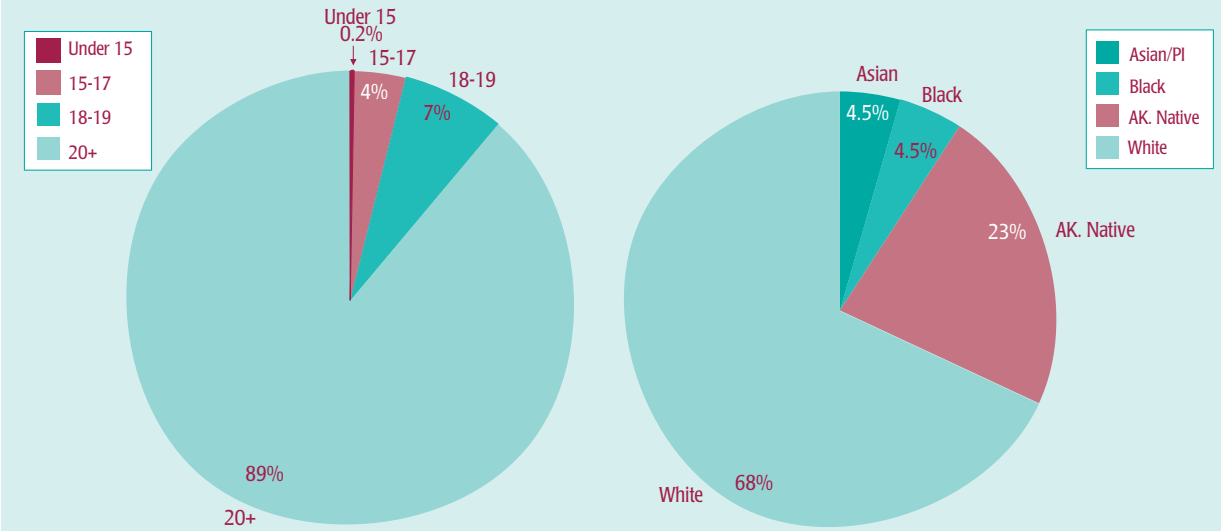
Early Childhood

Prenatal Care

Births in Alaska, 1991 - 1995, By Age and Race of Mother
(Total Births: 55,378)



Definition

There is some disagreement over what constitutes "adequate" prenatal care. Here we use the Alaska Bureau of Vital Statistics' measure of prenatal care—the Kessner Index. That index has three classifications of prenatal care: adequate, intermediate, and inadequate.

Care is considered adequate among women who see a doctor (or other medical professional) at least once during the first three months of pregnancy and at least nine times over the entire length of pregnancy. Care is considered "intermediate" among women who see a doctor at least once during the early months of pregnancy and several times during the later months. Care is classified as "inadequate" among women who don't see a doctor at all during their first five months of pregnancy and four or fewer times during their entire pregnancy.[1]

Significance

Nationwide, an estimated 25 percent of pregnant women don't get prenatal care during the first three months of their pregnancy—the period of crucial fetal development.[2]

For a long time, many researchers have maintained that adequate prenatal care helps reduce the number of babies with low birth weights. (As we discuss in the next section, babies with low birth weights are more likely to die before their first birthday.)

Recently, however, some analysts have questioned the evidence linking inadequate prenatal care and low birth weight.[3] But other benefits of good prenatal care are clear. Pregnant women who see their doctors regularly are more likely to discover medical problems that might injure them or their fetuses. They are more likely to be aware that eating poorly, drinking alcohol, and smoking can harm their babies. And some researchers have found that women who visit doctors regularly while they are pregnant are more likely to continue getting good preventive health care for themselves and their infants.[4]

What About Alaska?

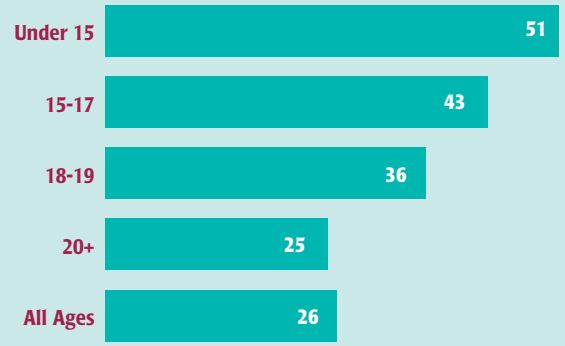
From 1991 through 1995, nearly 55,400 babies were born in Alaska. The overwhelming majority (89 percent) were born to mothers at least 20 years old.

