



Nancy Sadusky saw the hanging light in her dining room start to sway, but it didn't worry her. After all, earthquakes were pretty much the stuff of daily life in Seward, Alaska, and most rumbled on through without leaving any trace.

Story continues on back of page.



Children In Danger



Besides, Nancy was busy that day. It was just before Easter, and some fresh-baked rolls were cooling on a shelf above the counter. A bunch of hard-boiled eggs for her children to decorate sat on the counter, next to bowls of blue, red, yellow, and green dye.

But this time was different: the quaking went on and on, getting stronger instead of fading away. Eggs rolled off the counter, the shells shattering as they hit the floor and cabinets. The rolls fell from the shelf and into the bowls of egg dye—which then careened wildly around the kitchen, splashing the walls and ceiling.

Now Nancy was paying attention. She and her husband Jack quickly gathered their four children and got out of the house. It was March 27, 1964—Good Friday—and this would turn out to be the biggest earthquake ever recorded in the United States and close to the largest worldwide. It registered 9.2 on the Richter scale and was followed by a huge tsunami.

In the end, the Saduskys' house made it through the earthquake with limited damage, but they were without electricity for weeks and had no running water for months.

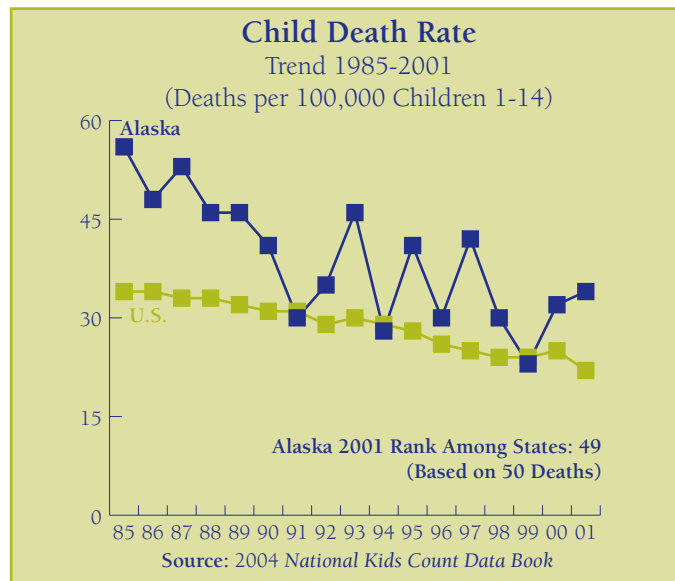
And within a day after the earthquake, Nancy was back in the kitchen—making sandwiches for 30 or so friends and neighbors who had ended up at the Saduskys' house. Some couldn't make it back to their own homes because of damage to roads and bridges; others had seen their houses washed into Resurrection Bay by the tsunami.

In 2004, Jack and Nancy Sadusky still live in Seward—in the same house that went through the earthquake. The only remaining telltale sign is a crack in a basement wall.

The 1964 Good Friday earthquake was epicentered in Prince William Sound, and it and the tsunami that followed—mostly the tsunami—killed 115 people in Seward, Valdez, Anchorage, Kodiak, and other southcentral communities.

The earthquake damaged or destroyed buildings, roads, bridges, rail lines, and harbors throughout the region. It also crippled Seward's economy, by destroying the city's port—which had been the major port in southcentral Alaska.

Alaska is earthquake country: more than 10 percent of all the earthquakes worldwide happen in Alaska. Roughly 5,000 earthquakes rumble the state every year. In the 40 years since the Good Friday earthquake, none has yet equalled its strength, although there have been some with magnitudes of 8. In 2002, an earthquake measuring 7.9 caused widespread damage to roads and structures in interior Alaska.



DEFINITION

The child death rate is the number of deaths per 100,000 children ages 1-14, from all causes. Regional statistics are based on the child's place of residence. Manner of death information includes those ages 1 through 17.

SIGNIFICANCE

A big share of the Alaska children who die could be saved. Natural causes killed less than a third of those who died in recent years. Nearly half were killed by accidents. Alaska has historically had high rates of accidental death among both children and adults; the state's many waterways, vast stretches of rugged terrain and often harsh, unpredictable weather create dangerous conditions.

But rates of accidental death have come down, partly because of public campaigns stressing that life vests, helmets, and other safety gear can save children's lives.¹ The remaining deaths—close to one quarter of all

deaths among those under 18—were homicides and suicides. Perhaps not all those deaths could be stopped—but many could. In particular, Alaska's high rates of teenage suicide have led to several suicide-prevention campaigns.²

DATA

The child death rate in the U.S. has declined almost steadily over the past 15 years. The rate in Alaska has declined as well, but it remains among the highest in the country. It also fluctuates sharply from year to year, because it is based on a relatively small number of actual deaths—50 deaths in 2001, for example. So a slight change in the number of deaths can make a significant difference in the rate of death in a given year. Calculating an average rate over a five-year period (as we do in the regional graph) helps smooth out those year-to-year fluctuations.

