CHAPTER 4

Health

• Health facts at a glance • Discussion of selected health data • Issues and implications

"I can remember a time in Alaska when the only role for a Native person in the federal health system was to be a patient. Other than a few menial jobs, we had no part in the policy-making or the delivery mechanism. But look at the situation today, more than 30 years later. Our own tribal organizations are running almost the entire Alaska Native Health Service - its hospitals, clinics, health aides, nurses, doctors, technicians and administrators - on contract to the United States. It is Native institutions that make the decisions, and they provide several thousand jobs throughout the state. And now, in 2003, we are so accustomed to this reality that we forget what a miracle we have witnessed in such a short period of time."

--Willie Hensley, April 2003, to a gathering in Washington, D.C., in celebration of President Nixon's promulgation of the Indian Self-Determination policy more than 30 years earlier.

Alaska Native Health Facts at a Glance

Alaska Natives have witnessed major changes in the provision of health care. Recent health indicators show the progress made in health over the last four decades (1960's through 1990's):

- A new Alaska Native Medical Center in Anchorage was opened in 1997 and is operated by the Alaska Native Tribal Health Consortium.
- The Community Health Aide system has expanded to more than 170 villages.
- In recent years, 81% of Native children have been immunized for many of the common childhood diseases - a higher rate than for the entire United States.
- Native life expectancy increased from 46.4 years in 1950 to 69.5 years in 1997.
- Native infant mortality rates have decreased.
- Contributing to the decrease in diseases like tuberculosis and hepatitis are additions to housing units and improvements in safe water and sewer. Nearly 3700 new housing units were built in remote Alaskan communities in the late 1990's. 77% of rural homes had safe water and sewer by 2003.

Even with the progress made, the data indicate new and continuing disparities in the health condition of Alaska Natives, compared to the non-Native population. Many of the health disparities seem to be closely related to alcohol abuse and changes in dietary patterns:

- Native rates of Fetal Alcohol Spectrum Disorder (FASD) doubled, from 2.5 cases per 1,000 births in the late 1980's to 5 cases per 1000 births in the late 1990's.
- Alcohol and other substance abuse contribute to child abuse and neglect, domestic violence, sexual assault and incarceration.
- More than one-third of all prison inmates in Alaska are Natives, almost double the percentage of Natives in the total population.
- Native teen birth rates, smoking rates and use of marijuana are higher than those of non-Natives.
- About 40% of Alaska Natives smoke cigarettes, and many use smokeless tobacco.
- Thirty percent of Natives are considered obese, up from 20% in 1990's.
- Alaska Native diabetes rates doubled between 1985 and 1999.

Discussion of Selected Data from the Status of Alaska Natives Report 2004

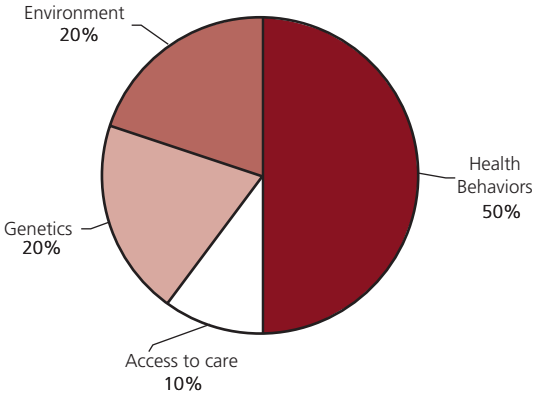
This chapter presents key facts and findings on Alaska Native health. The World Health Organization defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."[23]

During the course of this project, however, the Policy Center discovered that Natives do not

necessarily agree with that definition. In the discussions, and in meetings with the Project Team, the Policy Center discovered that Alaska Natives look at health and wellness as two aspects that are very much connected. Health implies the treatment and prevention of disease of a physical nature. Wellness implies a more holistic approach to well-being and requires inclusion of mental and spiritual health of a person.

As Figure 4-1 indicates, health *behaviors* account for 50% of how long people live. How much people eat and exercise - whether they abuse alcohol, use other drugs, or smoke cigarettes – affects how long they live. Other factors of how long people live include genetic inheritance, which is something over which no one has control. Another factor is environment (food, housing, sanitation, marine contamination, global warming, or toxic PCB's in the ground). The last factor in determining how long a person lives is access to health care, the ability to get to a Health Aide, a doctor, a nurse or a hospital when sick.

Figure 4-1. What Determines How Long People Live?



Source: U.S. Center for Disease Control.

Source: ISER, Status of Alaska Natives Report, 2004, page 3-16

The following section discusses Alaska Native health. Notice that many of the health data have improved but there are continuing disparities when compared with the larger population. Notice that many of the health data are related to behaviors and individual choices. Programs that address many of these issues will be highlighted in this section. Six major health categories are discussed: Access to health care and living conditions, general health indicators, health of Alaska Native teens, social health, Alaska Native suicide rates, and alcohol.

Access to Health Care and Living Conditions

Access to Health Care

Since Alaska Statehood in 1959, the Native health care system has seen major improvements in the quantity and quality of hospitals, village clinics, health aides, and telemedicine in rural Alaska. These changes (more housing, less crowded conditions, more sanitary conditions) can help prevent disease and have contributed to many of the improvements in health indicators. Two examples of programs that have been put into place to improve access to health care include the Community Health Aide Program and telemedicine.

Community Health Aide Program

The Community Health Aide Programs (CHAP), operated by various tribal organizations across the state, began in the 1950's. It now consists of approximately 500 Community Health Aides and Community Health Practitioners in over 170 rural villages that have been selected by their communities to receive training. Community Health Aides are integral parts of a referral process, which includes mid-level providers, physicians, regional hospitals, and the Alaska Native Medical Center in Anchorage. In collaboration with the Community Health Aide Program, providers such as public health nurses, physicians and dentists visit villages to see clients in rural Alaska.

Community Health Aides provide the following services while maintaining a village clinic: acute care evaluation and treatment

for common medical problems; emergency care; preventive care; prenatal, well-child monitoring and immunization; health surveillance; and chronic disease monitoring, evaluation and referral.

--Heart, Victorie. CHAP Consultant. Alaska Native Tribal Health Consortium. Personal Interview. (2004, June 21)

Telemedicine

The Alaska Federal Health Care Access Network (AFHCAN) project is operated by the Alaska Native Tribal Health Consortium. The project's goal is to bring better health care to Alaskans in rural areas, using telemedicine technologies.

Through AFHCAN, health care in rural Alaska is more accessible. Effective use of the AFHCAN technologies reduces costs of health service delivery. Telemedicine has allowed clinics to triage patients effectively; patients are seen faster and referred directly to Anchorage, when needed, for services. In addition to improved access to health care, the AFHCAN reduces costs by either mitigating the need for patient travel or referring patients directly to the care they need.

--Alaska Native Tribal Health Consortium. The Alaska federal health care access network webpage.

Compacting

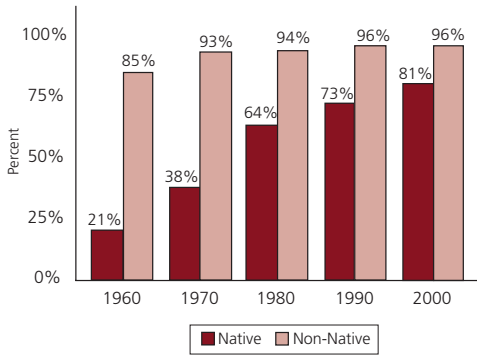
"The Alaska Native Tribal Health Consortium, which operates the Alaska Native Medical Center in Anchorage, is a brilliant example of Native self-determination. It demonstrates how competing interests can come together for the benefit of an entire people. The development of one statewide health compact (with many co-signers) between the Alaska Native tribes, regional health organizations and the Indian Health Service brought huge increases in operational flexibility and in federal funds to tribal health care and was a model of unified effort for tribes nationwide. The unifying experience of Compacting also helped make contracting of the new Native Medical Center flow more smoothly. These are remarkable achievements."

