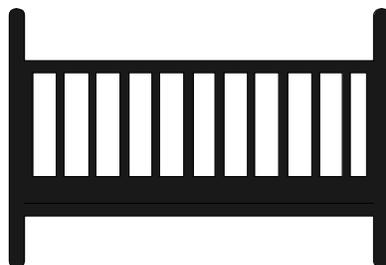


FETAL AND INFANT DEATHS

FETAL AND INFANT DEATHS



42 FETAL DEATHS
80 INFANT DEATHS

FETAL DEATHS

A fetal death is defined as the death of a fetus after the eighth week of gestation and before delivery. Alaska Statute 18.50.240 requires the filing of a certificate for each fetal death that occurs in the state when the pregnancy has lasted at least 20 weeks. The filing of certificates for fetal deaths which occur prior to the twentieth week of pregnancy is optional. This report includes information only for fetal deaths in which either the estimated gestation or the calculated gestation (last menstrual date subtracted from the date of delivery) is at least twenty weeks.

TABLE 2.1A FETAL DEATHS BY CENSUS AREA OF MOTHER'S RESIDENCE, ALASKA, 1995

CENSUS AREA OF MOTHER'S RESIDENCE	DEATHS
ANCHORAGE BOROUGH	19
BETHEL	2
FAIRBANKS NORTH STAR BOROUGH	3
JUNEAU BOROUGH	1
KENAI PENINSULA BOROUGH	3
KETCHIKAN GATEWAY BOROUGH	1
KODIAK ISLAND BOROUGH	3
MATANUSKA-SUSITNA BOROUGH	2
NOME	4
NORTH SLOPE BOROUGH	1
NORTHWEST ARCTIC BOROUGH	1
VALDEZ-CORDOVA	1
WADE HAMPTON	1
TOTAL	42

FETAL AND INFANT DEATHS (continued) Alaska Bureau of Vital Statistics

TABLE 2.1B FETAL DEATHS BY NATIVE REGIONAL CORPORATION OF MOTHER'S RESIDENCE, ALASKA, 1995

CENSUS AREA OF MOTHER'S RESIDENCE	DEATHS
ARCTIC SLOPE CORP.	1
BERING STRAITS CORP.	4
CALISTA CORP.	3
CHUGACH NATIVES INC.	2
COOK INLET REG CORP.	23
DOYON LTD.	3
KONIAG INC.	3
NANA REGIONAL CORP.	1
SEALASKA CORP.	2
TOTAL	42

TABLE 2.1C FETAL DEATHS AND FETAL DEATH RATE BY MOTHER'S RACE, ALASKA, 1991-1995

MOTHER'S RACE	FETAL DEATHS						TOTAL BIRTHS	1991-1995 RATE
	1991	1992	1993	1994	1995	TOTAL		
WHITE	44	40	33	30	24	171	37,541	4.6
NATIVE	17	12	10	9	12	60	12,584	4.8
BLACK	3	3	2	4	5	17	2,577	6.6
ASIAN/PI	4	4	2	1		11	2,505	4.4
UNKNOWN	1				1	2	199	
TOTAL	69	59	47	44	42	261	55,406	4.7

TABLE 2.2 FETAL DEATHS BY AGE AND RACE OF MOTHER, ALASKA, 1995

MOTHER'S AGE	MOTHER'S RACE				
	WHITE	NATIVE	BLACK	UNKN	TOTAL
15-17	1	1			2
18-19		1			1
20-24	9	4	1	1	15
25-29	6		1		7
30-34	7	4	2		13
35-39	1	2	1		4
TOTAL	24	12	5	1	42

TABLE 2.3 FETAL DEATHS BY LENGTH OF GESTATION AND WEIGHT, ALASKA, 1995

GESTATION	WEIGHT IN GRAMS						UNK	TOTAL
	<500	500-999	1000-1499	1500-1999	2000-2499	2500-4000		
20-24 WEEKS	7	4						11
25-28 WEEKS		3	3					6
29-32 WEEKS	1		1	1				3
33-36 WEEKS			2	3	3	3	1	12
37-41 WEEKS					3	6	1	10
TOTAL	8	7	6	4	6	9	2	42