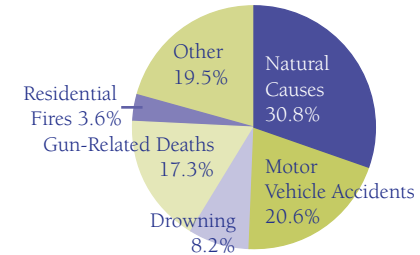
From 1997 through 2001, the death rate among Alaska children averaged 32 per 100,000 children. But the rate varied sharply among regions, with the rate in the Northern and Southwest regions seven times that in Southeast Alaska.

Most young children (1-9) who died in recent years were killed by natural causes or accidents. Still, 1 in 10 of the very young children (under 5) who died were murdered. Among older children (10-17) almost a third of the deaths were murders or suicides.

How Do Alaska Children Die?

(Ages 1-17, 5-Year Average, 1997-2001)

Causes of Death (In Percentages)



Manner of Death

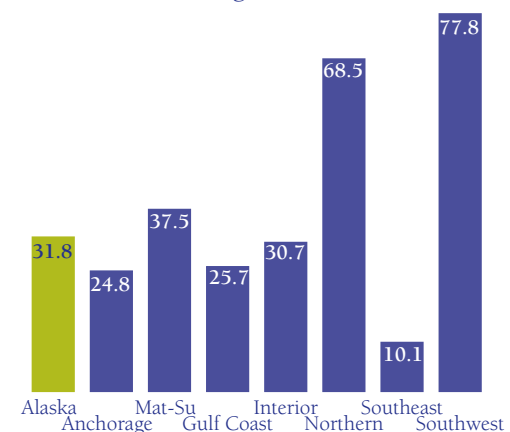
(Number of Deaths, by Age, 1997-2001)

	1-4	5-9	10-17	Total	Percent
Natural Causes	45	21	46	112	30.8%
Accidents	36	27	93	156	42.9%
Suicides	0	1	53	54	14.8%
Homicides	10	3	16	29	8.0%
Other	5	1	7	13	3.6%
Total	96	53	215	364	100%

Source: Alaska Bureau of Vital Statistics

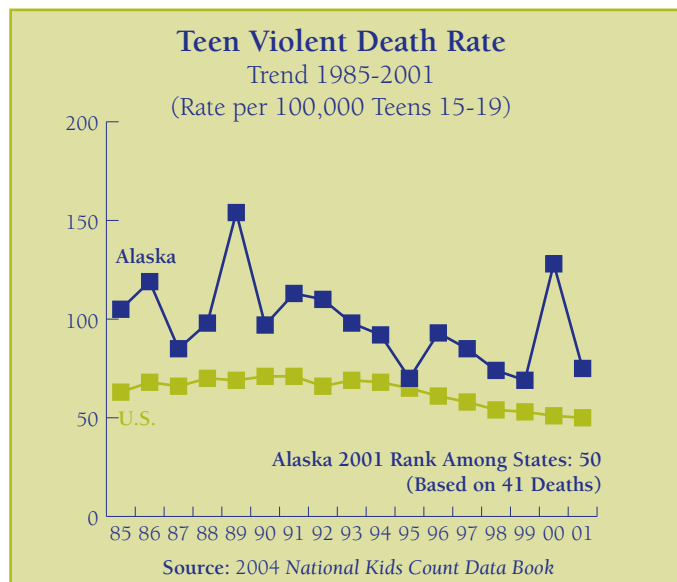
Child Death Rate By Region

(Deaths per 100,000 Children Ages 1-14)
5-Year Average, 1997-2001



Source: Alaska Bureau of Vital Statistics

Teen Violent Deaths



DEFINITION

The trend graph above shows the number of violent deaths (from accidents, homicides, and suicides) per 100,000 teenagers 15 to 19.

SIGNIFICANCE

As we discussed in the Child Death Rate indicator, many of these violent deaths are accidental and could be prevented if teenagers used life vests, helmets, and other safety gear. But the suicide rate among Alaska teenagers—especially Native teenagers—is very high and worrisome. Suicide's toll on families, friends, and neighbors is enormous; that's especially so in small Alaska communities. One particularly worrisome possibility is that children who grow up in places where violent deaths are common may come to see such deaths as inevitable, rather than preventable.

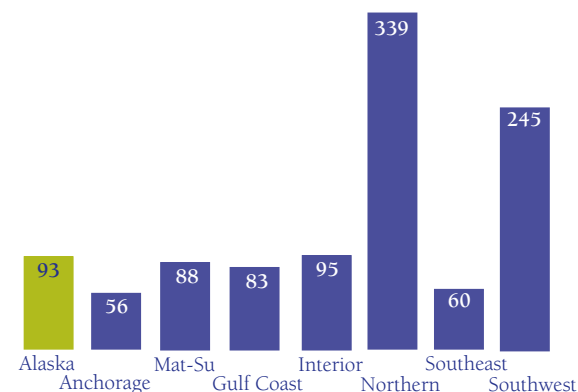
In late 2004, Alaska's governor, Frank Murkowski, and the Statewide Suicide Prevention Council will release a suicide prevention plan. The plan will describe the scope of the problem, list goals for suicide prevention, and provide tools communities can use to stop young people—as well as older Alaskans—from killing themselves. Through late 2004, the draft plan will be available on the Web site of the Alaska Department of Health and Social Services.³

DATA

Alaska's rate of teen violent death is consistently among the highest in the nation, but in most recent years it has been lower than it was in the 1980s and early 1990s. The exception was in 2000, when it spiked to 128 deaths per 100,000 teenagers; in 2001 the rate dropped to 75 per 100,000. Keep in mind that Alaska's rates are based on a relatively small number of deaths, and a change in the number of deaths can make a big difference in the rate. For example, the high rate in 2000 was based on 64 deaths; the much lower rate in 2001 was based on 41 deaths.

