

# Utah Health Status Update: Infant Mortality Review

September 1998

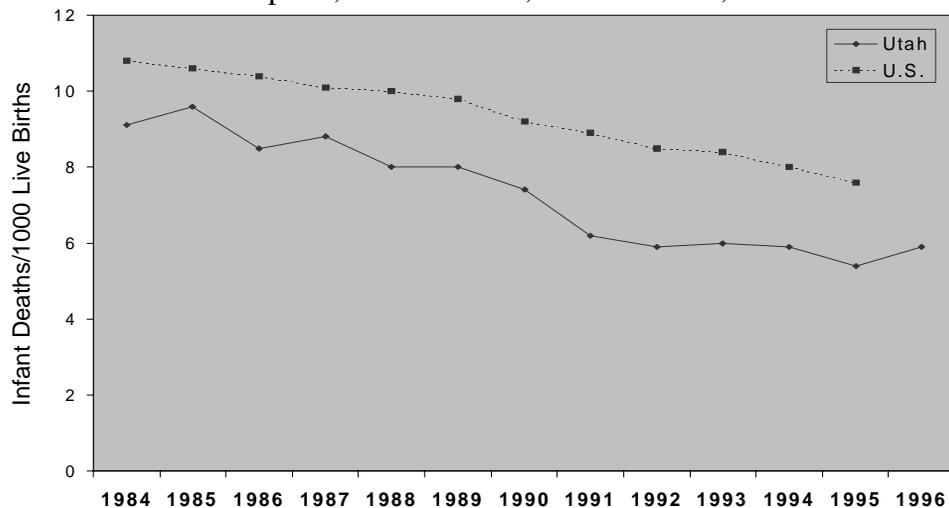
Utah Department of Health

Infant mortality (the death of an infant <1 year if age) is a sentinel event that serves as a measure of a community's health and social and economic well being.

The infant mortality rate has steadily declined over the past decade, but rates remain high for some populations in Utah, and preventable deaths continue to occur. This Health Status Update presents findings from the Utah Infant Mortality Review based on careful reviews of infant deaths in Utah.

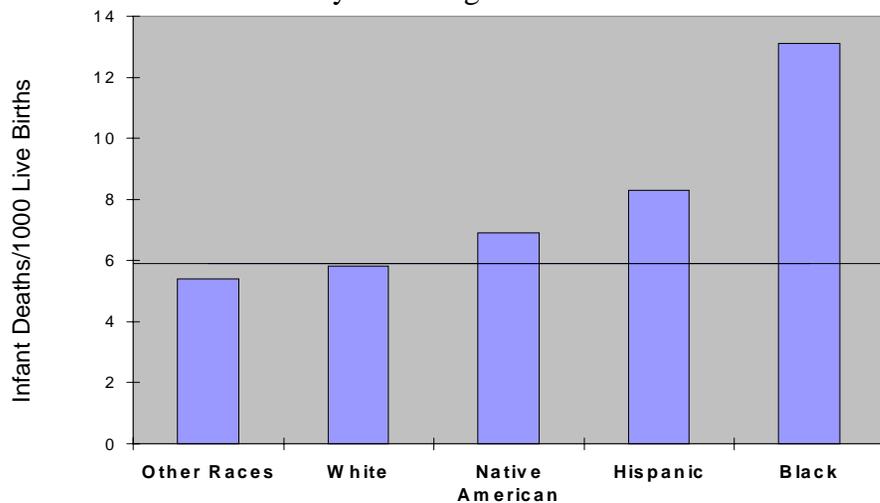
## Infant Mortality

Infant deaths per 1,000 live births, Utah and U.S., 1984-1996.



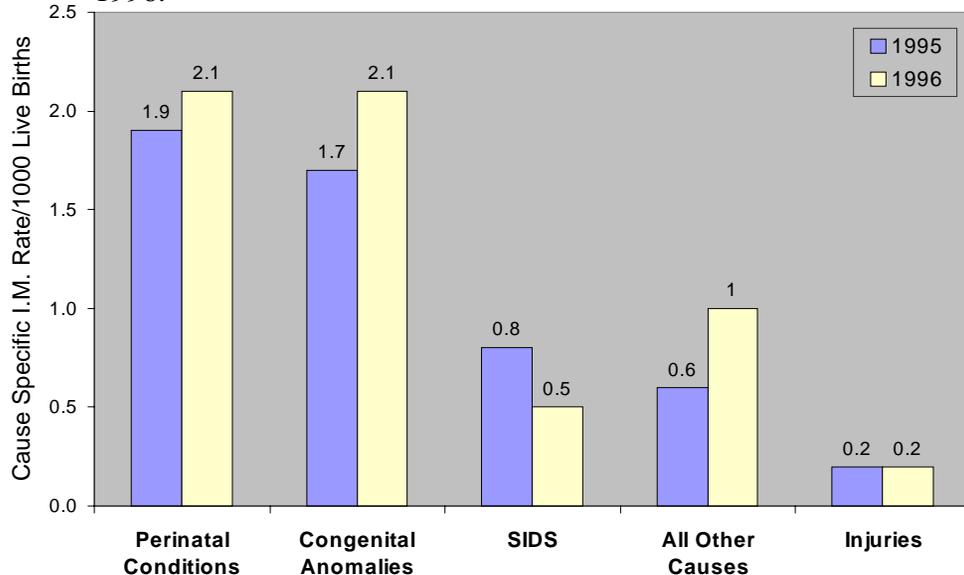
## Infant Mortality by Race/Ethnicity

Race/ethnicity specific infant death rates per 1,000 live births, 1991-1995 five year average.