INFANT DEATHS

Infant deaths are defined as deaths which occur before an individual’s first birthday. Infant mortality may be calculated by either of two methods: *birth cohort* or *death cohort*. The *birth cohort* method considers all babies born in one year and determines the number of those babies who die before reaching their first birthday, either in that year or the next. The *death cohort* method groups together infants who die in the same year.

The birth cohort method is more reliable for calculating infant mortality rates because it calculates a rate for a specific group of infants, whereas the death cohort method calculates a rate based on comparing deaths in one year against births in that same year. The flaw in using the death cohort is that some of the infants who died in that year were born in the previous year, and some of the infants born in that year will die in the next year. When using the birth cohort method in this report, all infants born in 1994 are considered, whether the death occurred in 1994 or 1995, if the infant died before its first birthday. Birth cohort calculations are not included for 1995 in this report because not all 1996 death records were complete at the time this report was compiled.

The death cohort method is used in this report for calendar year 1995. This method compares the number of deaths to infants who died during 1995 prior to their first birthday with the number of infants who were born in 1995.

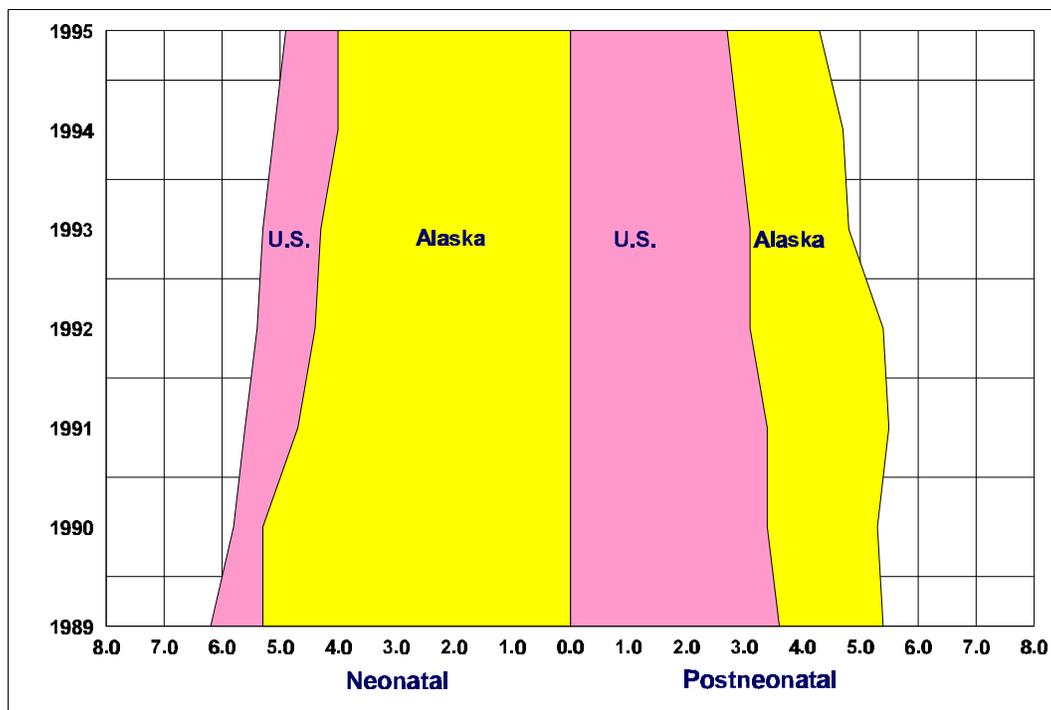
Infant Mortality Rates

Using the death cohort, the total number of infant deaths during 1995 was 80. This is a 1.2 percent decrease from 82 infant deaths during 1994.¹ Since relatively small changes in infant deaths can cause large fluctuations in the infant mortality rate (IMR) from one year to the next, Alaska’s annual IMR is calculated on a five-year moving average. The 1991-1995 five-year average infant mortality rate was 8.3 deaths per 1,000 live births, down from 8.8 deaths per 1,000 live births for 1990-1994. The U.S. infant mortality rate of 7.6 deaths per 1,000 live births in 1995 reflects a 5% decrease from 8.0 infant deaths per 1,000 live births in 1994.² Both the U.S. and Alaska infant mortality rates have been steadily decreasing in recent years, and both are now at the lowest rates ever recorded.

