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Maine Department of Human Services

Maine Bureau of Health

Paul Kuehnert

Maine Department of Human Services, paul.kuehnert@maine.gov

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Health Status and Needs Assessment of Native Americans in Maine: Final Report

Paul Kuehnert, M.S., R.N.
Director, Division of Disease Control
Maine Bureau of Health

January 15, 2000

Maine Department of Human Services
Bureau of Health
11 State House Station
Augusta, Maine 04333-0011

Angus S. King, Jr. Governor Kevin Concannon, Commissioner Dora Anne Mills, MD, MPH Bureau Director

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Background

In the late summer of 1999, Mr. Irvin Rich of the U.S. Health Care Financing Administration (HCFA) requested that Maine Bureau of Health (BOH) participate in a conference that was being planned for October. The conference, jointly sponsored by HCFA and the U.S. Health Resources and Services Administration (HRSA) and the Indian Health Services (IHS), was being organized to address the feasibility of developing collaborative efforts to address health disparities experienced by Native Americans in New England. The conference was to be attended by representatives of New England states' health and Medicaid programs, private and public universities and colleges, and health and political leaders from the region's Native American tribes. The Maine BOH was asked to prepare an assessment of the health needs of its Native American residents for presentation to the conference. A preliminary, verbal presentation of the assessment findings was made to the conference participants meeting in Boston, Massachusetts on October 5, 1999. This final, written report is based upon that presentation.

Goals and Methods

The goals of this health needs assessment and analysis of the Native American population of Maine were:

- To provide an overview of the population's health status;
- To identify priority health needs;
- To identify health resources and assets;
- To identify health service/resource gaps, and
- To identify possible areas for action to improve the health of Native American residents of Maine that could be taken by the Maine Bureau of Health.

The assessment and analysis were guided by the epidemiological approach to community needs assessment (Finnegan and Ervin, 1989). Specific methods included:

- Review of population data on socio-economic status, natality, morbidity and mortality data. All data were compared to the rest of the Maine population for reference purposes. (Natality and mortality data were gathered for the twenty year period 1978-1997 and grouped in five year increments (see discussion in **Limitations** below.))
- Review of a recent report on a behavioral risk factors survey of one specific Maine Native American sub-population.
- Interviews with key informants.

Limitations

A number of important potential limitations related to the interpretation of the findings of this assessment and analysis must be noted at the outset. First and foremost, the Native American population in Maine is relatively small (approximately 6,500 individuals per the 1990 census). As a result, the number of health-related events (births, illnesses, deaths) are relatively few each year and are unstable from a statistical standpoint. In order to address this problem, natality and mortality data were grouped into five year time periods to enhance their stability and improve the ability to interpret trends. Even so, the reader should note that all underlying numbers are small and must be interpreted with caution.

A further complication related to the already-small numbers of health related events amongst the Native American population in Maine is the strong possibility that some data elements from the vital records may not be reliable due to reporting error. A number of studies (Hahn and Eberhardt, 1995) have documented that in a significant number of death certificates in the U.S., race/ethnicity is improperly recorded. Two separate studies (Hahn and Eberhardt, 1995 and Sorlie et al, 1992), found a misclassification ratio of roughly 0.82 of race on the death certificates of Native Americans. When using mortality data as one measure of health problems in a

population, this error has the effect of underestimating the impact of a disease or health problem on the population in which the deaths are misclassified. The implications for this needs assessment are discussed in the **Recommendations** section of this report.

Two additional potential limitations regarding this needs assessment are: 1) the limited time and resources available for the assessment, and 2) the historical role of the Bureau of Health in relation to Native American health in Maine. As to the first issue, while every effort was made to be thorough and comprehensive, the lack of resources did have the effect of limiting the type and extent of data gathering and analysis activities. For example, key informant interviews were limited to tribal health leaders and their key staff. Additional time and resources would have allowed us to interview and/or survey additional community leaders and members.

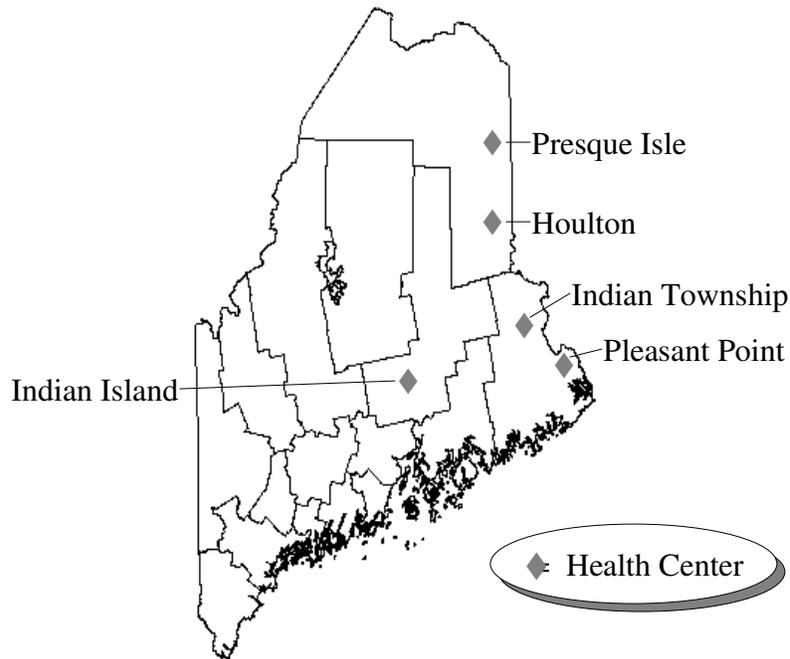
Regarding the second issue, the Maine Bureau of Health has played a relatively minor role in addressing the health of Native Americans in Maine. This has been due to primarily two reasons: 1) the central role of direct federal involvement with Maine's tribes historically through the Indian Health Service (IHS) and 2) the evolution of tribal autonomy and self-governance in relation to social and health services over the past twenty-five to thirty years. Thus, the Bureau of Health does not have well-established, longstanding relationships with Maine's tribal health leaders. This, as a result, may have inadvertently limited the information shared in key informant interviews, as well as limiting the depth of the analysis of the information that was shared.