But that still leaves more than 6,000 babies born to teenage mothers during the first half of the 1990s. And more than a third of those babies were born to mothers under 18 years old. Teenage mothers and their children face economic disadvantages (see Births to Teens indicator), but they also face health risks. Half the youngest mothers (15 and under) and nearly four in ten older teenagers get inadequate prenatal care. Even among mothers over 20, one-quarter don't get adequate prenatal care.

About 68 percent of women who had babies in Alaska from 1991 through 1995 were White, 23 percent were Native, 4.5 percent were Black, and 4.5 percent were Asian.

One quarter of mothers of all races in Alaska get inadequate prenatal care, but the share is considerably higher among Alaska Native mothers—four in ten. Part of the reason for that high rate is undoubtedly that many Native women live in small, isolated communities with very limited medical care. A third of Asian mothers also lack adequate prenatal care, with smaller shares among Black and White mothers.

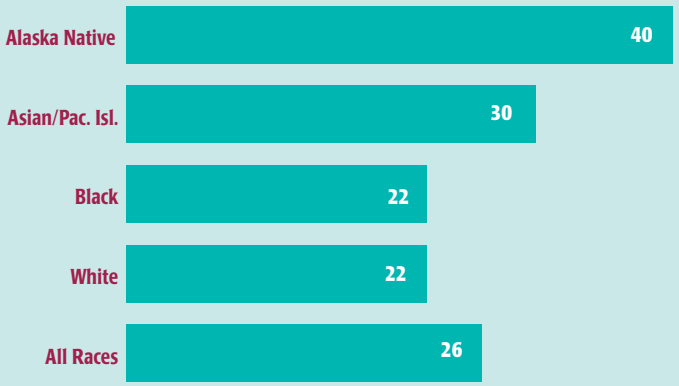
Percent of Babies Receiving Less Than Adequate* Prenatal Care, By Age of Mother, 1991-1995



**See text for definition of "adequate" care.*

Source: *Alaska Bureau of Vital Statistics*

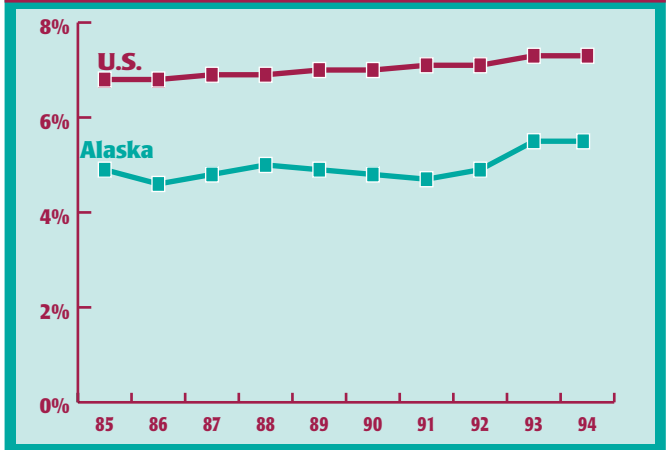
Percentage of Babies Receiving Less Than Adequate Prenatal Care, By Race of Mother, 1991-1995



Source: *Alaska Bureau of Vital Statistics*

Babies With Low Birth Weight

Trend 1985-1994
Percent Babies With Low Birth Weight



Source: Kids Count *Data Book, 1997, Annie E. Casey Foundation*

Definition

Babies considered to have low birth weight are those weighing under 2,500 grams (5.5 pounds) at birth. The data are reported in percentage of live births—by mother's place of residence, not place of infant's birth. Births of unknown weight are not included in these calculations.

Significance

While most American children get off to a healthy start, babies weighing less than 2,500 grams (5.5 pounds) at birth have a higher probability of experiencing developmental, physical, and behavioral problems.

Babies with low birth weight are more commonly born to low-income women and women over age 35. Inadequate nutrition and inadequate weight gain during pregnancy are major risk factors for low birth weight, as well as for intrauterine growth retardation, increased prenatal morbidity and mortality, and pre-term birth.