In discussing infant mortality, a distinction is made between neonatal mortality (deaths prior to the 28th day of life) and postneonatal mortality (deaths from the 28th day up to one year). Neonatal deaths are frequently associated with circumstances related to pregnancy and delivery while postneonatal deaths are associated with living conditions. Alaska’s neonatal mortality rate has generally been lower than the neonatal mortality rate for the United States, while its postneonatal mortality rate has been higher. Chart 2.1 provides a graphic comparison of the neonatal and postneonatal rates for Alaska and the United States.

1 Crondahl, J., Mitchell, P., Zenk, A.E., Anderson, C., Walden, S. and Juan, I. Department of Health and Social Services, Division of Public Health, *Alaska Bureau of Vital Statistics 1994 Annual Report*, Juneau, Alaska. June 1996, p.47.
 2 National Center for Health Statistics, U.S. Department of Health and Human Services, “Report of Final Mortality Statistics, 1995,” *Monthly Vital Statistics Report*, Vol. 45, No. 11(S2), June 12, 1997, p. 11.

CHART 2.1 NEONATAL AND POSTNEONATAL MORTALITY RATES PER 1,000 LIVE BIRTHS, ALASKA AND THE UNITED STATES, 1989-1995 (DEATH COHORT METHOD)



United States rates are single year rates and are provided by the National Center for Health Statistics.³ Alaska infant mortality rates are calculated using five-year moving averages per 1,000 live births, based on death-cohort.

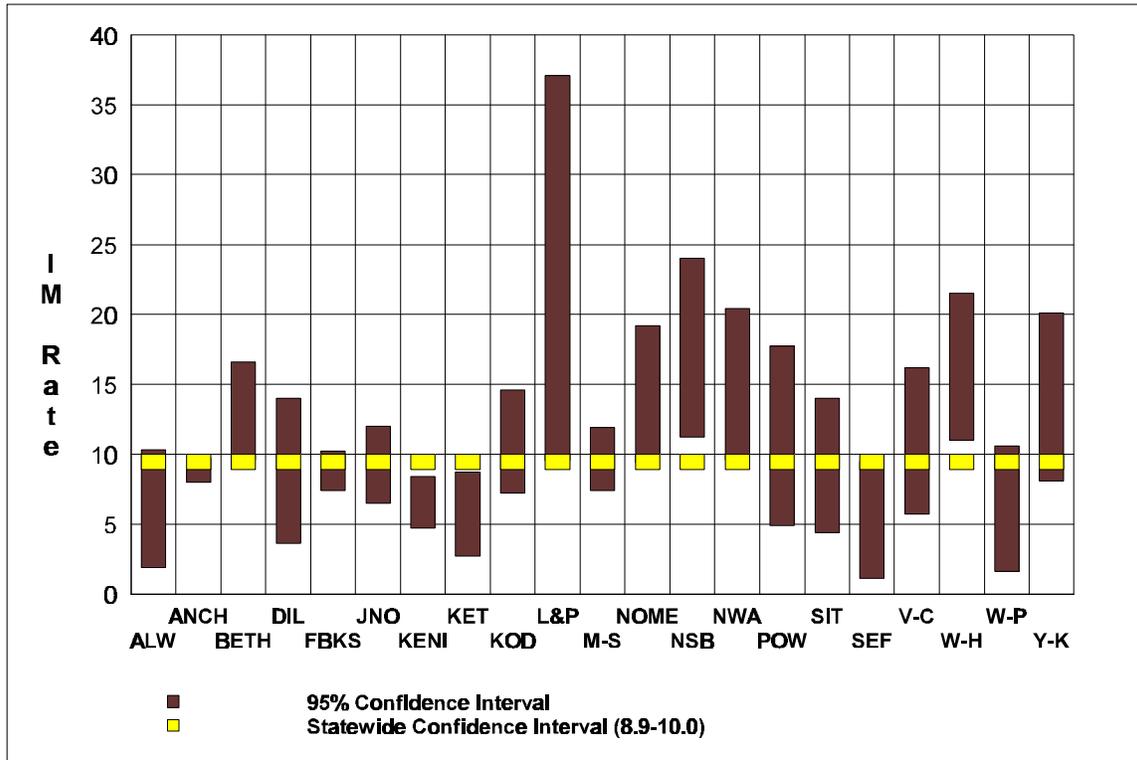
Chart 2.2 compares confidence intervals for infant mortality in individual census areas against the statewide average. When smaller populations, such as individual census areas, are analyzed, ten-year averages and 95 percent confidence intervals are used. The calculated infant mortality rate occurs at the midpoint of the confidence interval. The smaller the population, the larger the confidence interval. (For a detailed discussion of confidence intervals and statistical significance, refer to Appendix B.)