Overview of Native Americans in Maine

Maine, the largest state in New England, has approximately 1.2 million residents. Taken as a whole, Maine's residents are relatively poor, as compared to national and regional averages, and live primarily in rural settings. The vast majority (98.5%) of Mainers are white, with the largest racial minority groups in the population being Asian-Pacific Islanders (0.7%) and Hispanics (0.7%), followed by Native Americans (0.5%) and African-Americans (0.5%) (percentages add to greater than 100% due to individuals with multi-racial heritage.)

While Maine's Native Americans live in every county in Maine and each of its cities, the vast majority resides in or near the five small, rural communities of Indian Island (Penobscott Nation), Pleasant Point (Pasamaquoddy tribe), Indian Township (Pasamaquoddy tribe), Houlton (Houlton Band of Maliseet) and Presque Isle (Aroostook Band of Micmac) illustrated in Figure 1. With the exception of Presque Isle, each of these communities includes a reservation where many tribal members live. The Micmacs have only been federally recognized relatively recently and do not have a reservation. Micmacs live throughout Aroostook County and have tribal government offices, a community center, health center and some housing developments in Presque Isle.

Figure 1



Tribal governments in Maine, as in other parts of the U.S., have unique, direct and fairly complex relationships with the federal government as well as with the State. For the purposes of this assessment, it is important to note that tribal members have all the rights and responsibilities of other Maine citizens, including access to health and social services. Most often, these services – e.g., social services for children or elders -- are delivered under contract with the tribal government as opposed to being delivered by townships or state employees. This is also true for housing and environmental protection programs as well.

Each of Maine's tribes receives funding directly from the IHS. The level of funding is set according to an IHS allocation formula based on the number of tribal members. These funds allow each tribe to operate its own community health center and community health programs. These range from the comprehensive primary care health centers that have been operated by the Penobscott and Pasamaquoddy tribes for nearly thirty years, to the recently established centers of the Maliseet and the Micmac bands which provide limited direct services while purchasing a more extensive set of services from other community providers. However, IHS funds derived from this same allocation formula must also be used to purchase diagnostic, treatment and rehabilitation services for un- or under-insured tribal members. This, in turn, makes funding for preventive and primary care services for each tribe vulnerable to unanticipated, often catastrophic events

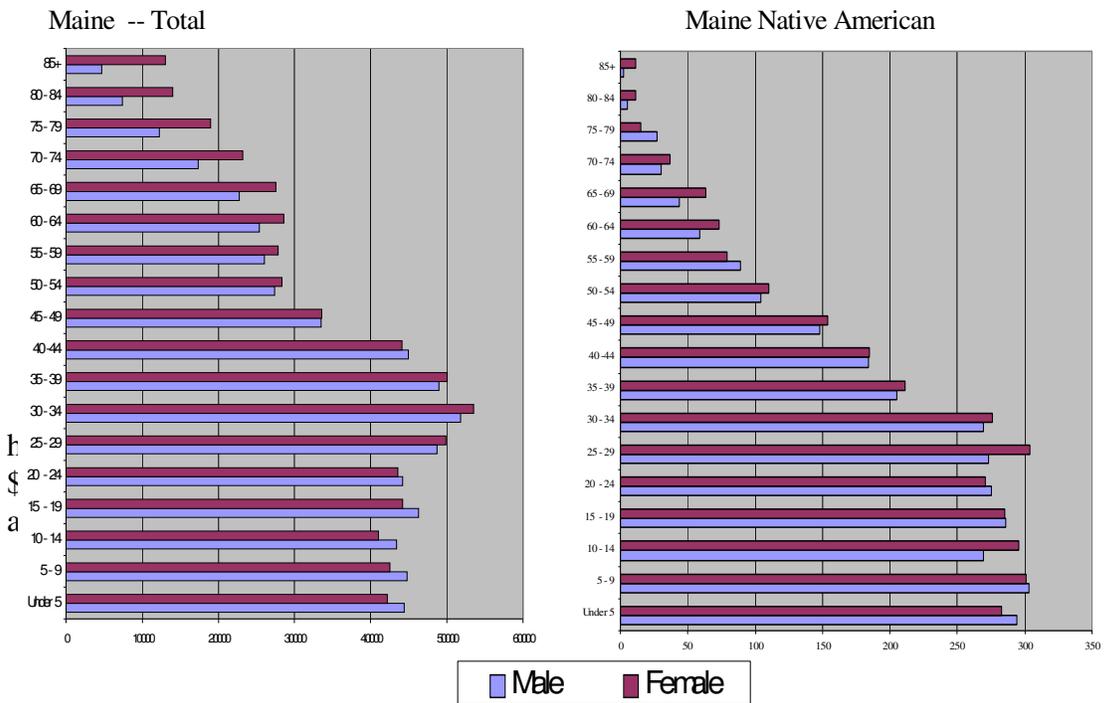
(e.g., car wrecks with serious injuries) befalling individual members. (These issues are more fully discussed in the **Health Resources** and **Conclusions** sections of this report).

Population Comparisons

The Native American population in Maine is younger than the general population. The population distributions are displayed in Figure 2. The population distribution of Maine Native Americans is similar to distributions of developing nations.