Impact

- Babies with low birth weight die more frequently during their first year of life than do babies born weighing more than 2,500 grams.[5]

- One study estimated that of the $11.4 billion spent nationally on health care for infants in 1988, about 35 percent (or $4 billion) was spent on the "incremental costs of low birth weight infants, with nearly half ($1.8 billion) going to rescue the very tiniest babies."[6]

- Charges for the initial hospitalization of a surviving infant weighing 500 to 600 grams at birth (under 1.5 pounds) averaged $1 million in the early 1990s.[7]

- Due to advances in neonatal care systems, many infants weighing only 750 grams (1 pound, 10 ounces) at birth are now surviving. But the survivors often face serious long-term health and developmental problems.[8]

- Babies with low birth weight are more likely to require special education. About half of all children who weighed less than 5.5 pounds at birth are enrolled in special education programs by the time they are 6 to 15 years old.[9]

- Low birth weight also puts babies at increased risk of mental retardation, neurological defects, growth and development problems, pulmonary dysfunction, visual and hearing defects, cerebral palsy, epilepsy, learning disorders, chronic lung problems, and child abuse and neglect.[10]

- If no pregnant women smoked cigarettes, 20 to 30 percent of all low-weight births and 10 percent of fetal and infant deaths could be prevented.[11]

Babies With Low Birth Weight

What About Alaska?

Relatively few (about 5 percent) of the babies born in Alaska over the years 1991-1995 weighed less than 5.5 pounds. Over the past decade the share of babies with low birth weight in Alaska has consistently been among the lowest in the nation, remaining below 5 percent for most of that time.[12]

The two graphs on this page show how the share of babies born weighing less than 5.5 pounds varied among regions and among races in Alaska on average from 1991 through 1995.

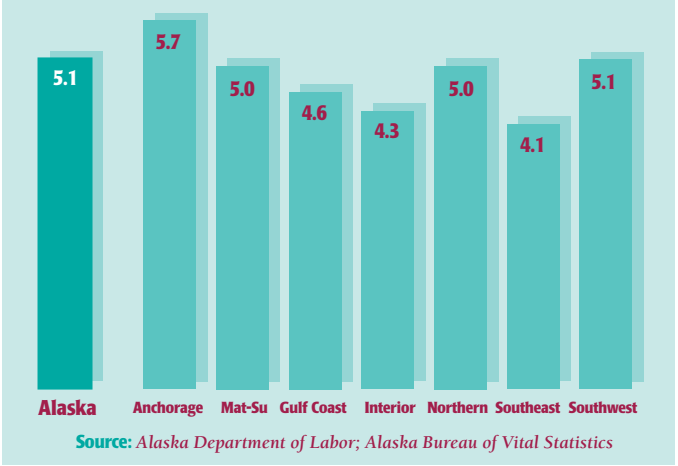
Within regions, the percentage varied from 4.1 percent in Southeast to 5.7 percent in Anchorage.

Among races, the percentage of babies with low birth weight was lower among White and Native babies and higher among Asian and Black babies. Remember, however, that because the Black and Asian populations of Alaska are much smaller, births of relatively few underweight babies can change the percentages.

Percent of Babies with Low Birth Weight, by Race
(Babies Weighing Less than 5.5 Pounds at Birth, 5-year Average, 1991-1995)

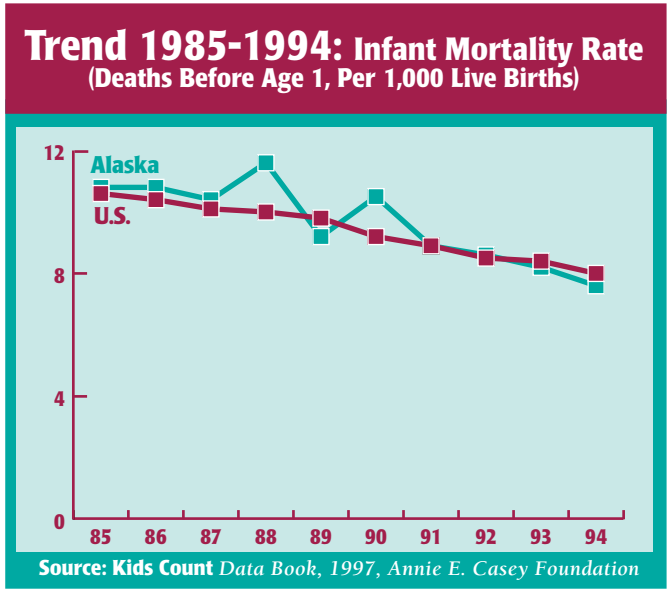
Source: *Alaska Department of Labor; Alaska Bureau of Vital Statistics*