To help reduce the effects of year-to-year fluctuations, we use 5-year averages when calculating the regional rates shown in the bar graph above. From 1997 through 2001, the violent death rate among Alaska's teenagers averaged 93 per 100,000.⁴ But that rate varied sharply by region, with rates in the Northern

Teen Violent Death Rate, By Region
(Rate per 100,000 Teens, 5-Year Average, 1997-2001)



Source: Alaska Bureau of Vital Statistics

and Southwest regions several times higher than in Anchorage or Southeast Alaska.

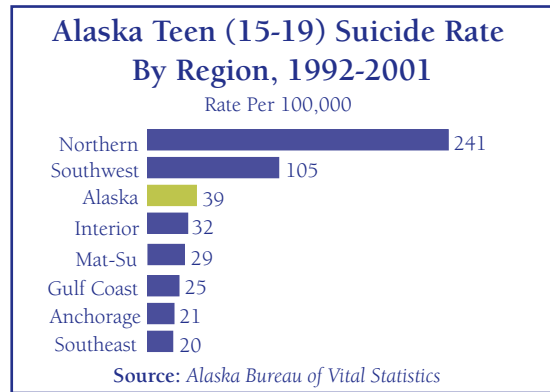
Accidents made up 53 percent of all violent deaths among Alaska teenagers from 1997 through 2001, suicides another 39 percent, and homicides 8 percent.⁵ Again, rates of specific types of death varied considerably among regions, with a lower-than-average rate of accidental death in Anchorage and an especially high rate of suicides in the Northern region. But remember that the actual numbers of regional deaths are very small—given that the statewide numbers themselves are small—so a slight change in the numbers can cause a big change in the rates.

TEEN SUICIDE IN ALASKA

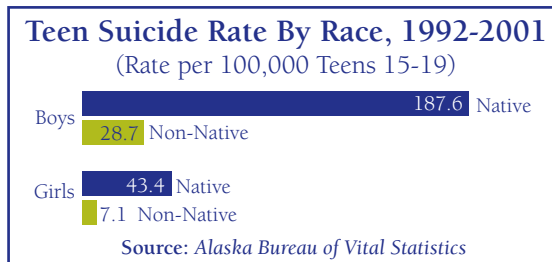
As we said at the outset, rates of suicide among Alaska’s teenagers—especially Native teenage boys—are very high. From 1992 through 2001, 174 teenagers took their own lives. Half of those suicides were among just Native teenage boys. To put that in perspective, remember that only about 22 percent of Alaska’s teenagers are Native.⁶

The bar graph below shows how those grim numbers translate into rates per 100,000. The rate among Native teenage boys was almost 188 per 100,000; the rate among Native girls was over 43 per 100,000. That compares with nearly 29 per 100,000 among non-Native boys and about 7 among non-Native girls.

So the suicide rate among Native teenage boys over the past decade was more than six times higher than that among non-Native boys. The rate among Native teenage girls was also about six times that of non-Native girls—and about 1.5 times that of non-Native boys.



The bar graph above shows suicide rates by region of Alaska for the same period—from 1992 through 2001. That rate was vastly different around the state, with Anchorage’s rate about half the statewide average and the rate in the Northern region more than six times higher. Those rates by region correspond with what we know about teen suicides by race: the Northern and the Southwest regions are predominantly Alaska Native.



Child Abuse and Neglect

DEFINITION AND SIGNIFICANCE

Child abuse or neglect exists when parents or other adult guardians hurt or endanger—physically or mentally—children in their care, or fail to protect them from such harm. Nationwide every year, hundreds of children, especially the youngest and most vulnerable (those under age 5), are killed by abuse. Thousands more are seriously hurt, and many of them suffer lifelong disabilities.

