

Utah MCH Facts

Infant Mortality from Perinatal Conditions: 2001-2003

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Utah Department of Health

Introduction

The infant mortality rate in the United States rose from 6.8 deaths per 1,000 live births in 2001 to 7.0 in 2002. This rate increase was the first in over four decades and was attributed to an increase in low birth weight and preterm births. Utah also experienced an increase in infant mortality during this time period from 4.8 in 2001 to 5.5 in 2002. This fact sheet examines infant mortality from perinatal conditions defined as deaths that are the result of poor maternal health, inadequate care during pregnancy and delivery, lack of essential care for the newborn baby, infections, birth injury, asphyxia, and problems relating to premature births. The data excludes deaths from SIDS or lethal anomalies. Data from 2001-2003 are compared to data from 1995-1998 to examine trends between the two time periods.

Infant Mortality Rates Due to Perinatal Conditions

Infant mortality rates for perinatal conditions were calculated by dividing the number of infant deaths due to perinatal conditions by the total number of live births registered in the state of Utah during the time period. Infants that were born out of state but died in Utah were reviewed but excluded from this analysis. From 1995-1998, 370 infant deaths were attributed to perinatal conditions resulting in a mortality rate of 2.1 [Table 1]. From 2001-2003, 298 infant deaths were identified as perinatal conditions resulting in a mortality rate of 2.0.

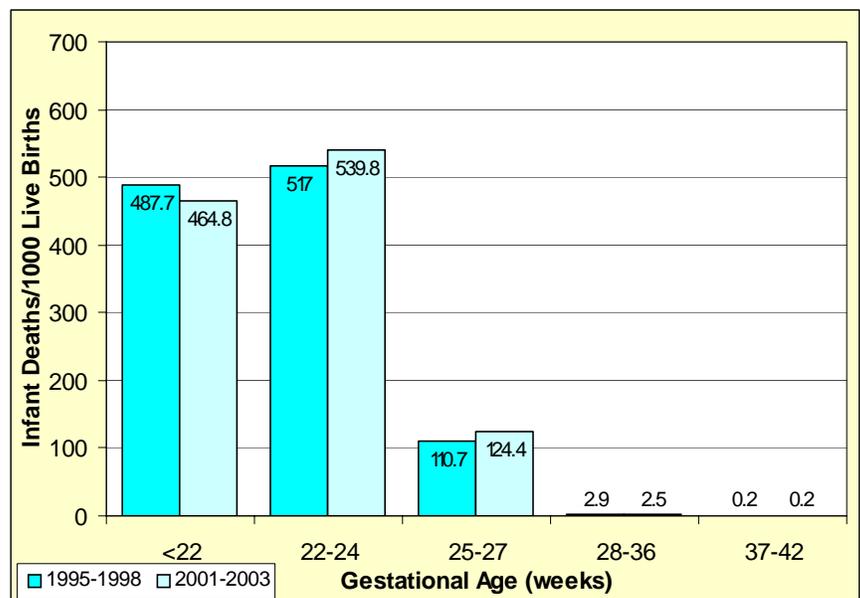
Table 1. Infant Mortality Rates Due To Perinatal Conditions by Time Period, Utah

Time period	1995-1998	2001-2003
Number of Deaths	370	298
Live Births	173,470	150,424
Infant Mortality Rate*	2.1	2.0

Gestational Age

Prematurity and complications from preterm birth continue to be the leading cause of infant mortality from perinatal conditions during 2001-2003. The rate of infant mortality was significantly higher across all preterm age groups ($p < 0.01$) when compared to term deliveries. Delivery at or before 24 weeks occurred in 62% of the deaths analyzed. In comparing the two time periods, the proportion of preterm births in the general population remained stable however, the death rate in each of the gestational age groups varied from a slight decrease in the <22 and 28-36 week group to a slight increase in the 22-24 and 25-27 week group. (Figure 1). None of the differences between study periods were statistically significant.