Percent of Babies with Low Birth Weight, by Region
(Babies Weighing Less Than 5.5 Pounds at Birth, 5 year average, 1991-1995)



Source: *Alaska Department of Labor; Alaska Bureau of Vital Statistics*

Infant Mortality



Definition

The infant mortality rate is the number of deaths per 1,000 (live births) among infants under one year. The data are reported by the child's place of residence, not place of death.

Significance

Low birth weight and infant mortality are related: the infant mortality rate can be predicted with reasonable accuracy from the proportion of babies with low birth weights.[13]

The infant mortality rate is considered a barometer of the general health of a population. Infant mortality has been declining in the U.S. since 1985, largely because of improvements in medical technology.[14]

Families with low incomes and less education are more likely to have babies with health problems. A study cited by the Casey Foundation found that infant mortality was 50 percent higher among poor families than among families with incomes above the poverty line. The link between poverty and infant mortality helps explain why the national infant mortality rate in 1994 was 15.8 per 1,000 births among Black Americans, compared with 6.6 among White Americans.[15]

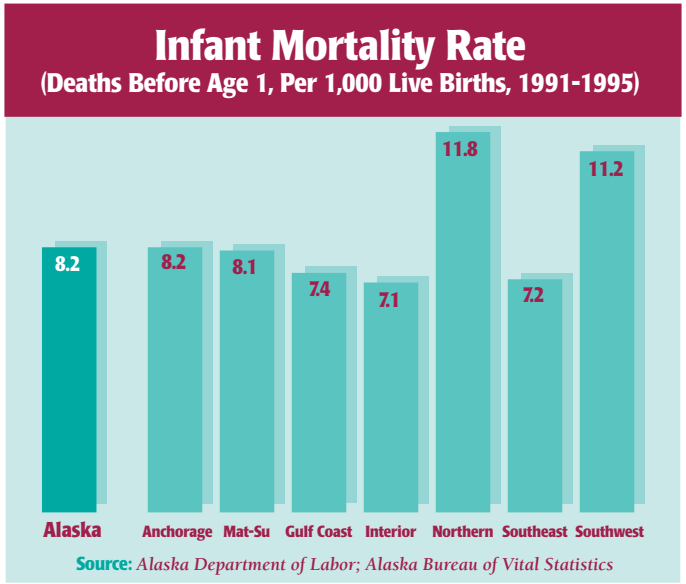
What About Alaska?

Like the rest of the U.S., Alaska has been reducing infant mortality over the past decade, decreasing the rate per 1,000 births from 10.8 in 1985 to 7.6 in 1994—slightly below the U.S. average of 8.0.

The tie between low birth weights and infant mortality in Alaska is clear. In 1989, for example, 43 percent of infants who died had weighed under 5.5 pounds at birth.[16]

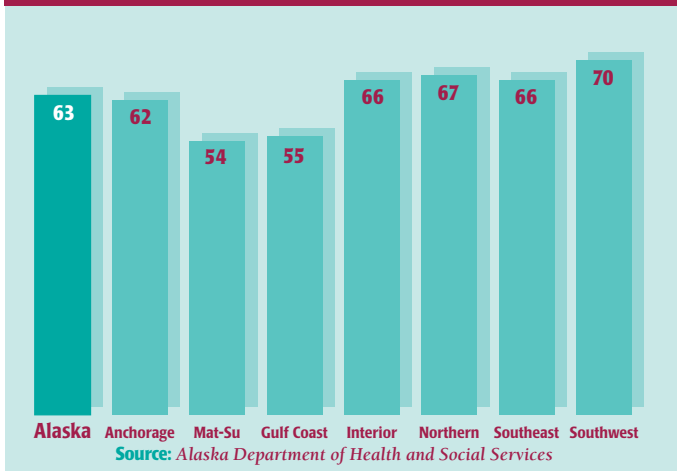
Alaska's infant mortality rate between 1991 and 1995 averaged 8.2 per 1,000 births, with regional rates from 7.1 in the Interior to 11.8 in the Northern region.