Figure 2

Population Distribution -- 1989



**Table I
POPULATION COMPARISONS¹**

	MAINE	MAINE NATIVE AMERICANS
POPULATION	1,227,928	6,392
EDUCATION		
High School or higher	78.8%	69.0%
BA or higher	18.8%	7.7%
INCOME		
Per capita	\$12,957	\$7,840
Median Household	\$27,854	\$21,519
Median Family	\$32,422	\$23,493
EMPLOYMENT		
In labor force	65.6%	64.5%
Unemployed	6.6%	14.4%

Natality Comparisons

As detailed in Table II, the birth rate of Maine Native Americans has been higher than that of the entire population of Maine during the 1978-1997 period. This is consistent with the population distribution noted above (Figure 2). The percentage of births that are low birth weight (<2500 grams) among Maine Native Americans has averaged 5.3% with little variation during the past twenty years and is the same as the average of the Maine population as a whole (Table II).

**Table II
NATALITY COMPARISONS²**

	MAINE	MAINE NATIVE AMERICANS
LIVE BIRTHS PER 1,000 POPULATION:		
1978-1982	14.5	21.0
1983-1987	14.2	16.2
1988-1992	13.8	15.1
1993-1997	11.4	16.4
BIRTHS < 2500 grams % OF ALL BIRTHS		
1978-1982	5.2%	5.6%
1983-1987	5.3%	5.8%
1988-1992	5.1%	4.5%
1993-1997	5.8%	5.3%

¹ Source: US Bureau of the Census, 1990

² Source: Maine Bureau of Health, Office of Data, Research and Vital Statistics

Births to Maine Native American teenagers have been consistently higher --- ranging one and one-half to two times higher --- than births to all Maine teenagers (Table III.) The Maine Native American Teen birth rate apparently declined dramatically between the first and second five year period (from 94.7 to 63.6 births per thousand teen women), but then has remained apparently stable. The average and median ages of Maine Native American teen mothers (17.6 and 18 years respectively) has remained virtually unchanged during the twenty year period and is about the same as that of all Maine teen mothers (17.9 and 18 years respectively).

Table III³		
Teen Birth Comparison		
	ALL MAINE TEENS	NATIVE AMERICAN TEENS
Birth rate/1000 Females 15 – 19 years old:		
1978-1982	45.6	94.7
1983-1987	40.4	63.6
1988-1992	41.3	68.7
1993-1997	34.1	67.1

As illustrated in Table IV, infant deaths amongst both Maine Native Americans and Mainers as a whole reached record low rates of 6.4 and 5.7 deaths per 1000 live births respectively during the last five year period. Maine as a whole has shown a slow and steady decline in infant deaths over the twenty year period. Maine Native Americans began and ended the period with rates comparable to that of the general population, but there were wide, upward fluctuations in the middle ten years, especially in the 1988-92 period. These fluctuations must be viewed with considerable caution, however, since the underlying numbers are extremely small.

Table IV⁴		
Infant Mortality Comparison		
	ALL MAINE	MAINE NATIVE AMERICANS
Infant deaths/1000 live births:		
1978-1982	9.7	9.4
1983-1987	8.5	10.1
1988-1992	6.6	20.3
1993-1997	5.7	6.4

³ Ibid.

⁴ Ibid

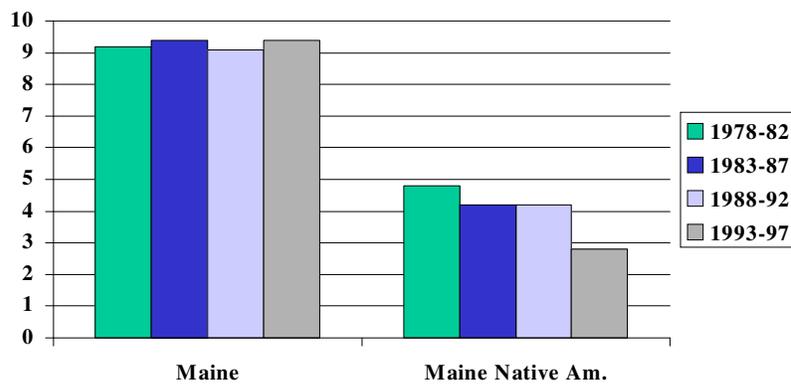
Mortality Comparisons

Also consistent with having a younger population, crude death rates among Maine Native Americans over the twenty year period are much less than those of the general population (average of 4.0 versus 9.3 deaths per thousand, see Figure 3).

Figure 3

Crude Mortality Comparison

Deaths/1,000 Population



However, life expectancy among Maine Native Americans is less than that of all Mainers. Mean and median ages of death are compared between the two for each five year period in Table V. While exercising caution in interpretation given the small numbers involved for Maine Native Americans, it appears that gains are being made (increasing average age of death from 55 to 60 years) but that the gap between the two populations has not apparently narrowed.

Table V⁵
Age at Death Comparison

	ALL MAINE		MAINE NATIVE AMERICANS	
Mean and Median Age of all Decedents, all causes:	Mean	Median	Mean	Median
1978-1982	57.3	74.0	57.3	57.0
1983-1987	57.4	76.0	57.4	59.0
1988-1992	57.5	76.0	57.5	64.0
1993-1997	74.1	77.0	60.1	63.0

Crude numbers of deaths to Maine Native Americans by Cause Grouping are detailed in Table VI. Leading causes of death for Maine Native Americans have been converted into age adjusted rates and compared to age adjusted rates for the Maine general population in Table VII.

⁵ Ibid.