--Will Mayo, June 2004, Alaska Native Policy Center Project Team.

Rural Water and Sewer Systems

In the 1970's, the federal and state governments spent about $135 million to improve rural water and sewer systems. Between 1980 and 2003, they spent more than $1 billion on further improvements, most of it ($840 million) since 1990.

Figure 4-2. Percentage of Housing Units with Complete Plumbing, Native and Non-Native Households, 1960-2000



Source: U.S. Census; ISER, Status of Alaska Natives Report, 2004, page 4-73

Between 1960 and 2000, the percentage of Native houses with complete plumbing (running water in the kitchen and bathroom and a flush toilet) increased by almost four times. The percentage of non-Native houses with complete plumbing also increased, but not nearly so sharply.[24]

- In 1960, 21% of all Native houses had complete plumbing, compared with 85% of non-Native houses.
- By 2000, 81% of all Native houses had complete plumbing, compared with 96% of non-Native houses.
- By the end of 2003, 77% of homes in rural Alaska had complete sanitation systems (of various

types). 32 small, rural communities still lack piped water and sewer systems; and in 23 other rural communities, less than 30% of houses have piped systems.

While there is still a gap between Native and non-Native homes, this is a major step forward for rural Alaska. Provision of clean drinking water and sanitary sewage disposal are two important public health steps that society can take to prevent disease.

In 2003, planning, design, and construction of new systems (or improvements and expansion of existing systems) are underway in 156 communities. The Alaska Department of Environmental Conservation predicts that 87% of all rural homes in Alaska will have complete sanitation systems by 2007.[25]

"State and Federal governments have provided the dollars to make the improvements in Alaska Native housing and living conditions. But, without Native advocacy in these areas, and support from Alaska's Congressional delegation, we would not have seen these changes."

--Comment from discussion series on Health, November 2003.

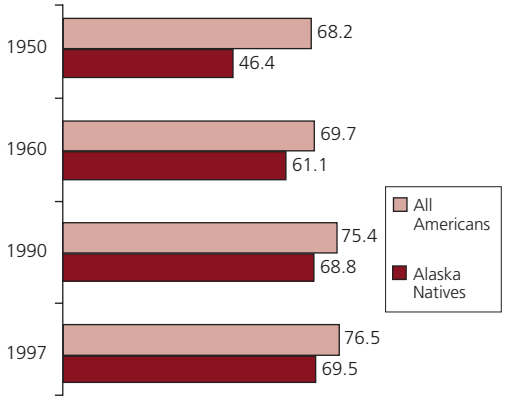
General Health Indicators

Life Expectancy

Figure 4-3 shows how Native life expectancy has increased in recent decades, largely due to improved and expanded health care.

- In 1950, the average Native Alaskan could expect to live 46.4 years, while the average American could expect to live to 68 years.
- With the great effort on eradicating TB and other infections, the life expectancy of Natives born in 1960 had increased by almost 15 years, to 61.1 years.
- In more recent years, Native life expectancy has continued to increase, but at a slower rate. By 1997, life expectancy for Alaska Natives had grown to 69.5 years.

Figure 4-3. Years of Life Expectancy at Birth



Source: ISER, Status of Alaska Natives Report, 2004, page 3-17; [Alaska Area Native Health Service; Alaska Bureau of Vital Statistics]

Immunizations

Native children are better immunized (81%) than American children generally (77%). Outbreaks of measles among Native children and adults have been cut sharply. Hepatitis A has been stopped in its tracks, and Hepatitis B has been reduced by half.

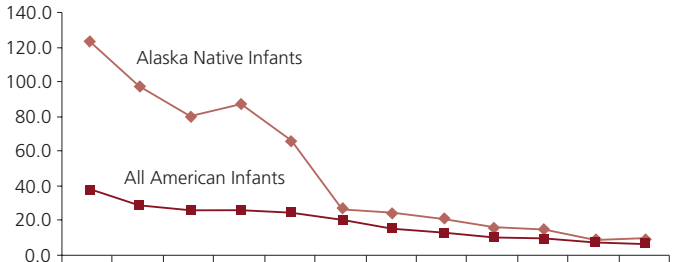
Table 4-1. Two-year Old[1] Immunizations Coverage for Alaska Natives

Vaccine	Alaska Natives Immunized[2]	US Baseline (2000)[3]	Healthy Alaskans 2010 Goal[3,4]
DTaP	87%	82%	95%
Polio	94%	90%	95%
MMR	93%	91%	95%
Hib	92%	93%	95%
HepB	93%	88%	95%
PCV	88%	NA	NA
Varicella	81%	68%	95%

[1] Two year old refers to children 24-35 months.
[2] Source: Resource Patient Management System Reports from 9 Tribal Heath Corporations compiled by the Alaska Native Tribal Health Consortium (ANTHC). Provided by Rosalyn Singleton, Immunization Coordinator, ANTHC
[3] Source: Healthy Alaskans Vol. 1
[4] Healthy Alaskans 2010 goals are for children 19-35 months.

Source: Wells, R. (2004, February). Statewide health profile for Alaska Natives. Anchorage, AK: Alaska Native Health Board, Alaska Native Epidemiology Center.

Figure 4-4. Infant Mortality Rates, Alaska Natives and All Americans, 1945-2000 (Deaths per 1,000 Births)



	1945	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000
Alaska Natives	123.7	97.6	79.4	87.0	65.4	26.7	23.9	21.4	16.0	15.1	9.6	9.5
All Americans	38.3	29.2	26.4	25.7	24.7	20.0	16.1	12.6	10.6	9.2	7.6	7.0

Source: ISER, Status of Alaska Natives Report, 2004, page 3-18; [Alaska Native Health Services, August 2002; Alaska Native Health Board]

Table 4-1 on the previous page lists seven diseases for which Alaskan children are immunized. All seven immunizations are required for enrollment of a child in preschool and childcare facilities (for example, Head Start). The first five on the list (all but Hib and Varicella) are required for enrollment in public schools (K-12).[26]

Infant Mortality Rates

"Infancy" is the first year of life, and "Infant Mortality" is the death of a child before his or her first birthday. Figure 4-4 above illustrates a slow decrease in the rate of infant mortality among all American babies over the past 60 years. The decrease for Alaska Native babies, measured over the same time period, has been greater, although there is still a disparity between the populations.

In 1945, more than 120 of every 1,000 Native babies (one out of eight) died in the first year of life. By 2000, the rate had decreased to 9.5 deaths per 1,000 Native infants.[27]

Today, the *gap* between infant mortality rates of Native babies and all babies in the U.S., which had been 85.4 deaths in 1945, has closed to 2.5 deaths on 2000. In less than six decades, Alaska Native infant mortality has been cut by 92.3%.

A fact not shown in Figure 4-4 is that, between 1998 and 2000, only 4.2 Native infants per 1,000 died in the first month of life - a rate actually lower than for all American infants (4.7 per 1,000). But Native infant morality *during the following 11 months of life* remains 5.3 per 1,000, more than twice the rate for all American infants (2.3 per 1,000).