Several census areas (Aleutians East, Angoon-Hoonah-Skagway, Bristol Bay, Denali, Haines Borough, and Yakutat) have been omitted from Chart 2.2 because occurrences of infant mortality are too few for rates to be reliable. Those census areas which have infant mortality rates significantly above the statewide 95% confidence interval of 8.9-10.0 deaths per 1,000 live births are North Slope and Wade Hampton. Kenai Peninsula and Ketchikan are the only census areas with rates below the statewide 95% confidence interval. The confidence intervals for all other areas fell at least partly within the range of the statewide average.

³ Ibid., Table 25, pp. 66-67.

Alaska Bureau of Vital Statistics (continued) FETAL AND INFANT DEATHS

CHART 2.2 95% CONFIDENCE INTERVALS FOR INFANT MORTALITY BY CENSUS AREA, ALASKA, 1986-1995 (DEATH COHORT)



FETAL AND INFANT DEATHS (continued) Alaska Bureau of Vital Statistics

Infant Deaths by Age

TABLE 2.4A INFANT DEATHS BY CENSUS AREA OF DECEDENT'S RESIDENCE AND AGE, ALASKA, 1995 (DEATH COHORT METHOD)

CENSUS AREA OF DECEDENT'S RESIDENCE	DECEDENT'S AGE		TOTAL
	NEONATAL	POST-NEONATAL	
ANCHORAGE BOROUGH	25	13	38
BETHEL	4	1	5
DILLINGHAM	2		2
FAIRBANKS NORTH STAR BOROUGH	6	7	13
JUNEAU BOROUGH	2		2
KENAI PENINSULA BOROUGH	1		1
KETCHIKAN GATEWAY BOROUGH		1	1
KODIAK ISLAND BOROUGH	1		1
MATANUSKA-SUSITNA BOROUGH	3	2	5
NORTH SLOPE BOROUGH		3	3
NORTHWEST ARCTIC BOROUGH		1	1
PRINCE OF WALES-OUTER KETCHIKAN	1		1
VALDEZ-CORDOVA	2	1	3
WADE HAMPTON		1	1
WRANGELL-PETERSBURG		1	1
YUKON-KOYUKUK	1	1	2
TOTAL	48	32	80