Table VI⁶
Deaths to Maine Native Americans
by 32-cause grouping
1978-1997

Cause	1978- 1982	1983- 1987	1988- 1992	1993- 1997
INFECTIOUS & PARASITIC DISEASES(001-139)	2	3	1	2
MALIGNANT NEOPLASMS (140-208)	14	19	31	27
DIABETES MELLITUS (250)		1	4	4
NUTRITIONAL DEFICIENCIES (260-269)			2	
ANEMIAS (280-285)		1		
MENINGITIS (320-322)		1		
HEART DISEASE (390-398,402,404-429)	33	22	21	16
CEREBROVASCULAR DISEASE (430-438)	12	5	4	2
ATHEROSCLEROSIS (440)		1	1	
OTHER DIS ARTERIES & CAPIL (441-448)	1	1	3	1
PNEUMONIA AND INFLUENZA (480-487)	4	4	2	1
CHRONIC OBSTR PULMONARY DIS (490-496)	2	5	9	5
ULCER OF STOMACH & DUODENUM (531-533)		1		
ABDOM HERNIA & INTEST OBS (550-553,560)		1		
CHRONIC LIVER DIS & CIRRHOSIS (571)	3	5	1	1
NEPHRITIS,NEPH SYND & NEPHROSIS(580-589)		1	1	1
CONGENITAL ANOMALIES (740-759)		2	3	
PERINATAL CONDITIONS (760-779)		2	2	1
SYMPTOMS, SIGNS & ILL-DEF COND (780-799)	3	1	3	1
ALL OTHER DISEASES (RESIDUAL)	7	8	19	9
ACCIDENTS & ADV EFF (E800-E949)	11	13	11	4
SUICIDE (E950-E959)	2	4	2	4
HOMICIDE & LEGAL INTERV (E960-E978)	3	1	3	
ALL OTHER EXTERNAL CAUSES (E980-E999)			1	
ALL CAUSES	97	102	124	79

⁶ Ibid.

Table VII⁷
Mortality Comparisons

Age-Adjusted Deaths by Cause, Per 100,000 Population

	All Maine	Native Amer.	All Maine	Native Amer.	All Maine	Native Amer.	All Maine	Native Amer.
	1978-1982		1983-1987		1988-1992		1993-1997	
Breast Cancer	23.0	27.4	22.0	7.7	22.1	25.0	20.2	16.7
Lung Cancer	37.7	40.7	39.6	50.0	43.4	56.0	43.5	61.7
Cardio- vascular Disease	244.1	357.8	220.8	180.1	178.9	143.1	160.0	80.5
Heart Disease	193.0	254.2	179.3	135.7	143.3	103.4	127.4	69.6
Cerebro- vascular Disease	36.1	95.4	28.1	32.3	23.9	20.3	22.9	7.6
Suicide	12.9	10.3	12.6	14.3	12.3	7.9	11.7	15.1
Motor Vehicle Crashes	20.3	34.5	17.9	23.2	16.7	15.1	14.3	6.4
Diabetes	8.6	0.0	9.0	6.4	12.8	21.6	12.8	16.9
Any Mention Diabetes	36.9	39.3	41.0	63.4	39.9	80.5	40.3	36.6

Over the past twenty years, the leading cause of death among Maine Native Americans has shifted from cardiovascular diseases (ICD9 390-398, 402, 404-438) to cancer (ICD9 140-208). In the 1978-82 period, cardiovascular disease accounted for 46% of deaths in Maine Native Americans while cancer accounted for 14.4%. In the 1993-97 period, cardiovascular-related deaths dropped to 22.7% while cancer increased to 34%. This is in contrast with the general population of Maine in which heart disease remains the leading cause of death (30%) while cancer is the second leading cause (25%) (Maine Department of Human Services, 1999, page III 13).

As shown in Figure 4, the rate of deaths due to lung cancer among Maine's general population appears to have increased slightly over the past twenty years. During the same time period, comparable rates among Maine Native Americans appear to have increased more dramatically. Lung cancer accounted for 42% of all cancer deaths to Maine Native Americans (Figure 5) during this twenty year period.

⁷ Ibid.