A 1988 study reported that Native infants in Alaska have a mortality rate about 2.5 times that of White infants—17.2 per 1,000 births compared with 6.9. The death rate among Native infants was also higher than the national rate of 12.5 per 1,000 births among all Native American infants in the late 1980s.[17]



Immunizations by Age Two

Percent of Alaska Children Immunized By Age Two, By Region (1992-1997, 5-year Average)



Source: *Alaska Department of Health and Social Services*

Definition

This indicator shows the percentage of Alaskan children who have received all the recommended doses of these vaccines by age two: DTP (diphtheria, tetanus, and pertussis); OPV or IPV (polio); MMR (measles, mumps, and rubella); and Hib (*Haemophilus influenza,* type b).

Significance

Immunizations improve children's health, save lives, and reduce health care costs. National studies report that every dollar spent for vaccines saves much more in other direct and indirect medical costs: $1 for DTP saves $29; $1 for MMR saves $21; $1 for OPV saves $6; $1 for Hib saves $2.

What About Alaska?

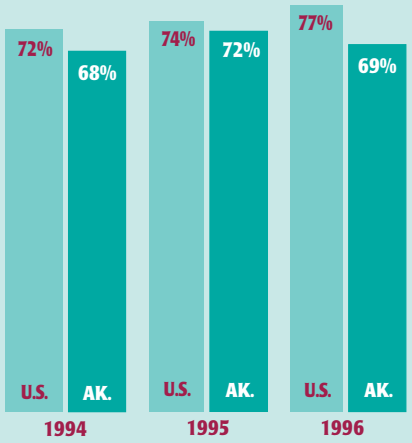
Data on immunizations provided by Laurel Wood, Section of Epidemiology, Alaska Department of Health and Social Services

Alaska has been a leader in effective childhood immunization programs. For instance, Alaska was the first state to implement vaccine programs to fight the leading cause of childhood meningitis; to use hepatitis A vaccine to prevent epidemics; and to establish a vaccine distribution program to make free preventive immunizations available to all Alaska's children. In 1996, the Alaska Department of Health and Social Services distributed more than 235,000 doses of pediatric vaccines—valued at more than $2 million— to health care providers around the state.

Despite these efforts, Alaska has recently fallen behind the national average in immunization rates among two-year-olds. In 1996, a survey by the national Centers for Disease Control and Prevention put Alaska near the bottom (48 out of 50 states) in rates of immunization among two-year-olds. Only 69 percent of Alaska's two-year-olds had been fully immunized, compared with the national average of 77 percent.

The immunization rate varies sharply among regions of Alaska. On average from 1992-1997, 63 percent of two-year-olds statewide were immunized, with regional percentages from 54 in the Mat-Su region to 70 in the Southwest.

Immunization Levels Among Two-Year-Olds, U.S. and Alaska, 1994 - 1996



Source: *Centers for Disease Control and Prevention, National Immunization Survey*

Immunizations by Age Two (continued)

Still, despite the low immunization rates among two-year-olds, the incidence of preventable childhood diseases in Alaska remains low (see table below)—largely because of Alaska's strong immunization requirements for children attending school or going to day care. Audits conducted by the Section of Epidemiology of the Department of Health and Social Services indicate that more than 99 percent of school students are adequately immunized.

Reported Cases of Vaccine-Preventable Diseases in Alaska, by Date of Diagnosis, 1992-1996

	1992	1993	1994	1995	1996	5–Year Total
Diphtheria	0	0	0	0	0	0
Tetanus	0	0	0	0	0	0
Pertussis	18	5	0	1	3	27
Measles	9	2	10	0	63	84
Mumps[a]	3	11	4	12	3	33
Rubella	0	1	0	0	0	1
Polio	0	0	0	0	0	0
Hib[b]	2	7	4	2	6	21
Hepatitis A	153	756	205	50[c]	53	1,217
Hepatitis B	21	14	14	13	16	78

[a] *Clinical diagnosis;* [b] *Meningitis;* [c] *First year of vaccine licensure*