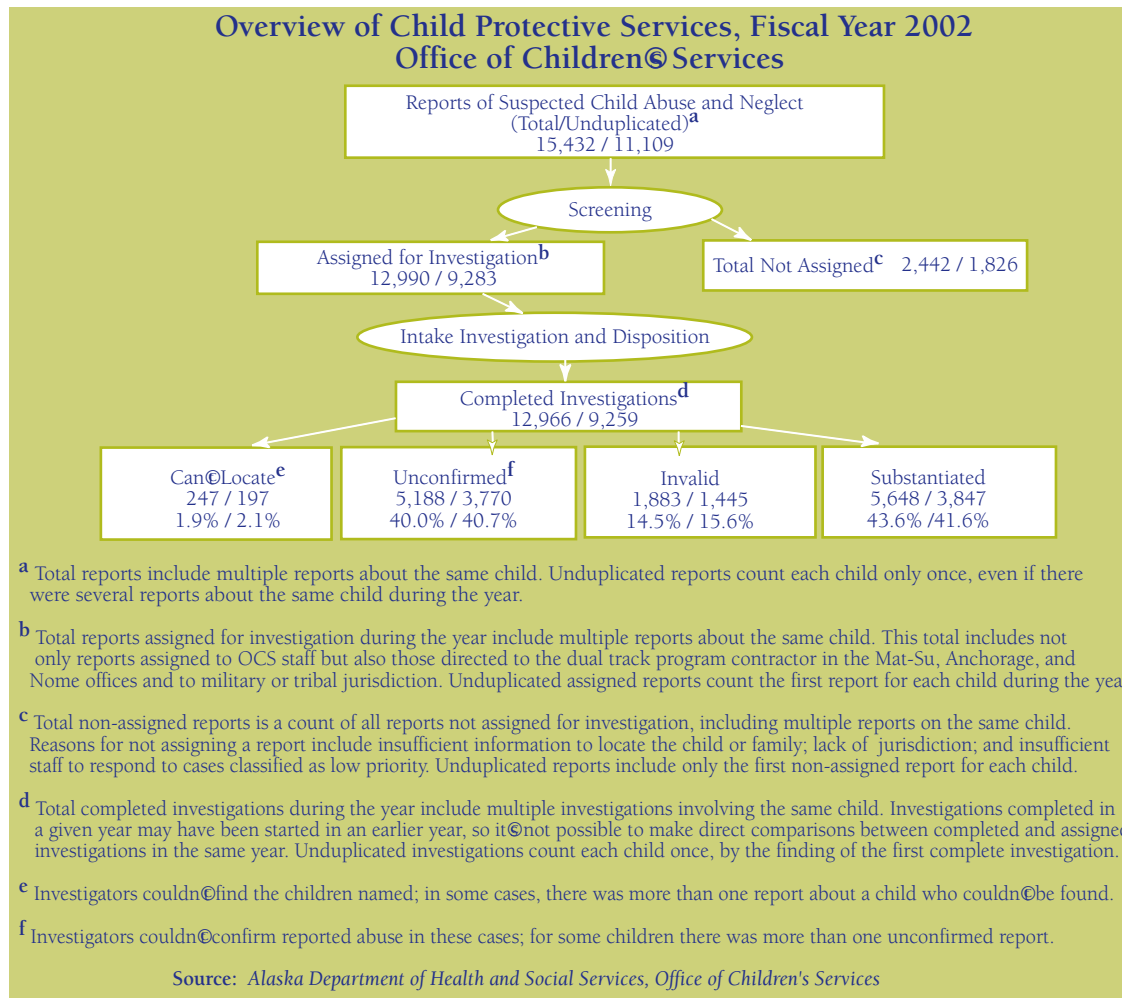
Remember that we don't know how many children are in fact abused or neglected; we only know how many suspected cases of abuse are reported and investigated.

INVESTIGATION PROCEDURES AND STATISTICS

The Office of Children's Services (formerly the Division of Family and Youth Services) in the Alaska Department of Health and Social Services investigates reports of suspected child abuse and neglect in Alaska. Anyone who believes a child is in danger can file a report with the office, which assigns investigation priority by assessing the potential risk to the child.

The office received 15,432 total and 11,109 unduplicated reports of abuse in fiscal year 2002. Total reports include multiple (duplicated) reports of suspected harm to the same child. Unduplicated counts include each child only once, even if there are several reports concerning the same child. Total reports measure the agency's workload; unduplicated reports show the number of individual children who may have suffered abuse.

Not all reports of abuse are substantiated. The flow chart shows that of the 12,966 investigations completed in fiscal year 2002, about 44 percent found substantiated harm.



Another 40 percent of completed investigations found "unconfirmed" harm, meaning investigators were unable to determine whether children had in fact been abused or neglected. About 15 percent of investigations completed in 2002 found no evidence of abuse ("invalid" reports). In the remaining 2 percent of investigations, the children who had been reported as abused couldn't be found.

CHILD ABUSE BY TYPE

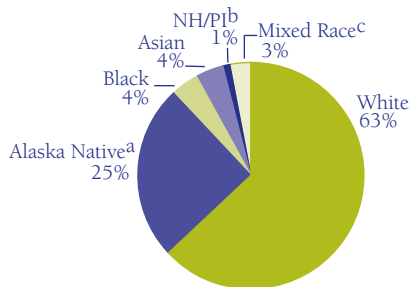
As the facing page shows, neglect was the most frequent type of substantiated child abuse in Alaska between 1998 and 2002, with an annual average of about 14 in 1,000 Alaskan children being neglected, 5 per 1,000 children physically abused, and about 2 per 1,000 sexually abused or mentally injured.