## Utah Causes of Infant Deaths

Cause specific infant mortality rate per 1,000 live births, Utah, 1995-1996.



## Deaths from Perinatal Conditions

- 81% of infants who died of perinatal conditions were very low birth weight (<1500 grams); their mean gestational age was 26 weeks.
- 82% of deaths from perinatal conditions occurred within the first week of life.
- 21% of infants who died of perinatal conditions were from multiple gestations.
- Death rates from perinatal conditions were about twice as high for infants of primigravidas and grand-multiparas than for other women.
- Death rates from perinatal conditions were 1.5 to 2 times higher for infants born to women with high and low pre-pregnancy weight than for other infants.

Table 1. Frequency and Percentage of Infant Deaths Due to Perinatal Conditions in Utah During 1995 and 1996 Classified by Cause of Death.

Cause of Death	Number	% of Total Study Group
Prematurity	61	33%
Maternal Causes	43	23%
Perinatal Infections	18	10%
Respiratory Distress Syndrome	15	8%
Digestive Disorders	12	7%
Other Respiratory Disorders	12	6%
Hypoxia/Asphyxia	7	4%
Birth Trauma	6	3%
Other Infectious or Parasitic Diseases	5	3%
Ill Defined Perinatal Conditions	2	1%
All Other Causes	4	2%
<b>TOTAL</b>	<b>185</b>	<b>100%</b>

## SIDS and Deaths of Undetermined Cause

The incidence of SIDS has decreased since the "Back to Sleep" campaign began in 1992, but the rate of "undetermined" deaths has increased. SIDS, a diagnosis of exclusion, is defined as: the sudden death of an infant <1 year of age that remains unexplained after a complete investigation, that included an autopsy, examination of the death scene, and review of symptoms, illnesses, and other pertinent medical history. If the investigative information and pathologic findings are insufficient to determine the cause of death, it will be listed as "undetermined" on the death certificate. In the past, some deaths from positional asphyxia may have been attributed to SIDS. Part of the decline in SIDS death rates may be an artifact of this diagnostic shift.

Table 2. Frequency of Infant Deaths Due to SIDS and "Undetermined Causes" in Utah During 1995 and 1996.

Cause of Death	1995	1996
SIDS	30	22
Undetermined	5	10
<b>TOTAL</b>	<b>35</b>	<b>32</b>

- 65% of infants who died of SIDS were between 2 and 4 months of age.
- Of infants who died of SIDS and for whom this information was known, 66% were found in the prone sleep position; 47% were exposed to environmental tobacco smoke.
- 9/11 infants who died of undetermined causes (with information available) were sleeping on a surface not designed for infants.

## Congenital Malformations

The Utah Birth Defects Registry identified and collected data on three major types of malformations during 1995 and 1996: neural tube defects (NTDs); oral-facial clefts; and trisomy 13, 18, and 21. Those malformations accounted for 46 deaths, or 29% of all deaths attributed to congenital malformations in 1995-96.

- Most infant deaths (32 deaths) due to these congenital anomalies were due to chromosomal anomalies.
- 78% of all infants born with NTDs were diagnosed prenatally.
- Only 35% of all infants born with NTDs had a maternal serum alpha fetoprotein as their initial screen.
- 46 of 304 (15.1%) live born infants with the above mentioned malformations died during 1995-96.

## Injuries

Injuries accounted for 28 infant deaths in 1995-96; 22 deaths were unintentional (accidents) and 6 intentional (homicides).

- Motor vehicles and suffocation were the most common injury causes of infant death.
- Infant homicides occurred from 2 months through one year of age.

## Other Issues

- 44% of infants who died due to perinatal conditions and were possible candidates for maternal corticosteroid administration to prevent respiratory distress syndrome did not receive that treatment.
- Abuse or neglect contributed to 6 infant deaths; only 1 of these infants had been previously reported to Child Protective Services.
- All 8 infants who died of suffocation or positional asphyxia and for whom this information was known had been sleeping in an unsafe sleep environment.

Infant Mortality Review is a process aimed at identifying and examining the factors that contribute to infant deaths through systematic evaluation of individual cases. The process involves collecting data, individually reviewing cases, and identifying risk factors that are amenable to public health interventions. It is conducted by four programs in the Department of Health:

*Child Fatality Review Program* reviews deaths due to injuries, both unintentional and intentional.

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*Sudden Infant Death Program* review deaths due to SIDS and “undetermined” causes of death.

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*Perinatal Mortality Review Program* reviews infant deaths due to perinatal conditions.

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*Birth Defects Registry Program* reviews deaths due to selected congenital anomalies.

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Additional information about this topic is available from the Programs listed above, or from the Office of Public Health Data, (801) 538-6108, FAX (801) 538-7053, or email: [phdata@doh.state.ut.us](mailto:phdata@doh.state.ut.us). Please send any comments on this report to the Office of Public Health Data.

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