Source: *Alaska Department of Health and Social Services*

Spotlight on Prevention: Year 2000 Childhood Immunization Initiative

State officials are alarmed because in 1996 nearly one third of Alaska's two-year-olds didn't have all the immunizations they needed. The Alaska Department of Health and Social Services cites several reasons why Alaska's immunization rates have fallen below the national average, including: the number of children in the state nearly doubled between 1980 and 1996; the number of recommended immunizations increased from 7 to 10; the number of doses needed to give all children the recommended immunizations increased from about 880,000 in 1980 to 3.7 million in 1997.[18]

The Department of Health and Social Services has established the Year 2000 Childhood Immunization Initiative to increase rates of immunization in Alaska. Among other things, that effort will include: devoting more public health resources to immunization programs; working with regional task forces to find ways of increasing immunization rates locally; establishing regional mobile teams of nurses; asking health care providers to put more emphasis on immunizing children; and applying to the national Centers for Disease Control and Prevention for more money to administer vaccines.

Children with Developmental Disabilities

Alaska Children With Developmental Disabilities, By Type of Disability, 1995

Disability	Number of Children
Mental Retardation	1,334 (38%)
Multiple Disabilities	827 (24%)
Autism	137 (4%)
Traumatic Brain Injury	113 (3%)
Deaf or Blind	11 (0.3%)
Hearing impairments	15 (0.4%)
Speech and language impairments	19 (0.5%)
Visual impairments	6 (0.2%)
Serious emotional disturbances	75 (2%)
Orthopedic impairments	4 (0.1%)
Other health impairments	42 (1%)
Other learning disabilities	938 (27%)
Total	3,521 (100.%)

The numbers include children age 18 and under with at least three of the functional limitations cited in the definition below. Not all children with some form of disability are considered to have developmental disabilities.

Source: *Governor's Council on Disabilities and Special Education*

Definition

Data on developmental disabilities provided by David Maltman and Millie Ryan, Governor's Council on Disabilities and Special Education

A developmental disability is a severe, disabling condition that occurs before age 22, persists indefinitely, and substantially limits at least three of the following functions: listening and talking; learning; mobility; self-direction and self-care; independent living; and economic self-sufficiency.

Mental retardation, autism, and several other conditions have traditionally been associated with the term "developmental disability." But defining developmental disabilities is complicated by the lack of a generally accepted standard of what constitutes a "substantial functional limitation." For example, the federal Individuals with Disabilities Education Act lists a number of disabilities, but provides classification criteria for only one.[19] The State of Alaska has its own criteria for programs serving children with developmental disabilities.

Significance

Children with developmental disabilities typically need special training and assistance. Those with serious emotional disturbances or learning disabilities are more likely to drop out of school and, when they become adults, are less likely to be in the work force.[20]

What About Alaska?

In 1995, just under 2 percent of Alaska's children (18 and under)—about 3,520 children—had developmental disabilities. Disabilities were divided about equally among children of all ages. The most prevalent disability is mental retardation, accounting for nearly four in ten children with developmental disabilities. The State of Alaska has several programs to help children with disabilities. Two programs spotlighted on the next page are designed to help reduce problems in later life by working with disabled children early on.

Children with Developmental Disabilities (continued)

Spotlight on Prevention: Autism Intensive Early Intervention Project

Information provided by Todd Risley, Center for Human Development, University of Alaska Anchorage

About 10 autistic children are born in Alaska every year. Autistic children pay little attention to other people in general and respond less to parents and care givers than other children do. Language of autistic children is often bizarre and repetitive; some autistic children don't speak at all. The lifetime costs of care for an autistic child who does not receive help early are conservatively estimated at $1 million.

The Autism Intensive Early Intervention Project trains and supervises family members and volunteers who then teach autistic children to look at, respond to, and imitate other people and to talk and reason. This teaching goes on as much as 40 hours per week, beginning at age three or four and continuing for two years. Researchers have found that about half the autistic children who receive 40 hours per week of intensive intervention require no special help in school or later life; the other half need moderate help.

In 1997 there were 15 teaching teams statewide, each consisting of 10 to 12 volunteers trained through this project.

Spotlight on Prevention: Infant Learning

Information provided by Jane Atuk, Special Needs Services Unit, Alaska Department of Health and Social Services

Experts have identified a number of physical, cognitive, and other skills that can be improved if children with developmental disabilities receive help early, particularly during the first three years of life. The Infant Learning Program works with children from birth through two years who have disabilities or developmental delays, or who are at risk for developmental delays.