TABLE 2.4B INFANT DEATHS BY NATIVE REGIONAL CORPORATION OF DECEDENT'S RESIDENCE AND AGE, ALASKA, 1995 (DEATH COHORT METHOD)

N R C OF DECEDENT'S RESIDENCE	DECEDENT'S AGE		TOTAL
	NEONATAL	POST-NEONATAL	
AHTNA INC.	1		1
ARCTIC SLOPE CORP.		3	3
BRISTOL BAY CORP.	2		2
CALISTA CORP.	4	2	6
CHUGACH NATIVES INC.	1	1	2
COOK INLET REG CORP.	29	15	44
DOYON LTD.	7	8	15
KONIAG INC.	1		1
NANA REGIONAL CORP.		1	1
SEALASKA CORP.	3	2	5
TOTAL	48	32	80

Alaska Bureau of Vital Statistics (continued) FETAL AND INFANT DEATHS

TABLE 2.4C INFANT DEATHS BY RACE, SEX, AND AGE OF DECEDENT, ALASKA, 1995 (DEATH COHORT METHOD)

DECEDENT'S RACE	DECEDENT'S AGE		TOTAL
	NEONATAL	POST-NEONATAL	
WHITE	25	17	42
NATIVE	14	10	24
BLACK	3	3	6
ASIAN/PI	6	2	8
TOTAL	48	32	80
SEX			
MALE	27	19	46
FEMALE	21	13	34
TOTAL	48	32	80

TABLE 2.5A INFANT DEATHS BY CENSUS AREA OF DECEDENT'S RESIDENCE AND AGE, ALASKA, BIRTH YEAR 1994 (BIRTH COHORT METHOD)

CENSUS AREA OF DECEDENT'S RESIDENCE	DECEDENT'S AGE		TOTAL
	NEONATAL	POST-NEONATAL	
ALEUTIANS WEST	1		1
ANCHORAGE BOROUGH	19	14	33
BETHEL	2	1	3
DILLINGHAM		1	1
FAIRBANKS NORTH STAR BOROUGH	1	4	5
JUNEAU BOROUGH	1	2	3
KENAI PENINSULA BOROUGH	2	2	4
KETCHIKAN GATEWAY BOROUGH		1	1
KODIAK ISLAND BOROUGH	2	1	3
LAKE AND PENINSULA	1		1
MATANUSKA-SUSITNA BOROUGH	1	2	3
NOME	1		1
NORTH SLOPE BOROUGH	2	2	4
NORTHWEST ARCTIC BOROUGH		2	2
PRINCE OF WALES-OUTER KETCHIKAN		2	2
SITKA BOROUGH		1	1
VALDEZ-CORDOVA		2	2
WADE HAMPTON		2	2
YUKON-KOYUKUK	1	1	2
TOTAL	34	40	74

FETAL AND INFANT DEATHS (continued) Alaska Bureau of Vital Statistics

TABLE 2.5B INFANT DEATHS BY NATIVE REGIONAL CORPORATION OF DECEDENT'S RESIDENCE AND AGE, ALASKA, BIRTH YEAR 1994 (BIRTH COHORT METHOD)

N R C OF DECEDENT'S RESIDENCE	DECEDENT'S AGE		TOTAL
	NEONATAL	POST-NEONATAL	
AHTNA INC.		1	1
ALEUT CORP.	1		1
ARCTIC SLOPE CORP.	2	2	4
BERING STRAITS CORP.	1		1
BRISTOL BAY CORP.	1	1	2
CALISTA CORP.	2	3	5
CHUGACH NATIVES INC.		1	1
COOK INLET REG CORP.	22	18	40
DOYON LTD.	2	5	7
KONIAG INC.	2	1	3
NANA REGIONAL CORP.		2	2
SEALASKA CORP.	1	6	7
TOTAL	34	40	74

TABLE 2.5C INFANT DEATHS BY RACE, SEX, AND AGE OF DECEDENT, ALASKA, BIRTH YEAR 1994 (BIRTH COHORT METHOD)