As these data were presented in the Policy Center discussions, people recognized that the main benefit produced by efforts to reduce Native infant mortality tends to show up in the first month of life. But the death rate for Native babies in the following 11 months (when most infants have returned home) remains a challenge. The system of Native health care has begun to concentrate on support of families with new babies back home.

"Is there is a demonstrable relationship between better pre-natal care and declining rates of infant mortality?"

"I think we need to see more detail on the leading causes of infant mortality because the continuing gap between Native and non-Native mortality rates is a problem deserving the attention of policy makers."

--Comments from Health Discussion Series, November 2003, Regional meetings January through May 2004.

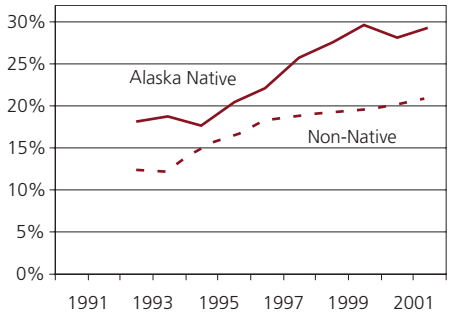
Obesity among Alaska Native Adults

Figure 4-5 on the following page shows that the percentage of Native adults who are considered "obese" increased from 18% to 30% (almost one-third) in just ten years.

Rates of obesity among non-Native Alaskans also increased in the 1990's - from around 12% to over 20%. Obesity is a national problem.

Until the 20th century, Native diets were high in proteins and some fats - and relatively low in sugars and starches. Anecdotally, the Project Team heard that a pattern of changing dietary habits is contributing to the increases in obesity and diabetes.

Figure 4-5. Share of Alaska Adults Who Are Obese, 1991-2002



Note: (Body Mass Index >=30; 3-Year Moving Averages) "body mass index" is a measurement of body fat based on height and weight.

Source: ISER, Status of Alaska Natives Report, 2004, page 3-39; [Behavioral Risk Factor Surveillance System]

"With obesity and diabetes, why have we seen these conditions increase during the past two decades? Is it the availability of sugars and starchy products, like pop and candy, in village stores?"

--Comment from regional meetings, January through May 2004.

"What accounts for striking rises in obesity and diabetes? Availability of sugars and starches in store-bought diets? Changes in active, outdoor lifestyles? Are Native American bodies designed to tolerate sugars, given the absence of sucrose in traditional times? The most important question in diabetic treatment is diagnosing it as early as possible. We need to increase mass screening efforts."

--Comment from Alaska Native Perspectives Class, April 2004.

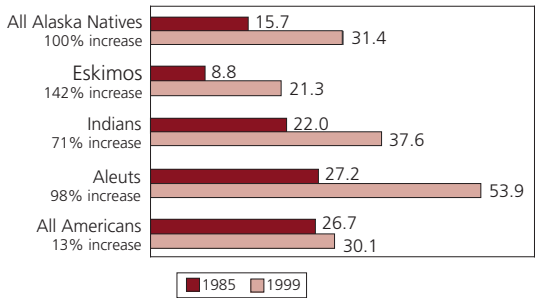
Diabetes among Alaska Natives

Poor diet, inactivity and obesity put any adult at great risk of contracting diabetes. Diabetes is dangerous. It can cause kidney failure, blindness, problems of blood flow that lead to the amputation of limbs, and early death.

Health professionals have become worried about the increase of diabetes among Alaska Natives, which you see in Figure 4-6. Alaska Native diabetes rates doubled between 1985 and 1999 - just 15 years - from 15.7 to 31.4 cases per 1,000 people.

Why has this happened? Perhaps it has to do with the way that contact with non-Natives has changed Native diets over time. One diabetes expert notes that the Aleut people have had the longest history of contact with western influence, starting with the Russians. They also have the highest rate of diabetes among all Alaska Natives - 53.9 cases per 1,000 people (5.39% of their population). Eskimo people were the last to be impacted by non-Natives, and in 1985 they had a diabetes rate of only 8.8 cases per 1,000. But, that rate went up to 21.3 cases per 1,000 by 1999.[28]

Figure 4-6. Growing Rates of Diabetes among Alaska Natives, 1985-1999



Note: Rate per 1,000 people.

Source: ISER, Status of Alaska Natives Report, 2004, page 3-40; [Indian Health Service, Alaska Area.]

Regions are fighting this disease [diabetes] and bringing awareness to the issue. For example, Norton Sound Health Corporation's Chronic Care Active Management and

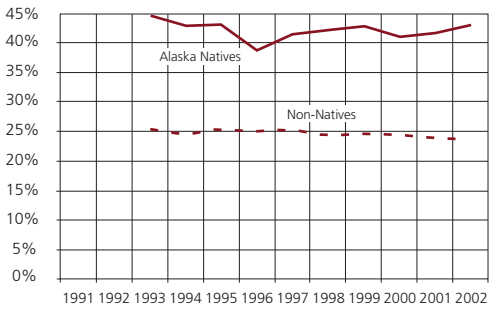
Prevention (CAMP) Program sponsored Joe Garnie of Teller in his Iditarod Race 2004. Their message was "Traditional living prevents diabetes. The exercise, nutrition and sharing that come with gathering and eating traditional Native foods can help keep you healthy—physically, mentally, and spiritually!"

--Elders and Youth Conference in Nome, February 2004.

Tobacco Use among Alaska Native Adults

Alaska Natives are more likely to smoke than non-Natives in Alaska, as Figure 4-7 shows. From 1991 through 2002, between 38 and 45% of Alaska Native adults smoked, compared with 25% or less of non-Native adults. Smoking is a risk factor for lung cancer, other cancers, other lung diseases (like emphysema), strokes and heart disease.[29]

Figure 4-7. Share of Alaska Adults Who Smoke, 1991-2002



Note: Based on 3-Year Moving Averages

Source: ISER, Status of Alaska Natives Report, 2004, page 3-38; [Behavioral Risk Factor Surveillance]

Among Alaska Natives, 15% of men reported using smokeless tobacco products, compared to 8% of non-Native men. Among women, 10% of Alaska Native women use smokeless tobacco, compared to less than 0.5% of non-Native women. The Alaska Native Health Board operates tobacco prevention programs to reduce the addiction, disease, and death caused by tobacco use in Alaska. Through these programs, technical assistance and other resources are available for communities, schools, organizations and individuals involved with tobacco prevention and intervention efforts.[30]

Leading Causes of Death among Alaska Natives

Table 4-2 on page 50 shows health conditions that are the leading causes of death among Alaska Natives. The numbers of Native deaths per 100,000 of population are given in five-year periods, from 1979 to 1998, in the upper half of the table. Comparative death rates for White Americans are shown in the lower half. The far right-hand column is the most important indicator of trends. The data indicate decreases in homicides, pneumonia/influenza and unintentional injuries.

The data also indicate increases in:

- Chronic Obstructive Pulmonary Diseases (emphysema, chronic bronchitis, asthma, etc. - often related to smoking).
- Diabetes (often related to diet, lack of exercise, and obesity).

Abuse of alcohol is a risk factor for cirrhosis of the liver and for other causes of death, including homicides, suicides and unintentional injuries. Because it is linked to very high rates of Fetal Alcohol Spectrum Disorder (FASD), child abuse and neglect, domestic violence, sexual assault, violent deaths and imprisonment, alcohol is a continuing issue of health and wellness in the Alaska Native community.

Alaska Native Death Rates

In the period between 1979 and 1983, the annual Native death rate was 944.8 deaths per 100,000 of population. But between 1994 and 1998, that decreased by 20%, to 757.9 per 100,000 per year. The death rate of White Americans also decreased in that period. Despite the decline, Natives are far more likely than other Alaskans to die at any age.