Figure 4

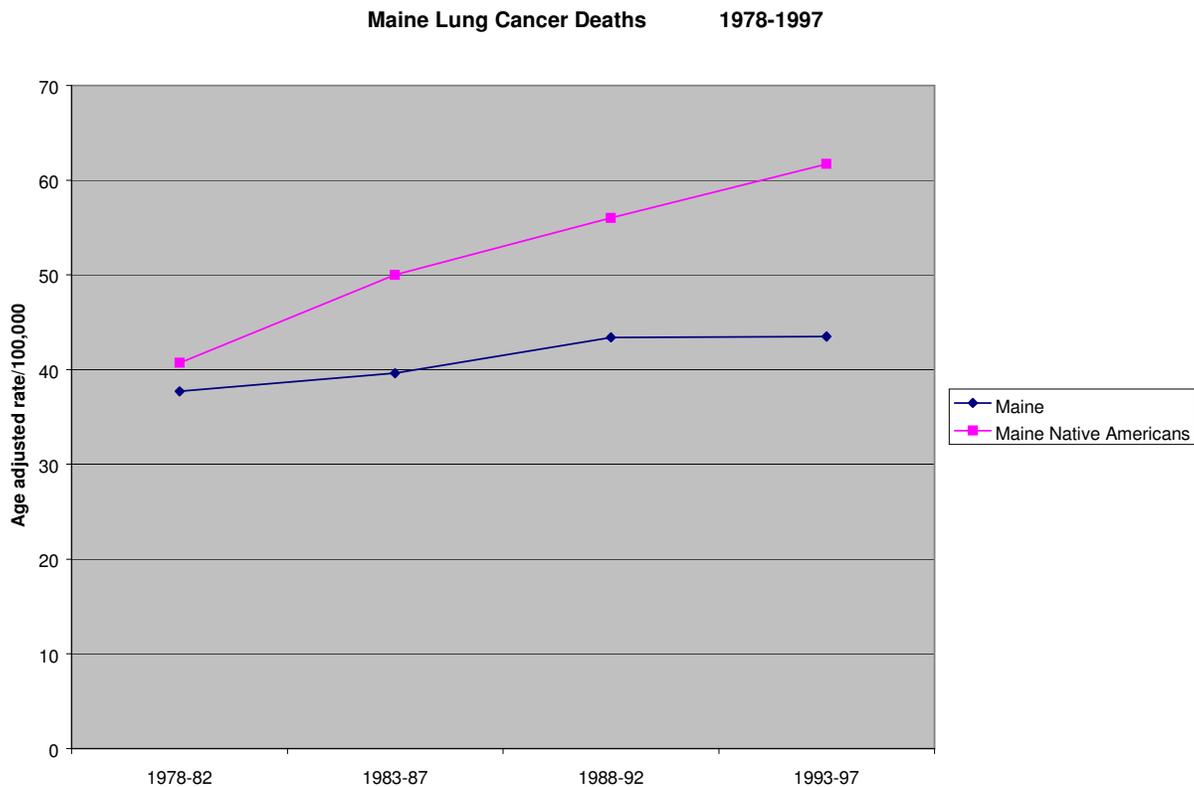
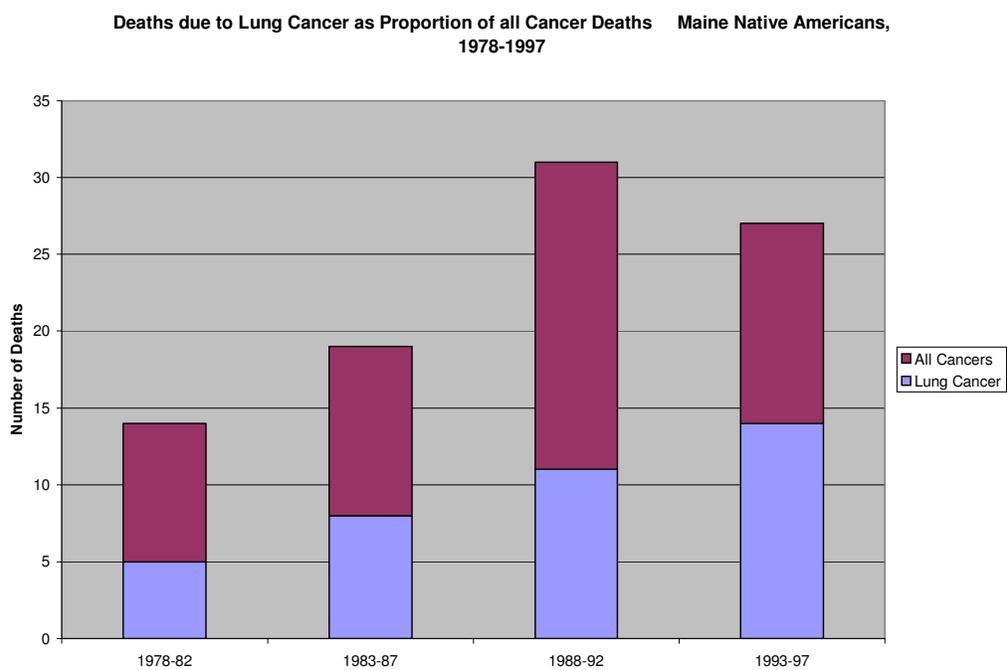


Figure 5



The apparent excess burden of deaths due to lung cancer in Maine Native Americans may reflect increased rates of tobacco use (see **Morbidity and Other Health Concerns** section below).

On the other hand, the rate of deaths due to cardiovascular disease among Maine Native Americans compare extremely favorably with the same rate in the general population in Maine (Figure 6). The apparent dramatic declines in death rates related to cardiovascular disease are reflected in specific components of the Cardiovascular disease cause grouping, including both Heart Disease (Figure 7) and Cerebrovascular Disease (Figure 8).