DECEDENT'S RACE	DECEDENT'S AGE		TOTAL
	NEONATAL	POST-NEONATAL	
WHITE	17	21	38
NATIVE	13	15	28
BLACK	1	3	4
ASIAN/PI	3	1	4
TOTAL	34	40	74
SEX			
MALE	16	18	34
FEMALE	18	22	40
TOTAL	34	40	74

Infant Mortality Rates by Race

Table 2.6 shows 5-year moving average infant mortality rates by race for the years 1991 through 1995. In the process of preparing this report, it was discovered that while the child's race at birth is reported to be the same as the mother's, the child's race on the death certificate may be reported differently. To ensure consistent reporting and calculation of rates, a new procedure was used in this report. All death certificates for decedents who were born in Alaska in 1989 or later are matched with the birth certificate and the child's race at birth is used for calculating deaths and death rates by race.

Alaska Bureau of Vital Statistics (continued) FETAL AND INFANT DEATHS

TABLE 2.6 BIRTHS AND INFANT DEATHS (DEATH COHORT METHOD) BY DEATH YEAR AND FIVE-YEAR MOVING AVERAGE INFANT MORTALITY RATES BY RACE, ALASKA, 1991-1995

RACE	BIRTHS, INFANT DEATHS, AND 5-YEAR MOVING RATES BY YEAR														
	1991			1992			1993			1994			1995		
	BTHS	DTHS	5-YR RATE	BTHS	DTHS	5-YR RATE	BTHS	DTHS	5-YR RATE	BTHS	DTHS	5-YR RATE	BTHS	DTHS	5-YR RATE
			1987-1991			1988-1992			1989-1993			1990-1995			1991-1995
WHITE	7,875	59	7.8	7,910	59	7.8	7,506	44	7.1	7,282	44	6.9	6,968	42	6.6
NATIVE	2,785	39	16.7	2,695	33	15.7	2,459	34	15.3	2,345	28	14.1	2,300	24	12.6
BLACK	518	5	13.9	537	5	13.0	584	7	10.4	491	5	10.5	447	6	10.9
ASIAN/PI	489	3	8.1	553	3	6.3	516	5	6.9	462	5	8.9	485	8	9.6
UNKNOWN	21		11.1	31			24			101			22		
TOTAL	11,688	106	10.2	11,726	100	9.8	11,089	90	9.1	10,681	82	8.8	10,222	80	8.3

Infant Deaths by Cause of Death

Although the same coding system (ICD9) is used in reporting causes of death for infants and the general population, the codes are grouped differently since causes of death for infants up to one year generally differ from those in the general population. For specific causes of death for infant mortality refer to Appendix C, Table C.2.

Certain causes of death are associated with factors such as age and birth weight. For instance, Sudden Infant Death Syndrome (SIDS) almost always occurs in the postneonatal period. Respiratory Distress Syndrome generally occurs only in low birth weight infants. The single greatest cause of infant death is Sudden Infant Death Syndrome. In the five-year period from 1991 through 1995, 120 infants were reported to have died of SIDS, a rate of 2.2 per thousand live births. This compares with a rate of 0.9 per thousand live births for the United States in 1995.⁴ The United States rate for SIDS deaths dropped 28% since 1994 when the rate was 1.1 deaths per thousand live births.

Because of its mysterious nature, Sudden Infant Death Syndrome can never be positively determined; rather, it is a diagnosis which occurs after other causes of death have been ruled out. What we can say about SIDS is that it affects normally healthy, sleeping infants under one year of age. One potential risk factor for SIDS is putting infants to sleep on their stomachs (the prone position).⁵

The Alaska Maternal and Infant Mortality Review Committee (MIMR) is composed of representatives from the medical professions including obstetricians and gynecologists, pediatricians, neonatologists, and representatives of the Indian Health Service. The work of the committee is coordinated by staff from the Section of Maternal, Child and Family Health in the Division of Public Health. This committee reviews medical records and, in some cases, police records for each infant death and either concurs with the cause of death as stated on the death certificate or determines a different cause of death. The committee reviewed 39 cases in 1993 and 1994 in which SIDS was the reported cause of death. In 33 of those cases they concurred that SIDS was the cause of death; in six cases they believed the cause of death to be other than SIDS.