Table 4-2. Leading Causes of Deaths, Alaska Natives and Whites Nationwide

Rates among Alaska Natives (Cases per 100,000 population)					
Cause of Death	**1979-1983**	**1984-1988**	**1989-1993**	**1994-1998**	**% Change**
Cancer	153.3	172.3	155.6	171.0	12%
Cerebrovascular Diseases	32.4	39.5	34.6	38.0	17%
Chronic Liver Disease and Cirrhosis	25.1	18.4	23.0	6.7	NS
Chronic Obstructive Pulmonary Diseases	12.8	25.8	31.2	37.2	191%
Diabetes Mellitus	3.4	6.9	12.7	12.3	262%
Heart Disease	152.6	168.3	147.2	140.0	NS
Homicide and Legal Intervention	37.0	25.6	21.0	15.2	-60%
Pneumonia and Influenza	29.2	32.1	29.3	18.9	-35%
Suicide	43.4	53.4	52.9	47.0	NS
Unintentional Injuries	188.2	168.2	131.7	107.1	-43%
Total, All Cases	**944.8**	**890.4**	**804.7**	**757.9**	**-20%**

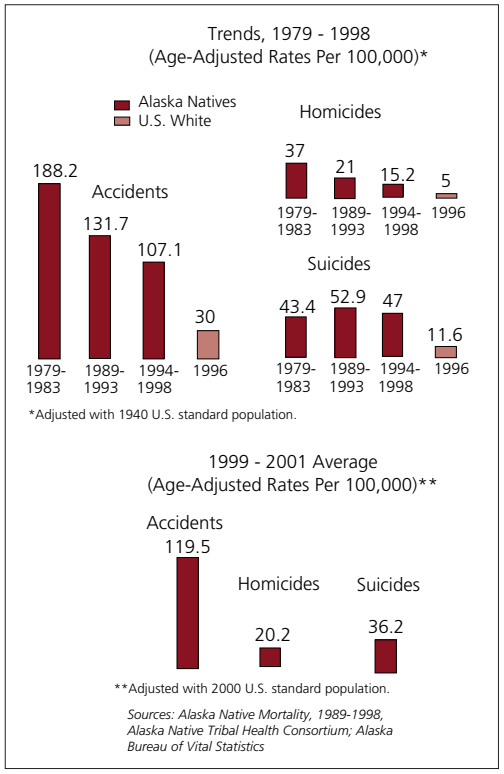
Rates among White Americans, Nationwide (Cases per 100,000 population)					
Cause of Death	**1981**	**1986**	**1991**	**1996**	**% Change**
Cancer	128.6	131.0	131.3	125.2	-3%
Cerebrovascular Diseases	35.7	28.9	24.7	4.5	-31%
Chronic Liver Disease and Cirrhosis	10.5	8.6	7.8	7.3	30%
Chronic Obstructive Pulmonary Diseases	16.8	19.3	20.6	21.5	28%
Diabetes Mellitus	8.9	8.6	10.5	12.0	35%
Heart Disease	191.4	171.0	143.1	129.8	-32%
Homicide and Legal Intervention	6.6	5.7	6.2	4.9	-26%
Pneumonia and Influenza	11.6	13.0	12.8	12.2	5%
Suicide	12.3	12.8	12.1	11.6	-6%
Unintentional Injuries	39.3	34.6	30.3	29.9	-24%
Total, All Cases	**544.8**	**520.1**	**486.8**	**466.8**	**-14%**

NS = not significant; +- Chi Square Test for Trend significant at p<0.05
Source: Alaska Native Mortality, 1989-1998, Alaska Native Tribal Health Consortium, August 2002.

Source: ISER, Status of Alaska Natives Report, 2004, page 3-23

Between birth and five years, Natives are almost three times more likely to die than White Alaskans; and the same is true between 15 and 24 years of age. It is even worse among Native young adults (25-34 years old), who die at nearly four times the rate of White Alaskans their age. A principal reason for this is that many violent deaths (homicides, suicides, accidents) occur in this age group. There are many more violent deaths among Alaska Natives of all ages than for other Alaskans and Americans, as illustrated in Figure 4-8.

Figure 4-8. Violent Deaths among Alaska Natives and U.S. White Population



Source: ISER, Status of Alaska Natives Report, 2004, page 3-21

Native deaths by accidents decreased by about 40% from the early 1980's to the late 1990's. Major causes of accidental deaths in rural Alaska include motor vehicle crashes (cars, trucks, snow machines, four-wheelers, etc.); drowning; accidental poisonings (including unintentional alcohol/drug overdoses); boat and airplane accidents; huffing; and accidental exposure to pesticides or other chemicals.

Much of the recent drop in accidental deaths is due to injury prevention programs operated by Native health institutions (life vests in boats, seat belts in cars and trucks, helmets on snow machines and four-wheelers, etc.). But Native rates of accidental deaths remain more than twice the rates for other Alaskans.

Native suicide and homicide rates from the early 1980's to the late 1990's are harder to understand because the data involve much smaller numbers of deaths than do accidents:

- Homicides went down in those 20 years - but increased after 1999.
- Suicides went up and down between 1979 and 1998, but then decreased to 36.2 deaths per 100,000 of population after 1999.

No one can predict whether declines in Native homicides and suicides will continue in the future. Although the rates appear to not have increased, they remain three to four times the rates for White Americans.

The Health of Alaska Native Teens

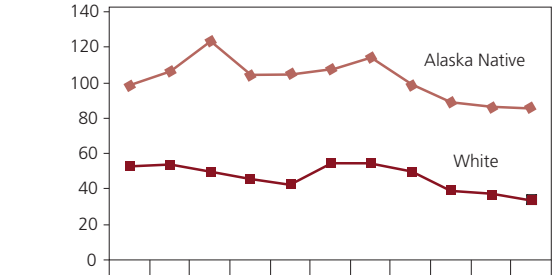
Alaska Native Teen Birth Rates

As shown in Figure 4-9 on the following page, birth rates among Alaska's Native and White teenage girls (15 to 19 years old) declined slowly between 1980 and 1999.

Native teen pregnancies dropped from a 1980 high of 123 per 1,000 girls (about one of every eight) to 85 per 1,000 girls in 1999 (about one of every 12). This is good news because teenage mothers face many obstacles: many do not get support from the fathers of their babies; often, they do not finish high school; and they (and their babies) are much more likely to be poor than are families with two parents.

Despite these improvements, a gap still exists between Native and White teen birth rates in Alaska. In 1980, the rate for Native girls was almost twice that of White girls. But by 1999, the Native rate, despite its declining numbers, had become 2-1/2 times that of White girls (whose birth rates had declined even more).

Figure 4-9. Birth Rates, Alaska Native and White Teenage Girls in Alaska, 1980-1999 (Births per 1,000 Girls 15-19)



	1980	1982	1984	1986	1988	1990	1992	1994	1996	1998	1999
Alaska Native	99	107	123	104	105	108	115	99	89	86	85
White	53	54	50	46	43	55	54	50	40	37	34

Source: ISER, Status of Alaska Natives Report, 2004, page 3-19; [Alaska Bureau of Vital Statistics]

"Birthrates for all women are declining, but the birth rate continues to be higher than the statewide rate. The Alaska Native birth rates among teenagers (aged 15-17) are also declining, yet they are consistently higher than all Alaskans."

"Teen pregnancies contribute significantly to high birth rates. There are risks involved during teen pregnancies, including issues with low birth weight and higher risks of child abuse and neglect. Another consideration when looking at high birth rates is that many of the Alaska Native babies being born are diagnosed with Fetal Alcohol Syndrome."