Figure 6

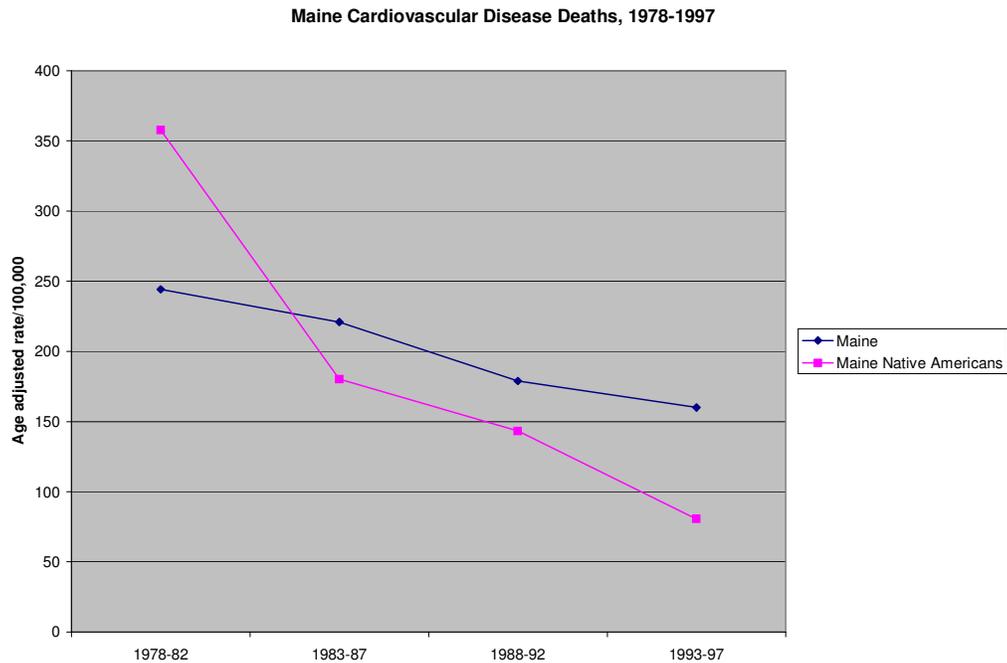


Figure 7

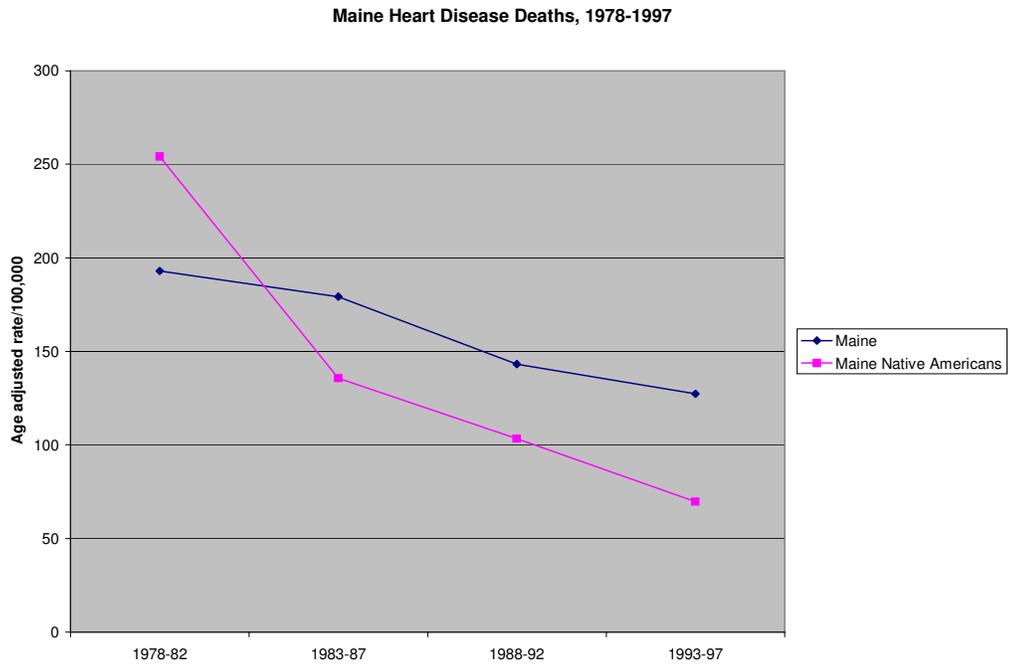
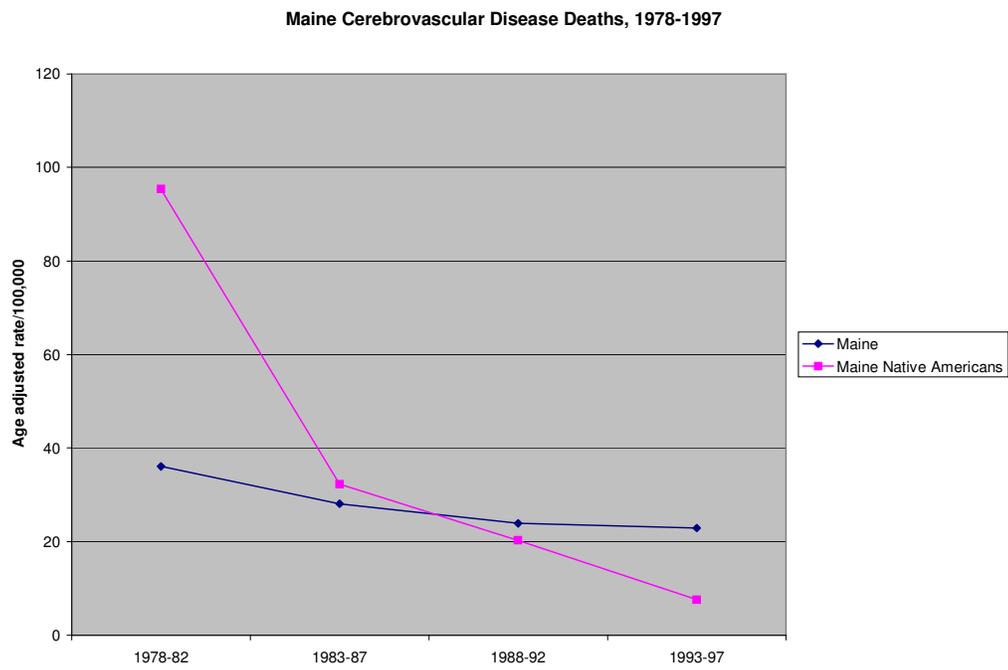


Figure 8



The apparently significant decline in rate of deaths due to cardiovascular disease in Maine Native Americans and their dramatic difference with the comparable rates in Maine's general population requires in-depth evaluation. Preliminarily, it seems that at least three factors may play a role: changes in the population denominator, misclassification of race on death certificates and increasing access to preventive health information and services.

First, some part of the decline may be explained by the dramatic increase in Native American population in Maine, from just over 4,000 reported in the 1980 census to over 6,300 in the 1990 census. This increase suggests changes either in the accuracy of census methods and/or the increase in Mainers of mixed racial heritage in identifying themselves as Native Americans. Secondly, it has been documented that death certificates are often inaccurate in recording the race of the decedent (Hahn and Eberhardt, 1995). As noted above, such a misclassification would have the effect of understating the impact of cardiovascular disease on Maine Native Americans. Thirdly, medical primary care was made easily accessible and combined with community-based, culturally relevant primary and secondary prevention services were created by and implemented in each of the reservation communities in Maine by the tribal health centers during this time period. People at high risk of cardiovascular disease were targeted for these programs and services. It is important that the contribution of each of these factors to the overall decrease in the rate of deaths from cardiovascular disease in Maine Native Americans be determined. (See **Recommendations** section)

In all other respects, mortality among Maine Native Americans is very similar to all Mainers. Those areas with apparent differences (See Table VII above) ---e.g., suicide, motor vehicle crashes, and diabetes--- have underlying numbers that are so small and unstable that little can be inferred from either the differences between the two populations or the variance in the Maine Native American rates from period to period.