CHILD ABUSE BY RACE

Alaska Native and Black children are the most likely to be the subjects of reports of neglect or abuse. Native children make up about 25 percent of the children in Alaska (as the pie graph shows), but suffered approximately half the substantiated abuse in recent years. Black children account for about 4 percent of children statewide but close to 7 percent of substantiated abuse.

We can't report current rates of abuse by race, because in mid-2004 the state Office of Children's Services was still in the process of setting up a system to account for the more complex racial identifications from the 2000 federal census. That census allowed respondents, for the first time, to report being of more than one race.⁷

Racial Composition of Alaska Children



^aIncludes Native alone and in combination with other races
^bNative Hawaiian/Pacific Islanders
^cExcept children of Native and other race, who are included in "Alaska Native."

Source: 2000 U.S. census, adjusted by Alaska Department of Labor

**SUBSTANTIATED CHILD ABUSE AND NEGLECT IN ALASKA BY RACE AND TYPE OF ABUSE
 (ANNUAL AVERAGE FY 1998-2002, UNDUPLICATED CASES, CHILDREN UNDER 18)**

	Neglect #	Physical Abuse #	Sexual Abuse #	Mental Injury #	Abandonment #	Total ^a #	%
White	60	364	126	162	0.8	1,213	34%
AK Native	1,319	80	102	113	5	1,819	50%
Black	141	64	12	34	0.4	251	7%
Asian/PI	42	35	6	11	0	95	3%
Hispanic/Other ^b	103	61	22	40	0.4	227	6%
Total	2,164	806	269	360	6	3,605	100%

^aAs of November 2003

^bOCS figures report Hispanic as a racial group; the U.S. census considers Hispanic as an ethnic group within other races.

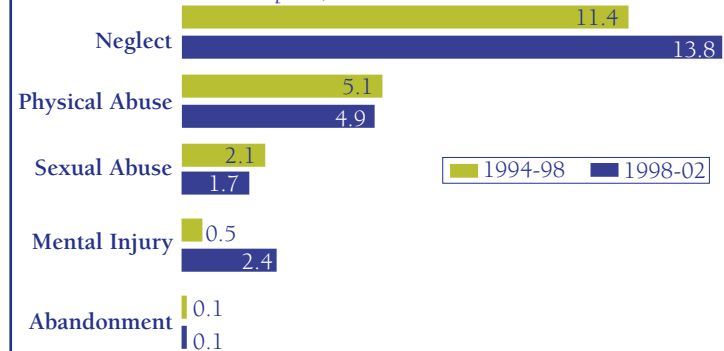
Source: Alaska Department of Health and Social Services, Office of Children's Services

TRENDS IN CHILD ABUSE

The bar graph compares annual average rates of abuse, by type, among Alaska children in the periods 1994-1998 and 1998-2002. It appears that rates of neglect may have increased, while rates of physical and sexual abuse may have declined. However, as we've noted elsewhere, rates based on the relatively small numbers of children in Alaska can fluctuate. We will feel more confident about trends as we get additional data. The increase in rates of mental injury is in part the result of a change in definition.

Rate of Substantiated Abuse Among Alaska Children, By Type of Abuse
 (Annual Average, 1994-1998 and 1998-2002)

Rate per 1,000 Children under 18



Source: Alaska Department of Health and Social Services, Office of Children's Services

Child Injuries

DEFINITION AND SIGNIFICANCE

In this indicator we look at serious and fatal injuries among Alaska children through age 19; “serious” here means requiring hospitalization. Injuries can be either accidental or intentional, but hospitalizations or deaths resulting from illnesses are excluded.

The National Health Account estimates that nationwide in 2000, medical treatment for serious injuries among children and teenagers cost \$19 billion.⁸ Fortunately, rates of accidental injury and death among children nationwide and in Alaska have declined in the past 20 years.

Still, injury rates remain high in Alaska, especially in rural areas and especially among Alaska Native children. Alaska’s rugged terrain, often dangerous waterways, and harsh climate do pose special hazards for children and adults. But simple steps—like requiring children to wear life vests when they’re in boats—could prevent a lot of injuries.

DATA

Accidents were by far the leading cause of death among Alaska’s children in the period 1996-2000, and motor vehicle accidents killed more children than any other single cause.⁹ Deaths from suicide and assault ranked second and third as causes of injury death.

Falls were the leading cause of serious (but non-fatal) injuries to children in much of the state in 2000, as was also true nationwide.¹⁰ But in four areas—the Northwest Arctic, Norton Sound, Kodiak,

and the Fairbanks borough—suicide attempts hospitalized more teenagers than any other single cause. In the Bristol Bay and Copper River regions, snowmachine and ATV accidents were the leading cause of injuries. Other statistics reported by government agencies include:

- Alaska Native children and teenagers have an accidental death rate 2.4 times higher than the rate among non-Native children.¹¹
- Suicide rates are six times higher, and attempted suicide rates four to five times higher, among Native teenagers than among non-Natives.¹²