--Comments from Health Discussion Series, November 2003.

"What age group(s) of teen girls is most vulnerable to becoming pregnant?"

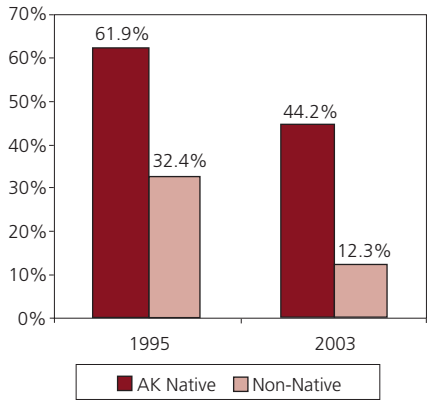
--Comments from regional meetings, January through May 2004.

Tobacco Use among Alaska Native Teens

Because of national campaigns of health education, smoking has decreased in America; and this is true among teenagers as well as adults.

- As Figure 4-10 shows, in eight years, smoking among Alaska Native teenagers declined by almost one-third (from 61.9% in 1995 to 44.2% by 2003).
- Smoking rates among Alaska's White teens also dropped in those years, by more than one-half.
- But the Native rate is still 3.6 times as high as the White rate. Despite declines, teen smoking among Natives remains dangerously high.
- In addition, one-third of Native high school males, and nearly one-fifth of Native high school females, use smokeless tobacco - far more than other Alaskan high schools students do.

Figure 4-10. Share of Alaska High-School Students Who Smoke, 1995 and 2003



Source: ISER, Status of Alaska Natives Report, 2004, page 3-24; [Alaska Youth Risk Behavior Survey, 1995 and 2003.]

"Data on inhalant use, especially by children and adolescents, should be included in future research."

--Comment from regional meetings, January through May 2004.

Alcohol and/or Drugs Use among Alaska Native Teens

Table 4-3 shows results of a study of alcohol and drug use among Alaska high school students in 1995 and 2003. The data come from the answers that teenage students in selected school districts gave about their own behaviors that put good health at risk.

The most common substance abuses among all Alaskan teenagers are:

- drinking alcohol,
- smoking marijuana, and
- sniffing inhalants ("huffing").

Native teens were more likely than other teens to smoke marijuana (at least once in the preceding 30 days). The Native use rate went up between 1995 and 2003, while the non-Native rate went down. By 2003, marijuana use involved 36% of all Native high school students surveyed.

Table 4-3. Alcohol and Drug Use among Alaska High-School Students, 1995-2003

	1995	
	Native	Non-Native
Current Marijuana Use [a]	29%	29%
Ever used inhalants	19%	23%
Binge drinking [b]	31%	31%

	2003		
	Native	Non-Native	U.S.
Current Marijuana Use [a]	36%	21%	24%
Ever used inhalants	10%	10%	15%
Binge drinking [b]	27%	27%	30%

[a] Used at least once in past 30 days
[b] Had five or more drinks within a few hours, at least once in past 30 days

Source: Alaska Youth Risk Behavior Survey, 1995 and 2003, a joint project of Alaska Departments of Education and Early Development and Health and Social Services.

Source: ISER, Status of Alaska Natives Report, 2004, page 3-36

Some good news indicated by the data is that binge drinking (five or more alcoholic drinks in a short period of time) and use of inhalants dropped among all teens in Alaska between 1995 and 2003. Despite modest decreases, binge drinking remains a very serious problem, as you see from the percentages.

The decline in inhalants has been even larger, but the fact that one out of every 10 Alaskan teenagers still huffs is unacceptable - because the results can be brain damage, organ failure and death.

Many rural residents are worried about inhalant abuse among pre-teens as well. One official with a Native health corporation has described inhalant abuse as Alaska's "silent killer." There were nine reported deaths in Alaska from inhalants during the 1990's, but this does not estimate the number of inhalant deaths that were not reported. Among young people, the difficulty of getting alcohol or illegal drugs may be one of the reasons why they turn to substances that are available.[31]

Why do Drugs and/or Alcohol?

"Boredom, there is nothing else to do, especially after school when most of the drinking/drug using takes place."

"Students are not aware of the dangers of using drugs and alcohol."

"Nobody stops students from using drugs or alcohol."

What can be done to address this issue?

"More resources and support services (we want to know that services are available to us, or are for us)."

"We felt that public campaigns against drug and alcohol abuse are too generalized and do not target us. There is a feeling that the campaigns don't alert us to the danger of drug and alcohol abuse, even when we or our friends are right in the midst of it. OR, we don't see the campaigns relating at all to us."

"Parents and adults (caring people) coming to talk to students about drugs and alcohol."

--Comments from presentation to Alaska Association of Student Governments, April 2004.

Social Health

The issues of alcohol, drugs, and the effects of substance abuse were discussed in several of the Policy Center meetings. Participants were not satisfied with the data alone; they wanted to understand the root causes, why Alaska Natives continue to struggle with alcohol and substance abuse. Participants shared personal stories during these discussions. They said this is not an easy subject to discuss; however, if Natives do not confront the deeper issues that seem to give rise to the alcohol and substance abuse, the problems will not go away. Some felt that using traditional healing practices, through spirit camp activities, would be a better way to address the root causes of the problems, not just the symptoms.

Alaska Natives in Prison

Alcohol abuse plays a role in high rates of imprisonment among Alaska Native people. In a recent report on criminal justice, the Alaska Judicial Council stated: "In rural…Alaskan communities, the amount of violence and crime appears directly proportional to the amount of alcohol consumed by the residents."[32]

- Between 1993 and 2002, the number of Alaska Natives in state prisons increased by 50%. The number of non-Native inmates went up by about 25%.
- Alaska Natives are 19% of Alaska's population, but they made up about 36% of inmates in Alaska prisons during the same period.
- In 2002, 1,338 Natives were in Alaska's prisons, with another 220 Alaska Natives incarcerated in Arizona.
- Also in 2002, almost half of all Native prisoners were young adults between 20 and 34 years old. 94% were men.
- Of 84 Native women in prison during 2002, 36% had committed crimes against people; 17% committed crimes against property; 15% had violated alcohol laws.
- The most common type of offense among Native men was crimes against people. Sexual offenses were second, making up almost one-third of the total. Native men are twice as likely to be imprisoned for sexual offenses as are other men in Alaska.[33]

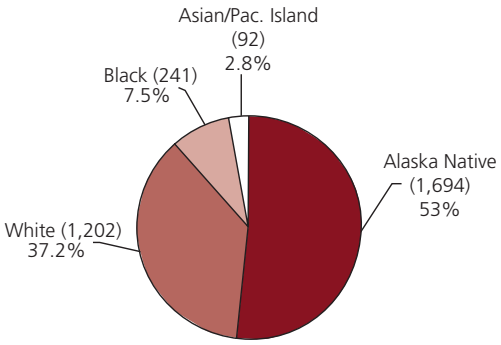
One topic not covered in the data compiled by ISER is the number of juveniles in the justice system. Data on this subject are needed in order to understand the extent of the problem; to see how many young Alaska Natives are in the justice system, to discover why they are there and to determine what will prevent this from happening.

Child Abuse and Neglect

Another serious social problem is child abuse and neglect. The data complied by ISER indicate that four out of every five documented cases of child abuse/neglect in Alaska are alcohol- or drug-related. Figure 4-11 on page 55 shows that between 1997 and 2001, Alaska Native children were far more likely than other children in Alaska to be abused and/or neglected. Native children accounted for 53% of all documented cases in that period, even though they were only about 25% of Alaska's children under 18.