Morbidity and Other Health Concerns

Current, key health problems facing Maine's Native American were elicited from the tribal health directors and their staffs during the interviews. Consistently, the top three problems facing the population were identified as being:

- **Diabetes and its complications**
- **Addictions: tobacco, alcohol, other substances**
- **Obesity**

These perceptions of the key informants were verified by examining two data sources. First, Medicaid claims data for 1997 from the Maine Bureau of Medical Services were analyzed to determine the most frequent diagnostic categories for health problems diagnosed during outpatient visits to the five health centers. These data, summarized in Table VIII, while not necessarily representative of the Maine Native American population as a whole, provide a snapshot of morbidity for what could be

argued may be the most vulnerable portion of that population. The frequency of outpatient diagnoses related to diabetes, mental illness and chemical addiction, respiratory diseases, and cardiovascular diseases can be said to confirm the key informants reports.

Table VIII⁸
Top Seven Morbidity Categories
Medicaid Claims from Maine Native Americans, 1997

- **Diabetes and its complications**
- **Mental Illness and chemical addictions**
- **Cardiovascular Disease**
- **Respiratory Disease**
- **Obesity**
- **Dental Disease**
- **Injuries**

The second data source reviewed was the recent Behavioral Risk Factor Survey conducted by the Aroostook band of Micmac Indians in 1998. This survey was reviewed for this assessment because it was the most recent conducted among any Native American population in Maine. Key findings regarding self reported health behaviors are summarized in Table IX. These findings of higher tobacco use, higher percentage of overweight and leading sedentary lifestyle, and higher percentage of problem alcohol use are consistent with the problems identified by the key informants.

Table IX⁹
Summary of Key Findings: Behavioral Risk Factor Survey
Aroostook Band of Micmac Indians, 1998

- **Significantly higher rates of tobacco use**
- **Higher percentages overweight and leading sedentary lifestyle**
- **Lower over-all alcohol use, but higher percentage of problem use**
- **Relatively high rates of condom and birth control methods usage**
- **High rates of primary care and screening test participation**

Finally, although not clearly linked to disproportionate Native American morbidity at present, many of the key informants expressed deep concern about two other health issues: environmental toxins and HIV/AIDS. Environmental concerns were focused on mercury, dioxin, lead, and cadmium. A number of studies regarding these toxins are underway. Besides concerns regarding near-term impact of these toxins on individual health, more long term concerns were voiced regarding the potential negative

⁸ Source: Maine Bureau of Medical Services.

⁹ Source: Maine Bureau of Health, Community Health Promotion

spiritual and community health impact should traditional reliance on hunting and fishing be restricted due to environmental pollution.

HIV/AIDS has had a relatively small impact on Native American communities in Maine to date. The key informants did express concern about its potential for having a devastating impact on their communities in the future. In two of the five tribal areas, a particularly high degree of concern was voiced regarding the growing prevalence of injection drug use among some tribal members and its potential as a pathway for HIV's entry into the community.

Health Resources

Each of Maine's tribes owns and operates its own health center. These centers were established with IHS and tribal funding. The centers range from the comprehensive primary care health centers that have been operated by the Penobscott and Pasamaquoddy tribes for nearly thirty years, to the more recently established (less than 5 years old) centers of the Maliseet and the Micmacs bands. The scope of services delivered on-site at the health centers varies. In every case, though, a full array of primary care services are offered to tribal members either on site or by local providers in nearby communities. These include: medical primary care, dental care, basic laboratory and x-ray services, pharmacy services, home health, and outpatient mental health and chemical addiction treatment services.

Besides directing the operations of the health centers, the tribal health directors also oversee the provision of some local public health services. These include a variety of primary prevention and wellness programs directed toward both their tribal members as a community and at-risk groups within the tribal communities. The health directors also either direct or collaborate with other leaders in their tribal governments the provision of environmental health services (e.g., lead, dioxin, etc.) and public sanitation (e.g., drinking water, food services, etc.).

Finally, each tribal health director oversees the purchase of needed physical and mental health diagnostic, in-patient treatment and rehabilitation services for un- or under-insured tribal members. Essentially, each tribe is the "health insurer of last resort" for all of its members. An assigned health center staff member(s) provides case management services for tribal members, coordinating coverage with other insurers and negotiating payment for services for members with no other health insurance.

These health resources are limited by two key factors: funding and availability of health professionals and facilities. In regards to funding, all of these health services --- local public health, primary care services, and secondary/tertiary care purchasing --- come out of each tribe's or band's health budget. Revenues are provided largely by a formula-based allocation from the IHS. According to the tribal health directors, this allocation is and has been essentially flat. This base funding may be supplemented by the tribes and/or by competition for categorical grants obtained from outside sources, such as the Bureau

of Health or the Department of Environmental Protection. This funding approach has the effect of making funds for preventive and primary care services for each tribe vulnerable to unanticipated, often catastrophic events (e.g., car wrecks with serious injuries) befalling individual members.

Beyond these tribal health resources, availability of health professionals and facilities is limited for Native Americans in Maine. This is true for most other Maine residents as well. As shown in Tables X and XI below, these shortages are even more acute in the very rural, remote areas of the state (Aroostook and Washington counties) in which the reservations are located.

Table X¹⁰				
Health Resources: Professionals				
	Maine	Aroostook County	Penobscot County	Washington County
Physicians	1:512	1:749	1:478	1:861
Primary Care Physician*	85	60	80	71
Phys. Asst.*	25	26	37	8
R.N.*	1,183	1,072	1,350	784
Dentist*	48	33	44	30
Dental Hygen*	75	46	79	41
Drug Counslr*	59	31	68	44
Counselor*	87	14	98	44
*per 100,000 population				

¹⁰ Source: Maine Bureau of Health, Office of Data, Research and Vital Statistics

Table XI¹¹				
Health Resources: Facilities				
	Maine	Aroostook County	Penobscot County	Washington County
Hospital Beds*	3	3.5	4	2.4
Long Term Care Beds**	57	60	50	55
Res. Care Level I Beds*	1.4	1.8	1.8	1.8
Res. Care Level II Beds*	3.5	4	2	2.5
<small>*per 1,000 population **per 1,000 population > age 65</small>				

These shortages are further exacerbated by the need for culturally competent providers, i.e., providers who are familiar with, sensitive to, and respectful of Native American culture.