In 1995, there were six SIDS deaths reported in the neonatal period (less than 28 days old). SIDS is extremely rare in this age group; there were only five SIDS deaths in this age group in the previous nine years.

4 National Center for Health Statistics, U.S. Department of Health and Human Services, "Report of Final Mortality Statistics, 1995," *Monthly Vital Statistics Report*, Vol. 45, No. 11(S2), June 12, 1997, Table 27, p.68.

5 Willinger, Marian, Ph.D., Hoffman, H., M.A., and Hartford, R., Ph.D., "Infant Sleep Position and Risk for Sudden Infant Death Syndrome: Report of Meeting Held January 13 and 14, 1994, National Institutes of Health, Bethesda, MD," *Pediatrics*, Vol. 93, No. 5, May 1994, p. 814.

FETAL AND INFANT DEATHS (continued) Alaska Bureau of Vital Statistics

TABLE 2.7 INFANT DEATHS BY SELECTED CAUSES OF DEATH AND AGE, ALASKA, 1995 (DEATH COHORT METHOD)

CAUSE OF DEATH	AGE AT DEATH		
	NEONATAL	POST-NEONATAL	TOTAL
PNEUMONIA & INFLUENZA		1	1
HERNIA OF ABDOMINAL CAVITY AND INTESTINAL OBSTRUCTIONS		1	1
CONGENITAL ANOMALIES	11		11
MATERNAL COMPLICATIONS OF PREGNANCY	2		2
PLACENTA,CORD,AND MEMBRANE COMPLICATIONS	6		6
LABOR & DELIVERY: OTHER COMPLICATIONS	2		2
SHORT GESTATION & LOW BIRTHWEIGHT RELATED DISORDERS	7	1	8
INTRAUTERINE HYPOXIA & BIRTH ASPHYXIA	1		1
RESPIRATORY DISTRESS SYNDROME	4		4
PERINATAL PERIOD INFECTIONS	2		2
SIDS	6	16	22
ACCIDENTS & ADVERSE EFFECTS	1	3	4
HOMICIDE		1	1
ALL OTHER CAUSES	6	9	15
TOTAL	48	32	80

TABLE 2.8 INFANT DEATHS BY SELECTED CAUSES OF DEATH AND RACE, ALASKA, 1995 (DEATH COHORT METHOD)

CAUSE OF DEATH	RACE				TOTAL
	WHITE	NATIVE	BLACK	AS/PI	
PNEUMONIA & INFLUENZA		1			1
HERNIA OF ABDOMINAL CAVITY AND INTESTINAL OBSTRUCTIONS		1			1
CONGENITAL ANOMALIES	7	4			11
MATERNAL COMPLICATIONS OF PREGNANCY	1			1	2
PLACENTA,CORD,AND MEMBRANE COMPLICATIONS	3	1		2	6
LABOR & DELIVERY: OTHER COMPLICATIONS	2				2
SHORT GESTATION & LOW BIRTHWEIGHT RELATED DISORDERS	3	3	2		8
INTRAUTERINE HYPOXIA & BIRTH ASPHYXIA		1			1
RESPIRATORY DISTRESS SYNDROME	2	1	1		4
PERINATAL PERIOD INFECTIONS	2				2
SIDS	9	8	3	2	22
ACCIDENTS & ADVERSE EFFECTS	2	2			4
HOMICIDE	1				1
ALL OTHER CAUSES	10	2		3	15
TOTAL	42	24	6	8	80