"Abuse" is a direct act that harms a child; "neglect" is a failure to provide something the child truly needs. Figure 4-12 on page 55 shows that almost three out of every four cases among Alaska Natives involved neglect, while 28% involved abuse. While White and Black children in Alaska are less likely to be abused, more of those cases involved abuse than neglect.

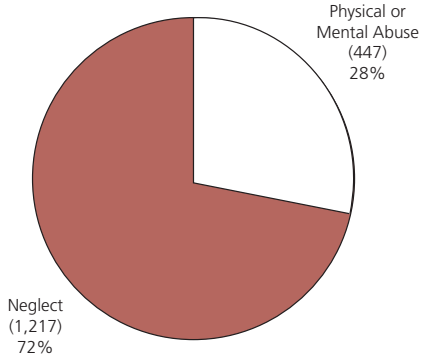
Figure 4-11. Victims of Child Abuse and Neglect in Alaska, by Race (1997-2001) Substantiated Cases, 1997-2001: 3,229



Note: Abuse and neglect among children under 18

Source: ISER, Status of Alaska Natives Report, 2004, page 3-29; [Alaska Department of Health and Social Services, Division of Family and Youth Services]

Figure 4-12. Percentage of Alaska Native Victims of Child Abuse and Neglect in Alaska, Reported Cases (1997-2001)



Note: Abuse and neglect among children under 18.

Source: ISER, Status of Alaska Natives Report, 2004, page 3-29; [Alaska Department of Health and Social Services, Division of Family and Youth Services]

"53% of child abuse/neglect cases occur among Natives, but Natives are 19% of Alaska's population. If this finding is presented by per capita, it will be more accurate and compelling."

--Comments from community meeting in Bethel, March 2004.

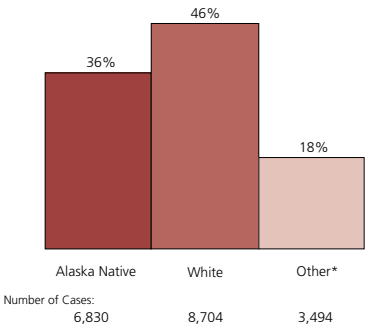
Domestic Violence and Sexual Assault

For all Alaskans, 85% of reported cases of domestic violence between 2000 and 2003 involved alcohol. Alcohol was also present in 80% of sexual assaults in Alaska during the same period. But Alaska Natives - almost entirely women - are the most frequent victims of both offenses. The numbers and percentages of these crimes among Natives, compared to other racial groups in Alaska, are shown in Figure 4-13:

Between 2000 and 2003, 36% of all victims of domestic violence in Alaska were Natives, even though they make up only 19% of all people in Alaska.

Experts also say that the 19,000 cases of domestic violence reported during that period are far below the true number, since so many incidents go unreported.

Figure 4-13. Reported Cases of Victims of Domestic Violence in Alaska, by Race



(Total Reports, 2000-2003: 19,028)
**Includes other races and cases where race of victim was unknown.*

Source: ISER, Status of Alaska Natives Report, 2004, page 3-30; [Council on Domestic Violence and Sexual Assault]

Alaska Native females were 44% (1,173) of all victims of sexual assault in this period. Again, this is likely an undercount because of unreported cases. It is estimated that, in 2000-2001, in Anchorage, Alaska Natives were 7.6 times as likely to be sexual assault victims as were other racial groups. Even though reported cases of sexual assault decreased in this period, the proportion of Alaska Natives who were sexually assaulted increased.[34]

Alaska Native Suicide Rates

Suicide rates among Alaska Natives have not increased in the past ten years, and they may have decreased slightly. But they still remain extremely high, especially in comparison with other Alaskans and Americans:

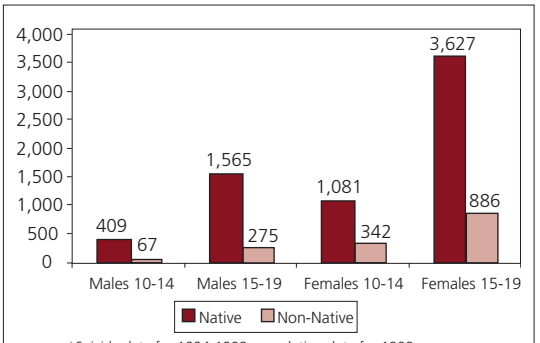
- Alaska Natives commit suicide at three to four times the rate among White Americans throughout the country.
- From 1999 to 2001, suicide was the fifth leading cause of death in the Alaska Native community.
- 75% of the Natives who kill themselves are unmarried men between the ages of 15 and 24; and alcohol is involved in two-thirds of those deaths.
- Young Native women kill themselves at three to four times the rate for young non-Native women in Alaska.
- Native teenagers are several times more likely to kill themselves than are non-Native teenagers in Alaska.

Suicide Attempt Rates among Native Children and Teenagers:

- Native boys, ages 10-14: 6 times that of non-Native Alaska boys in the same age group.
- Native girls, ages 10-14: 3 times that of non-Native Alaska girls in the same age group.
- Native boys, ages 15-19: 5.6 times that of non-Native Alaska boys in the same age group.
- Native girls, ages 15-19: 4 times that of non-Native Alaska girls in the same age group.[35]

Figure 4-14 shows Native females in the age range of 15 to 19 are attempting suicide at a much greater rate than males of the same age group.

*Figure 4-14. Suicide Attempt Rates among Alaska Children and Teenagers 1994-1998 (per 100,000 population)**



*Suicide data for 1994-1998; population data for 1998.

Source: 2001-2006, IN STEP - The Plan, State of Alaska, Department of Health and Social Services, November 2001, p.25.

Sources: U.S. Department of Health and Human Services. Behavioral risk factor surveillance system website. U.S. Center for Disease Control. National Center for Chronic Disease Prevention and Health Promotion. Alaska Department of Health and Social Services. Alaska youth risk behavior survey (2003). Alaska Department of Health and Social Services and Department of Education and Early Development.

Firearms are used in two-thirds of all (Native and non-Native) suicides in Alaska. Firearms are also used in almost two-thirds of all homicides in Alaska. Native men have the highest rate of death from firearms (accidents, suicides, homicides) of any group in Alaska.[36]

"Suicide, especially among Native teenagers and young adults, is hard to discuss. But, even though it is, I think the numbers are too low. Maybe it is because there is misdiagnosis of the cause of death."

--Comment from Youth meeting, Alaska Native Heritage Center, April 2004.

"We need to see more detail on the relationship between suicide and gender."

"Where can we get more information on dealing with family and community consequences of suicide?"

"We need to use methods of prevention before the fact."

--Comments from regional meetings, January through May 2004.

Alcohol

The ***Natives 2004*** report presents data on alcohol, which are summarized below. What is lacking is data on the effects of alcohol on individuals and communities. Alcohol abuse is a continuing major factor in so much of the health data presented in the ***Natives 2004*** report. Complete data on the social, economic and health impacts of alcohol on individuals and communities can help to develop more effective prevention and treatment efforts. According to *Alcohol Alert*, "Patterns of alcohol use and its consequences vary widely among minority groups. Although more research is needed, evidence suggests that prevention and treatment efforts may be more effective when based on an understanding of the ethnic context of drinking behaviors and their development."[37]

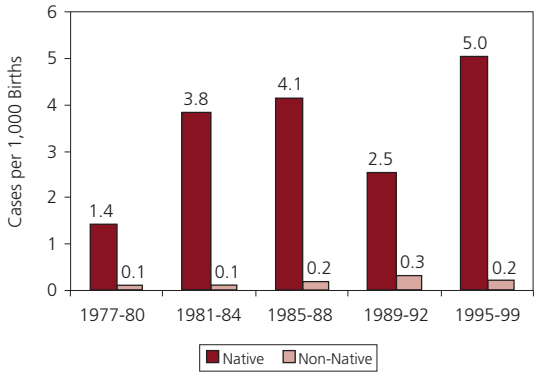
Alaska Natives and Fetal Alcohol Spectrum Disorder

"Fetal Alcohol Spectrum Disorder" (FASD), is an umbrella term describing the range of effects that can occur in an individual whose mother drank alcohol during pregnancy. The term FASD is not intended for use as a clinical diagnosis. FASD happens *only* when women drink during pregnancy.