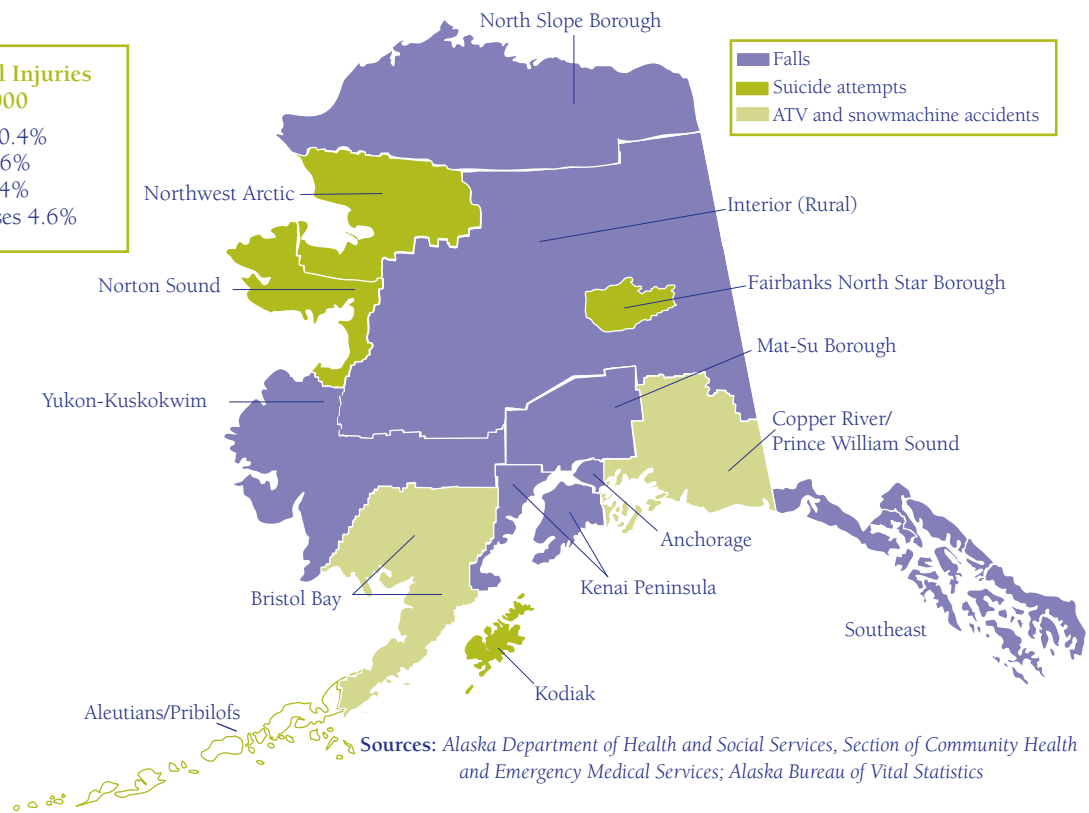
• Children in rural Alaska are killed by ATV, snowmachine, and boating accidents at rates more than four times higher than children living in Anchorage, Fairbanks, and Juneau.¹³

• American Indian and Alaska Native children have the highest unintentional injury death rate in the nation, with Black children a close second.¹⁴

Leading Causes of Serious (Non-Fatal) Injury, Alaskans 19 and Under, By Region, 2000

Causes of Fatal Injuries 1996-2000

1. Accidents 60.4%
2. Suicide 22.6%
3. Assault 12.4%
4. Other Causes 4.6%



DEFINITION AND SIGNIFICANCE

The U.S. Centers for Disease Control and Prevention sponsors national and state Youth Risk Behavior Surveys, which monitor things high-school students do that can risk their health or cause injuries. The survey asks teenagers to report their use of tobacco, alcohol, and drugs; their sexual activity; their use of seatbelts and other safety measures; their levels of physical activity; and their involvement in fighting or carrying weapons.

This survey provides the most comprehensive information available about teenage behavior. The survey results not only show levels of and trends in risky behavior among teenagers, but also provide information that school districts, health organizations, and others can use to try to reduce such behavior.

DATA

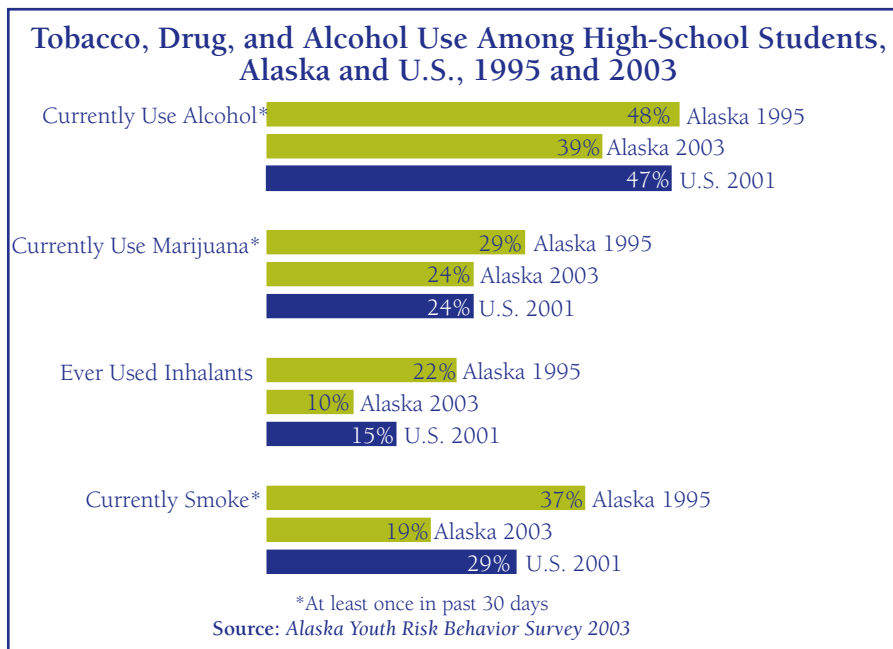
Alaska school districts statewide took part in Youth Risk Behavior Surveys in 1995 and 2003.¹⁵ The figures on this and the facing page compare 1995 and 2003 Alaska survey results and 2001 national results.

