, M. B. Young, MPH and W. M. Sappenfield, MD

1Alaska Division of Public Health, Anchorage, AK, 2College of Public Health University of South Florida, Tampa, FL

INTRODUCTION: The Alaska infant mortality rate (IMR) has been gradually declining since 2007. A dramatic drop in IMR for 2010 and 2011 has led to speculation about what might be associated with this unprecedented reduction.

METHODS: To pinpoint changes in IMR, an approach known as Perinatal Periods of Risk was used to assign Alaska fetal and infant deaths into four categories according to weight at birth and age at death. Categories included very low birth weight (VLBW 500-1,499 grams), and low to normal birth weight (> 1500 grams) sub-divided by age: late fetal (> 23 weeks gestation), neonatal, and postneonatal. To determine excess mortality, comparisons were made with rates previously calculated for a national low risk reference population. Alaska data were aggregated into three time periods. Fetal and infant mortality rates (FIMR) per 1,000 live births and fetal deaths were calculated for each category and compared by maternal race and residency. The study was conducted for 251 fetal and infant deaths in 2004–06, 265 deaths in 2007–09, and 129 deaths in 2010–11.

RESULTS: Alaska’s total excess deaths decreased from 94 in 2004–06 to 16 in 2010–11. During all three study time periods, the largest FIMR disparities between Alaska and the national reference group were observed for the postneonatal mortality rate (PNMR) of non-VLBW infants. The PNMR for larger Alaska Native infants living in rural areas decreased significantly (p = 0.004) between 2007–09 and 2010–11. During the three time periods, no significant changes to the PNMR were identified for infants born to White urban or rural women, or Native urban women.

CONCLUSIONS: The decline in the IMR since 2007 appears to be due to a decrease in the PNMR among rural Alaska Native infants. In most other mortality categories examined, Alaska’s births do as well or better than the national reference group’s.