Barriers to Health

The tribal health directors and their staff members were asked to identify barriers to health experienced by their members. Each of the following barriers were identified as key by directors and/or staff at three or more of the five tribal health centers:

- *Transportation:* public transportation is non-existent in these very rural, remote communities. Distances that must be traveled range from a few miles to clinic-based services to hundreds of miles for many diagnostic procedures and specialty care. In most cases, individuals must provide their own or rely on family and friends for transportation to and from both clinic and remote services.
- *Low income:* tribal members’ low income has multiple effects on health, including: poor nutrition, inability to maintain personal vehicles for transportation, and multiple economic concerns/stressors that may have higher priority than health concerns.
- *Prejudice and racism:* The tribes and tribal members continue to experience racially based discriminatory practices and attitudes in the broader community. These attitudes and practices are both barriers to health care and negative stressors affecting individual and community health.

¹¹ Ibid.

- *Shortages of qualified personnel:* All of the Indian health centers in Maine are located in designated health manpower shortage areas (See discussion above in the **Health Resources** section of this report) . Shortages of mental health and substance abuse treatment professionals are most acute at present.
- *Inadequate funding:* As discussed in the **Health Resources** section of this report, IHS funding for the Maine tribes is flat and must provide both individual member insurance coverage as well as support for primary and secondary prevention programs. The demand for health services and need for population-level prevention and wellness programming continues to grow, risking significant and growing gaps in services for tribal members.
- *Inaccessible/culturally inappropriate mental health and chemical addiction in- and day-treatment facilities.* In addition to shortages (noted above and in the **Health Resources** section of this report) of qualified, culturally competent mental health and substance abuse treatment professionals to staff outpatient services at the Indian health centers, there are no culturally competent in-patient or day-treatment facilities and programs in all of northern Maine. As a result, community members must be hospitalized a minimum of roughly 200 miles away (Portland, Me) or even further for treatment. For example, young Native Americans must be placed out of state (North Carolina) if they need a Native American culturally based treatment program.
- *Environmental toxins* including dioxin, mercury, lead, arsenic and cadmium are perceived as major threats to the health of Maine Native Americans. These perceived threats act as barriers to tribal members following traditional lifestyles and have a negative impact on health and well being.

Strategies to improve the health of Maine’s Native American population must address these barriers if the strategies are to succeed.

Community Assets

The tribal health directors and their staff members were asked to identify community assets that could be mobilized to address health concerns or problems faced by their tribes. Each of the following assets were identified as key by directors and/or staff at three or more of the five tribal health centers:

- *Talented and committed health leadership and staff* have been recruited and retained by each of Maine’s tribes. Many of the tribal health directors and a number of key staff have been in their positions for more than a decade, providing continuity to their relatively young organizations.

- *Community norms and values* that are based on traditional Native American culture strongly emphasize family ties, the importance of children, and compassion and caring for the community.
- *Community attitudes* that are supportive of and concerned about the health and well being of the individual, family and community. This is reflected in active commitment by tribal political leaders to the health centers and health programs.
- The tribes and tribal leaders are *politically experienced and knowledgeable*. A successful track record on a variety of issues on the state and federal levels has been established over the past twenty-plus years.
- *Health centers and health funding are in place*. Although levels of support are not as high as needed, the existing resources are tremendous community assets for health.

Conclusions

This brief assessment of Native Americans in Maine has provided an overview of the health status and health needs of our state's second largest minority community. Significant improvements in the health status of the Native American population appear to have been made over the past two decades. These improvements are the direct result of a comprehensive effort, funded largely by the federal Indian Health Services and directed by leadership from each tribe, to provide comprehensive primary health care services to Maine's Native Americans. Health disparities between the Native American and the general, majority white population of Maine, while not resolved, are being successfully addressed.

But much remains to be done. Attention to increasing the health resources available to the tribes is vital at this time or the gains that have been made will be lost. Key to building on the success of Maine's tribes in addressing the question of access to primary care will be sustaining and enhancing access to primary and secondary care, particularly around the key problem areas of chemical addiction and mental illness. Just as important will be to further develop and then maintain population-focused, primary prevention efforts that will succeed in reducing the incidence of chronic disease, particularly those related to smoking, inactivity, substance use, and poor nutrition. Finally, of particular importance will be strategies to secure these resources while separating it from funding for individual tribal member major medical coverage, especially catastrophic coverage.

Recommendations

The Maine Bureau of Health should take steps to formalize working partnerships with Maine's five tribal health centers. A short-term agenda that could be addressed through such partnership efforts would include two key objectives:

- **Completing an in-depth evaluation** of the apparent dramatic reduction in mortality from cardiovascular disease among Native Americans in Maine over the past twenty years. This evaluation should begin with a death certificate review to determine whether race was properly coded for deaths of Native Americans in Maine. If these dramatic, positive changes in cardiovascular-related mortality are confirmed, the Bureau of Health should partner with the tribes, the Indian Health Service and others to secure funding for an in-depth evaluation of this population-based prevention success story! Lessons learned from such an evaluation would have tremendous implications.
- **Devising a mutual strategy to develop and enhance primary and secondary prevention** efforts directed by and toward the Native American population of Maine. Such a strategy should address funding and staffing an integrated, comprehensive prevention program(s) that focuses on each tribe's particular concern but would probably include such areas as: tobacco and other addictions, physical activity, environmental toxins, nutrition, physical activity, dental, mental and sexual health.

In addition, the Bureau of Health might be helpful to the tribes in working with other state and federal partners to develop strategies to address the complex issues of increasing access to mental health and chemical addiction treatment and devising strategies to provide better major medical—particularly catastrophic --- coverage for un- and under-insured tribal members.

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