The news about Alaska high-school students is mostly good, in the sense that it shows falling levels of several kinds of risky behavior. Still, many Alaska teenagers still smoke, drink, carry weapons, and do other things that put them or other people at risk.

- The share of Alaska students who drink dropped from 48 percent to 39 percent between 1995 and 2003—so by 2003, Alaska students were considerably less likely to drink than students nationwide.

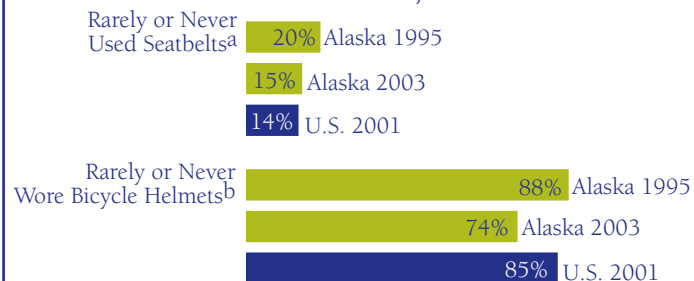
- Use of inhalants—like gasoline fumes—among Alaska high-school students dropped by more than half in less than 10 years. In 2003, about 10 percent of Alaska students had ever used inhalants, compared with 15 percent nationwide.
- Marijuana use among Alaska students also dropped, with current users dropping from 29 to 24 percent between 1995 and 2003. Students nationwide and in Alaska are about equally likely to use marijuana.
- Smoking dropped nearly 50 percent among Alaska students, with current smokers down from 37 percent in 1995 to 19 percent in 2003. Students nationwide are now significantly more likely to smoke than Alaskans.

- Alaska teenagers were less likely to have sex and more likely to use condoms in 2003 than in 1995. That corresponds with national trends that analysts cite as bringing down the teen birth rate.¹⁶
- Carrying weapons and fighting were less prevalent among Alaska teenagers—both boys and girls—in 2003. Still, almost a third of high-school boys said they had carried weapons in the month before the survey and more than a third had been in fights in the previous year.
- Most Alaska students use seatbelts when they ride in cars, but a sizeable share—15 percent in 2003—don't.
- Use of bicycle helmets among high-school students did increase in recent years. But in 2003, 74 percent of Alaska students and 85 percent of students nationwide still reported that they rarely or never wore bike helmets.



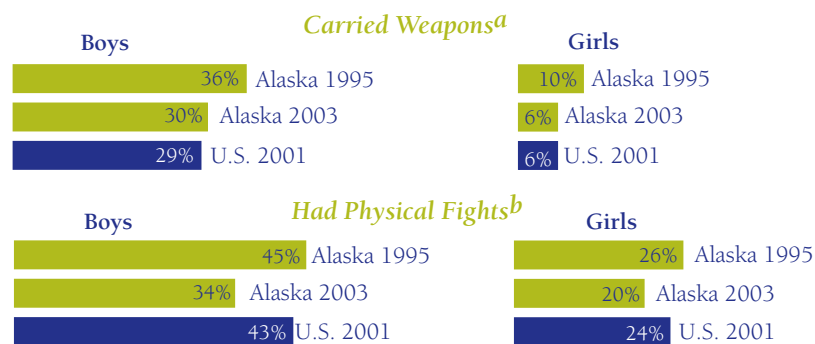
Youth Risk Behavior (continued)

Helmet and Seatbelt Use Among High-School Students, 1995 and 2003, Alaska and U.S.



^aRiding in car driven by someone else. ^bAmong those who rode bicycles in previous year.
Source: Alaska Youth Risk Behavior Survey 2003

Carrying Weapons and Fighting, High-School Students, 1995 and 2003, Alaska and U.S.