In FY 1996, about 1,400 children age two and under were enrolled in the program, with about half those continuing from the previous year. Children can be referred to the program by parents, physicians, community health aides, or others. Program specialists work with children and families to develop individual programs that can include special instruction, therapy, assistive technology, and coordination with other available services.

Infant Learning Program Enrollment
Infants through Age 2, By Severity of Disability, FY96

In Numbers of Children and Percentages of Enrollment

Region Enrolled	Severe[a]	Moderate[b]	Mild[c]	At Risk[d]	Total
Anchorage/Mat-Su	286 (20%)	203 (14.%)	92 (7%)	63 (4%)	644 (45%)
Gulf Coast	56 (4%)	96 (7%)	40 (3%)	41 (3%)	233 (16.%)
Interior	95 (7%)	65 (5%)	16 (1 %)	4 (0.3%)	180(13%)
Northern	37 (3%)	20 (1%)	5 (0.4%)	4 (0.3%)	66 (5%)
Southeast	48 (3%)	39 (3%)	43 (3%)	66 (5%)	196 (14%)
Southwest	35 (2%)	52 (4%)	6 (0.4%)	5 (0.4%)	98 (7%)
Total	557 (39%)	475 (34%)	202 (14%)	183 (13%)	1,417 (100%)

[a] *Severe — delay of 50 percent or more in one or more areas of child's development*
[b] *Moderate — delay of 25-49 percent in one or more areas of child's development.*
[c] *Mild —delay of 15-24 percent in one or more areas of child's development*
[d] *At risk — two or more biological or environmental factors likely to result in developmental delay*

Source: *Special Needs Services Unit, Alaska Department of Health and Social Services*

Notes

[1] Alaska Bureau of Vital Statistics, *1995 Annual Report,* July 1997, Appendix D.

[2] Prenatal Care Hotlines, http://www.hrsa/dhhs.gov/mchb/hotline 3.htm

[3] See for example, Greg Alexander and Carol Korenbrot, "The Role of Prenatal Care in Preventing Low Birth Weight," in ***The Future of Children,*** No.1, Spring 1995.

[4] A.M. Butz, A. Funkhouser, L. Caleb, and B.J. Rosenstein, "Infant health care utilization predicted by pattern of prenatal care," in ***Pediatrics*** (1993) 92, 1:50-54. Cited in Alexander and Korenbrot (note 3).

[5] *Healthy Alaskans 2000: Changing the course of public health for the decade*, Alaska Department of Health and Social Services, February 1994, p. 136.

[6] *The Future of Children: Low Birth Weight*, Center for the Future of Children, The David and Lucile Packard Foundation, 5 (1) Spring 1995, p. 4.

[7] Ibid., p. 30.

[8] Ibid., p. 4.

[9] Ibid., p. 7.

[10] *Healthy Alaskans 2000,* p. 136.

[11] *The Future of Children,* p. 124.

[12] *Healthy Alaskans 2000,* p. 136.

[13] *The Future of Children,* p. 20.

[14] *Kids Count Data Book 1997,* Annie E. Casey Foundation.

[15] Ibid.

[16] *Healthy Alaskans 2000,* p. 136.

[17] *Prenatal Care in Alaska: More Costs Less,* Senate Advisory Council, Alaska State Legislature, 1988 (Research Request 88-003247).

[18] *Year 2000 Childhood Immunization Initiative,* Alaska Department of Health and Social Services, November 1997.

[19] Thirteen disabilities were outlined in the federal Individuals with Disabilities Education Act regulations [section 504 of 1990 Americans with Disabilities Act]: autism, deafness, hearing impairment, mental retardation, orthopedic impairment, other health impairment, serious emotional disturbance, learning disability, speech or language impairment, traumatic brain injury, and visual impairment. With the exception of learning disability, federal law does not provide classification criteria for any of these disabilities. (D. J. Reschly [1996]. "Identification and Assessment of Students with Disabilities," in *The Future of Children: Special education for students with disabilities,* vol. 6, num. 1, p. 40-53.)

[20] M. Wagner, and J. Blackorby (1996). "Transition from high school to work to college: How special education students fare," in *The Future of Children: Special education for students with disabilities,* vol. 6, num. 1, p.103-120.