Figure 1. Comparison of Infant Mortality Rates by Gestation Age and Time Periods, Utah



Adequacy of Prenatal Care

The Kotelchuck index was used to define adequacy of prenatal care by evaluating month of entry into prenatal care and percentage of recommended visits. In comparing the inadequate, adequate, and adequate plus categories for the 2001-2003 time period, over 50% of women who had an infant die had adequate plus prenatal care defined as having early entry into prenatal care and 110% of recommended visits. These women, many of whom experienced an identified high risk condition during their pregnancy, were followed closely for that condition. Unfortunately for these women, this close observation failed to provide them with an optimal outcome. Most of the infant deaths reviewed in 2001-2003 were associated with pregnancy complications similar to those found in 1995-1998.

Ethnicity Rates

Utah had a 77% increase in births to Hispanic women between 1995 and 2003. Preterm births to Hispanic women decreased overall from 11.5% in 1995 to 9.5% in 2003. The Hispanic infant mortality rate from perinatal conditions increased from 2.1 in 1995-1998 to 2.7 in 2001-2003 (Figure 2) in spite of the decrease in preterm births. The ethnic disparity in infant mortality was not significant in 1995-1998 but was statistically significant in 2001-2003 ($p < 0.001$). Given this finding, in-depth analysis of the data on Hispanic mortality is planned to thoroughly evaluate this disparity.

Prepregnancy Body Mass Index

Nearly two-thirds of the adult population in the United States is overweight of which 30% is obese. Maternal obesity rates are increasing in Utah as overall obesity rates continue to dramatically rise in the United States. Maternal obesity contributes to adverse pregnancy outcomes including macrosomia, cesarean delivery complications, and preterm birth. Forty-four percent of the women who had an infant die from perinatal conditions in Utah were either overweight or obese. Infant mortality rates were highest among women who were obese. The mortality rate of 2.8 in women categorized as obese was significantly higher than women with normal BMI ($p < 0.001$). (Figure 3).

Conclusions

The Reproductive Health Program will continue to focus on populations at risk for infant mortality. Targeted interventions will include obesity and appropriate pregnancy weight gain education and participation in prematurity prevention research and education. The significant disparity between Hispanic and Non-Hispanic infant mortality rates illustrates a need for continued research and targeted public health efforts to decreasing this gap.

Figure 2. Comparison of Infant Mortality Rates by Ethnicity and Time Periods, Utah

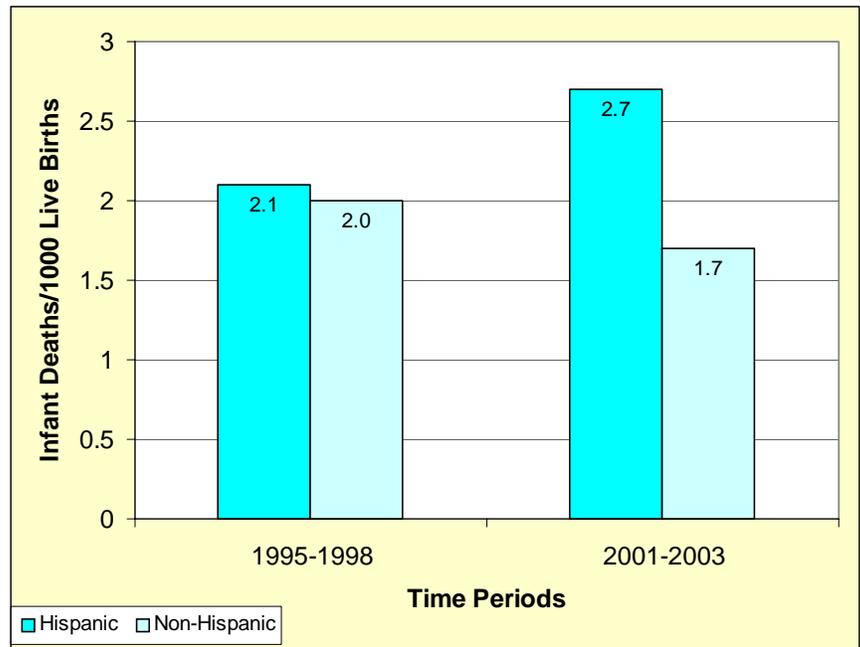


Figure 3. Infant Mortality Rate by Pre-Pregnancy Weight Category Utah, 2001-2003