^aWithin past 30 days ^bWithin past 12 months
Source: Alaska Youth Risk Behavior Survey 2003

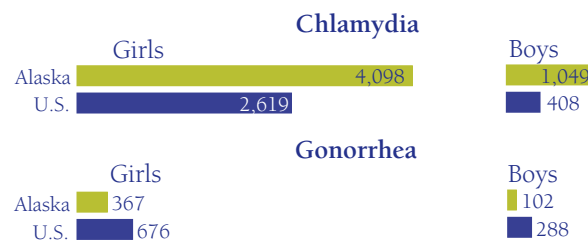
SEXUALLY-TRANSMITTED DISEASES AMONG TEENAGERS

Alaska had the highest rate of chlamydia in the nation in 2003, and the rate was especially high among teenagers and young adults. Chlamydia is a sexually-transmitted bacterial infection that often has no symptoms, but if left untreated can cause pelvic inflammatory disease and infertility in women. Girls 15 to 19 in Alaska had chlamydia at a rate of nearly 4,100 per 100,000 in 2003, compared with a rate of about 2,600 among teenage girls nationwide. Teenage boys in Alaska had chlamydia at a much lower rate—about 1,050 per 100,000—but that rate was still more than double the rate among boys nationwide.

By contrast, teenagers in Alaska are only about half as likely as teenagers nationwide to have gonorrhea, another sexually-transmitted bacterial infection that can lead to pelvic inflammatory disease and fertility problems if left untreated. Again, rates are highest among teenagers and young adults. As the figure below shows, girls 15 to 19 in Alaska had gonorrhea at a rate of 367 per 100,000, compared with 676 per 100,000 among girls nationwide. Among boys 15 to 19, the gonorrhea rate in Alaska was 102 per 100,000, compared with 288 per 100,000 nationwide.

Chlamydia and Gonorrhea Rates Alaska and U.S. Teenagers, 2003*

(Rates per 100,000 teens ages 15-19)



*National figures are for 2002; 2003 figures are not yet available.

Sources: Alaska Epidemiology Bulletin #13 and #14; Centers for Disease Control and Prevention, Division of STD Prevention.

¹In particular, rates of accidental death among Alaska Natives have declined in recent years; see Scott Goldsmith and others, *Status of Alaska Natives 2004*, Institute of Social and Economic Research, University of Alaska Anchorage, pages 3-20 to 3-22.

²See, for example, the Statewide Council on Suicide Prevention's draft plan at: www.hss.state.ak.us/suicideprevention

³See note 2 above.

⁴We use Alaska's most current population estimates as the basis for calculating the five-year averages; the resulting rates are somewhat different from the national Kids Count calculations for Alaska.

⁵Information on numbers and rates of violent death within Alaska provided by Mike Matthews, an analyst with the Alaska Bureau of Vital Statistics.

⁶Alaska Department of Labor and Workforce Development, Research and Analysis Section, *Alaska Population Overview: 2001-2002 Estimates*, page 38.

⁷The Office of Children's Services plans to have a new database system in place by late 2004. For a discussion of the expanded race categories from the 2000 census, see *Status of Alaska Natives in 2004* (full citation in note 1), Appendix A.

⁸National Health Accounts, *Medical Expenditures Attributable to Injuries—United States, 2000*, MMWR Weekly, January 16, 2004/ 53(01); 1-4. These estimates include the U.S. based military and institutionalized populations and are calculated by multiplying the NHA estimate of U.S. medical expenditures in 2000 by the percentage of medical expenditures attributable to injuries, estimated by the Medical Expenditure Panel Survey.

⁹Personal communication from Phillip Mitchell, Alaska Bureau of Vital Statistics.

¹⁰National Safe Kids Campaign, *Report to the Nation: Trends in Unintentional Childhood Injury Mortality, 1987-2000*, May 2003.

¹¹Division of Public Health, Alaska Department of Health and Social Services, "Injury Disparities in Alaska," in *Alaska Injury Facts* No. 1, May 2003.

¹²Alaska Area Native Health Service, *Special Reports: Key Facts*, August 2001.

¹³Division of Public Health, Alaska Department of Health and Social Services, "Children's Injury Disparities in Alaska," in *Alaska Injury Facts* No. 2, May 2003.

¹⁴U.S. Indian Health Service, *Trends in Indian Health 1997* Washington, D.C. 1997.

¹⁵Many Alaska school districts did take part in a survey in 1999, but the Anchorage School District did not. Because more than 40 percent of the state's students attend Anchorage schools, the 1999 survey results didn't provide a representative state sample.

¹⁶See figure in Teen Birth Rate indicator.

HOW IS ALASKA WORKING TO PREVENT INJURIES TO CHILDREN?

To help make Alaska children safer, the Alaska Section of Community Health and Emergency Medical Services sponsors a number of educational programs and provides safety equipment.

- The Child Passenger Safety program offers child-safety seat inspections, provides education workshops for public health groups, and distributes child-safety seats to Medicaid-eligible children.
- The Injury Prevention In A Bag program trains community health aides, public health nurses, and others who may visit homes for medical purposes to also show families ways to make their homes safer and to distribute electrical outlet covers, door latches, and smoke detectors.
- The Kids Don't Float program is designed to prevent children from drowning and to increase public awareness about water safety. Program officials report that the program operates at 370 sites around Alaska and that it has saved at least nine lives since 1998. The program loans children life vests, at no charge, at harbors and boat ramps. It also provides water safety training to high-school students, who in turn offer water safety classes to elementary school children.

For more information on children's safety programs, go to the Injury Prevention Web site: http://www.chems.alaska.gov/Injury_Prevention/default.htm