- It is safe to say that many babies born in Alaska are to some extent affected by prenatal exposure to alcohol. The State of Alaska estimates that at least 126 such babies are born in Alaska, *each year.*
- Alaska has the highest rate of FASD of any state in the U.S., and 89% of those cases are Native babies.
- FASD can cause many different types of problems having to do with health and development, including mental retardation, deficiencies in physical growth, educational problems and behavioral disorders.
- In the last half of the 1990's, five out of every 1,000 Native babies were diagnosed with Fetal Alcohol Syndrome; and no one knows for certain how many other fetal alcohol syndrome babies may have been born, but were not diagnosed.
- It is estimated that the average cost of effective, life-long services to one person with Fetal Alcohol Syndrome is $1.4 million. These services include diagnosis, infant learning programs, health care, special education, adoption, etc.
- Another very expensive cost of FASD is adoption and placement. State agencies report that about 65% of all fetal alcohol children are in state custody or in foster care. Only 23% are living at home with one or more natural parents.
- FASD is 100% preventable, if pregnant women will drink *no alcohol.*[38]

Figure 4-15 shows patterns of diagnosed FASD cases among Natives and non-Native Alaskans since the late 1970's. The large increase in the last half of the 1990's may be due to better diagnostic efforts by state and federal governments and Native institutions of health care. As that effort continues, we can expect higher rates of diagnosed cases in coming years.

Figure 4-15. Fetal Alcohol Spectrum Disorder Rates Among Alaska Natives and Non-Natives, 1977-1999 (Cases per 1,000 Births)



Source: ISER, Status of Alaska Natives Report, 2004, page 3-27; [Alaska Department of Health and Social Services.]

Some progress is being made. In 1998, the Alaska Department of Health and Social Services started the Office of Fetal Alcohol Syndrome for prevention and services. Federal money supports the FAS Surveillance Project, which has created diagnostic teams (physicians, social workers, educators, parents, etc.) that are working statewide to evaluate and diagnose fetal alcohol problems. The State also uses TV, radio and newspaper ads to educate all Alaskans to the dangers of fetal alcohol.

"I understand that diagnosis efforts have identified more cases of FASD. But, I think these numbers are too low."

"Regardless of diagnostics, rates of FASD itself are increasing."

"Is there a Native historical/physiological inability to digest alcohol?"

"FASD diagnosis seems very complex and expensive."

"How can we help FASD children understand their own condition, especially when interacting with other children?"

"FASD births, drug births and HIV births should be added together in order to present a more accurate picture of pre-natal disorders that result from adult behavior."

"Is there a connection between FASD and problems of student misbehavior in school?"

"I'm skeptical of the State of Alaska's commitment on this health problem. I expect instead to see FASD 'punted' to the feds."

--Comments and questions from regional meetings and discussions, January through May 2004.

Alcohol Control

Figure 4-16. Alcohol Control in Small Rural Communities, 2001

Source: ISER, Status of Alaska Natives Report, 2004, page 3-25

Figure 4-16 shows that in 2001, 37% of Alaska's rural communities exercised no control over alcohol. Of the 63% of small rural communities that exercised some degree of alcohol control:

- 3% granted a license to one or more local package stores. ("You can buy it, but only at this one location.")
- 11% banned alcohol sale in the community. ("You can't sell it here.")
- 32% banned alcohol sale and importation. ("You can't sell it or bring it here.")
- 17% banned alcohol sale, importation and possession. ("You can't sell it, bring it, or have it here.")

Other research by ISER in the late 1990's estimated that communities with alcohol controls may have prevented as many as 20% of violent deaths that would have occurred without those controls.[39]

Alaska Natives and Substance Abuse Treatment

The number of Alaska Natives who go into treatment for alcohol or drug addiction has increased in the past decade. This probably results, at least in part, from the fact that people are now willing to go into treatment.[40] More than 90% of treatment admissions were for alcohol, the remainder being for all other drugs.

But there may not be enough dollars, people and facilities to meet the present demand for treatment. Women wait an average of 46 days for a placement, and men wait an average of 40 days. Furthermore, in the current system, there is a lack of support for those who have completed treatment and then are sent back to their home situations.

In the Policy Center meetings, we heard people ask about the need for data that documents the needs assessments for alcohol and substance abuse treatment. This is similar to the data needs reported in the 1994 Alaska Natives Commissions Report: "…needs assessment data, which would inform both the federal and state governments about the incidence and prevalence of alcohol and drug use, and abuse, among Alaska Natives [are missing]. Also missing is a method for collecting information regarding changes in alcohol and drug abuse behaviors, and information relative to perceptions of Alaska Natives as to the ways that local and statewide programs can impact substance abuse… Another set of data related to substance abuse among Alaska Natives [which is lacking] measures the effectiveness of the current system to achieve its goals of reducing, if not eliminating, alcohol and drug abuse, even though many millions of dollars continue to flow through that system each year."[41]

In a recent field review of treatment programs for alcohol abuse, interviews with substance abuse treatment providers and client focus groups were conducted.

Service providers that were interviewed included: Graf Healing Center; Ralph Purdue Center; CATG Yukon Flat C.A.R.E.; Ernie Turner Center; Dena A Coy Future Generations; Behavior Health – PATC; Minto Family Recovery Camp; Maniilaq Addiction and Support Services; Bill Brady Healing Center; and Hudson Lake Healing Camp.

Among the findings of the review, service providers highlighted those programs that were culturally oriented and/or managed by Natives. Many providers stated that the involvement of the community and guidance of Elders was critical to the success of individual treatment experiences of Alaska Natives.

In client interviews, Alaska Natives believed more culture in their treatment would be helpful. Participants also expressed a desire for more Alaska Natives to be involved in their treatment program. Unfortunately, the number of Alaska Native clients far exceeds the number of Alaska Native staff members. Participants also mentioned that substance abuse was often a symptom of other physical and mental abuses.

--Edtl, N. (2002-2003). Healing practices for Alaska Natives: a field review. Anchorage, AK: Alaska Federation of Natives.

Issues and Implications – The Alaska Native Policy Center View

The health data presented in the ***Natives 2004*** report indicate that health improvements have been made where access to health care has improved. These improvements deal with the physical side of health care: prevention, diagnosis and treatment of disease.

The health data also indicate that significant disparities continue to exist between the Native and the non-Native populations (for example smoking, infant mortality, and teen birth rates). There are continuing issues with alcohol and

substance abuse. Additionally, there are new challenges to Native health, such as obesity and diabetes.

When the Policy Center brought selected health data to the discussions and regional meetings, it found that participants were not too surprised by the data. It found that participants seemed to think that the rates on FASD, suicide, and smoking were low. Their everyday experience seemed to indicate higher numbers than what the data indicated. As the Policy Center reviewed the data and feedback from the discussions and regional meetings, the following were identified as health related data that the participants in the discussions and meetings wanted more information about:

- **Relationships in the data** among population, health and education. Participants wanted to see a bigger picture that related different age groups, risk factors that might be present for each of the age groups, and how that might affect education and economic conditions of Alaska Natives. For example, one participant at the education discussion series asked, "What are the future impacts of FASD births, drug births and HIV births on the schools, the workplace and society in general?" Another asked, "What are the economic and social costs associated with FASD (ethical diagnosis and care of children and adults, the cost of that care, the burden placed on the education system, future impacts on the workforce, and the preventability of the problem)?" Many of the participants at various gatherings recommended continued dollars for prevention programs, diagnostic programs and funding for education of children with FASD.

- **Preventive health services**, particularly on matters of behavioral health is important, particularly to reduce levels of tobacco use, abuse of alcohol and/or other drugs, huffing, obesity and AIDS.

- A clearer statistical picture of the extent of **HIV infection** among Alaska Natives. This information must be completely anonymous, and it must be gathered with strict ethical considerations.

"HIV affects individuals in all racial and ethnic groups in Alaska. Although individuals are not at risk of HIV infection due to their race/ethnicity, it is sometimes considered an indicator of other social factors that may influence risk of exposure to HIV.

"In less populous areas of the state, the smaller numbers of people, particularly those in the target populations, as well as lower HIV prevalence, often preclude establishment of AIDS-specific organizations or prevention programs focused exclusively or predominantly on HIV and staffed by HIV prevention specialists. …In rural areas, most HIV prevention efforts must reach out to a broader audience of persons potentially at risk to raise awareness of risk and provide referrals to individualized services for the fewer individuals at higher risk."

--Alaska Department of Health and Social Services. 2004-2006 Alaska HIV Prevention Plan. Division of Epidemiology. Pages 28-29.

- A reliable **data base on adult alcohol consumption patterns** - by communities, regions, genders, age groups, and other important variables is needed to understand the behavior. Further research into the underground economy of drug and alcohol supply is needed, which links to the relationship between substance abuse and criminal behavior and incarceration.

- The **extent of substance abuse**, other than alcohol, including prescription, as well as illicit drugs.

- Information on the **racial composition** of local and state police forces, prosecutors, public defenders, judges and magistrates and how this might affect incarceration rates.

- Comparative **life expectancies** for Alaska Natives at different ages, with different genders, living in different regions and communities.

- Specific health needs and adequacy of current services for **Native veterans,** both men and women, and especially those who have seen combat.

"Some veterans are still experiencing post traumatic stress dysfunction. Most Alaska Native Veterans also do not know that there are some services that they can get as veterans. Some veterans are not getting disability benefits from the VA due to paperwork issues. Some veterans have been exposed to Agent Orange and have other

health issues. The Alaska Native Veterans' Association in Fairbanks assists Alaska Native Veterans."

--Comments from George Charles, Project Team Member, May 2004.

- The vulnerability of **Native Elders**. As they live longer, we need to understand which specific health disorders will require more care (for example, Alzheimer's disease, other dementia, diabetes, various types of cancer, circulatory disease, lung conditions, restricted physical mobility and prevention of Elder abuse).

"Two projects are underway that address Alaska Native Elder health care needs. The Alaska Native Tribal Health Consortium is undertaking a comprehensive evaluation of Elder care needs of Alaska Natives. This project will assess long-term care needs and the health status of Elders statewide.

The University of Alaska, Division of Health Sciences, is compiling a national resource center for American Indians, Alaska Natives and Native Hawaiian Elders. The purpose is to provide culturally relevant solutions to Elder care needs of Native populations. The Administration on Aging, Department of Health and Human Services is the funding source for this project. (National Resource Center for American Indian, Alaska Native and Native Hawaiian Elders is supported by a grant, No. 90AM2752, from the Administration on Aging, Department of Health and Human Services)."

--Charles, George P., Director, (June 2004). National Resource Center for American Indians, Alaska Natives and Native Hawaiian Elders at the University of Alaska, Anchorage.

- Alaska Native **mental health issues** seem related to substance abuse problems. We need better information and understanding of why substances are abused, which may address mental health issues and certain behavioral patterns.

- More complete data on Native **suicide risk factors** (gender, age groups, linkages to substance abuse or mental health problems, geographic regions) are needed. Professional care-givers need detail in order to design more effective prevention programs.

As noted at the beginning of this chapter, for Alaska Natives, wellness is a more holistic approach to the Western sense of health. Health statistics abound, but the "wellness" of human beings - in the psychological, cultural and spiritual sense - is much harder to quantify, study and treat. Existing data do not fully portray the state of "wellness" of individuals or communities.

"The notion of disease, is really 'dis – ease', not being comfortable with who we are. The physical problems we see in the health data seem to point to a 'dis – ease.' It seems that we continue to miss the issues that are important to get a handle on, the root causes for alcohol abuse. To make progress, it may be that we have look deeper than the alcohol abuse and find out why our people are abusing alcohol. We need to identify what we can control individually.

"There is a common thread throughout the health data that we are reviewing. That common thread is related to the well-being of a whole person. If that wholeness is not present, physical health is not present."

--Policy Center Project Team discussion with Mental Health Experts, February 2004.

Endnotes

[23] World Health Organization. (1946, June). *Preamble to the constitution of the world health organization.* New York, NY: Adopted by the International Health Conference. Official Records of the World Health Organization. No. 2. page 100.

[24] Institute of Social and Economic Research. (2004, May). *The status of Alaska Natives report 2004.* (Vols. I-III). Anchorage, AK. Page 3-4 to 3-9.

[25] Ibid, page 3-5.

[26] **DTaP** stands for Diphtheria, Tetanus and acellular Pertussis (Whooping Cough). **Polio** causes serious paralysis and is largely controlled in the U.S. by effective vaccines. MMR stands for Measles, Mumps and Rubella. **Hepatitis A and B** are serious viral infections of the liver. **Hib** stands for Haemophilus influenzae, type b, a dangerous form of childhood flu. **Varicella** is chickenpox.

[27] Ibid, page 3-18.

[28] Institute of Social and Economic Research. (2004, May). *The status of Alaska Natives report 2004.* (Vols. I-III). Anchorage, AK. Page 3-39.

[29] Ibid, page 3-38.

[30] Ballew, C. (2002, August). *Selected results from the behavioral risk factor surveillance system for Alaska Natives (1995-2000).* Anchorage, AK: Alaska Native Health Board Alaska Native Epidemiology Center.

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[32] Alaska Judicial Council. (2000, May). *Final report of the Alaska criminal justice assessment commission.* Anchorage, AK: Alaska Judicial Council. Page 27.

[33] Institute of Social and Economic Research. (2004, May). *The status of Alaska Natives report 2004.* (Vols. I-III). Anchorage, AK. Page 3-32 to 3-34.

[34] Ibid, page 3-31.

[35] Ibid, page 3-31.

[36] Ibid, page 3-31.

[37] National Institute on Alcohol Abuse and Alcoholism. (2002, January). Alcohol and Minorities: An Update. *Alcohol Alert.*

[38] Institute of Social and Economic Research. (2004, May). *The status of Alaska Natives report 2004.* (Vols. I-III). Anchorage, AK. Page 3-26 and 27.

[39] Institute of Social and Economic Research. (2004, May). *The status of Alaska Natives report 2004.* (Vols. I-III). Anchorage, AK. Page 3-25.

[40] Ibid, page 3-35.

[41] Irwin, M. (Ed.). (1994). *Alaska Natives commission final report.* (Vols. II). Anchorage, AK: Alaska Native Commission. Pages 27-28.