

Community Health Profile Minnesota, Wisconsin & Michigan Tribal Communities 2002

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The Great Lakes EpiCenter

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ABOUT THIS REPORT

This community report is a snapshot of the health of the American Indian/Alaska Native people in the Great Lakes EpiCenter Project service area. The items chosen to report are not meant to be an exhaustive list of health indicators, but serve as a starting point. By tracking these indicators over time, a community can measure its progress toward becoming a healthier community. These indicators may also be useful in health program planning and resource allocation.

This report comes to you from the Great Lakes EpiCenter, which is an epidemiology project funded through a grant from the Indian Health Service. The purpose of the project is to assist project area Tribes (Wisconsin, Michigan, and Minnesota) in the collection, interpretation, and analysis of health data.

Data sources for this Community Health Profile include: U.S. Census Bureau, state departments of public health, state Women, Infants and Children (WIC) programs, Tribal Health Centers, and Indian Health Service (IHS). Sources are documented after all tables and graphs.

The population data included in this report define American Indian/Alaska Native people as those self-identifying as American Indian/Alaska Natives. Inclusion in the American Indian/Alaska Native population does not reflect Tribal affiliation. People may self-identify as American Indian/Alaska Native and not be enrolled in a Tribe; however, they would still be included as American Indian/Alaska Native in this report.

Technical Notes

Data included in the demographic section comes from the 1990 and 2000 U.S. Census' and the Bureau of Indian Affairs. If a socioeconomic status indicator estimate for 2000 was not available, then the 1990 data was used.

The 2000 mortality rates in this report use 2000 U.S. Census numbers as denominators and the number of deaths from death certificates as numerators. Age adjusted rates were standardized to the 2000 U.S. population. In some cases, national and Indian Health Service data may be from years other than 2000; these are the most recently published data available. Detailed notes under each table describe the data and sources.

The diabetes data for FY2001 is diabetes chart audit data aggregated by state and the Bemidji Area. The IHS total data is from FY1999.

The sexually transmitted disease information only includes data for the AI/AN population across years to show changes over time and not comparisons to other populations.

Data included in the maternal and child health section are from vital records and the respective states' WIC programs. All data are from 2000 unless otherwise noted.

Healthy People 2010 (HP2010) Target Objectives are from *Healthy People 2010: Understanding and Improving Health*, 2nd ed., by the U.S. Department of Health and Human Services.

DEFINITIONS

AI/AN	Race self-identified as American Indian or Alaska Native; does not reflect Tribal affiliation.
Age-Adjusted Death Rate	Death rates were standardized using the estimated 2000 population. Direct standardization was used to adjust for age distribution differences in the comparison populations.
All Races	Total population including all races in a defined area
Bemidji Area	Indian Health Service Area including American Indian/Alaska Native people living in Michigan, Minnesota, and Wisconsin. Only those people living in counties containing a reservation or next to a reservation are included in the Bemidji Area American Indian/Alaska Native population.
CHSDA	Contract Health Service Delivery Area: County or counties that include all or part of a reservation and any county or counties that have a common boundary with a reservation. In some cases other counties are designated as part of a Tribe's CHSDA.
Crude Birth Rate (CBR)	$\frac{\text{Number of resident live births}}{\text{Total resident population}} \times 1,000$
High Birth Weight	Birth weight of at least 4,090 grams
Immunization	Complete series of immunizations appropriate for the child's age group.
IHS Total	Indian Health Service total American Indian/Alaska Native population living on or near reservations.
Infant Mortality Rate (IMR)	$\frac{\text{Number of resident infant deaths}}{\text{Total resident live births}} \times 1,000$
Low Birth Weight (LBW)	Birth weight of less than 2,500 grams or about 5.5 pounds
Mortality Rate	$\frac{\text{Number of resident deaths}}{\text{Total number of residents}} \times 100,000$

NA	Not available: Data either not currently collected or not yet available to the EpiCenter.
Obesity	Body Mass Index (BMI) greater than the 95 th percentile.
Project Area	EpiCenter project services area which includes AI/AN Tribes in Michigan, Minnesota, and Wisconsin.
Severe Injury	Any Injury resulting in fatality, admission to hospital, loss of consciousness, or broken bone
WIC Participants	Women, infants, and children enrolled in the Women, Infants and Children (WIC) Program. Those eligible for WIC services include pregnant or postpartum women, infants, and children up to age five. They must meet income guidelines, have state residency, and be determined to be at “nutritional risk” by a health professional. Income must be no more than 185% of poverty level.
YPLL	Years of Potential Life Lost. A measure of premature death defined as the number of years of life lost among persons who die before age 65 years.

SECTION 1

DEMOGRAPHIC AND SOCIAL INDICATORS

Demographic and social indicators are important in understanding the health status of a community. These indicators are used to identify factors affecting morbidity and mortality. The indicators listed in this section include race, sex and age, education, employment income, and family characteristics with comparisons between Michigan, Minnesota, and Wisconsin, the total Great Lakes EpiCenter project area (which is the three state project area including Minnesota, Michigan, and Wisconsin) and the United States. Where appropriate, numbers and percentages are listed by American Indian/Alaska Native (AI/AN) and All races (includes AI/AN). Racial information from the 1990 and 2000 U.S. Censuses contain self-reported responses.

U.S. Census data included in this section are from the 1990 and the 2000 U.S. Censuses. Much of the racial-specific demographic data from the 2000 Census has not yet been released. With the exception of age and sex data and the employment data from the BIA, the demographic data below is from the 1990 Census. We hope to have the 2000 Census data for next year's community health profiles.

Number of American Indian/Alaska Natives in the Project Area:

1990 U.S. Census	148,166
2000 U.S. Census	160,674
Percent Growth	+8.4%

Please note that the document, *Trends in Indian Health* from the Indian Health Service, lists 1990 census numbers for Bemidji Area as being much lower than what is reported above. The *Trends* document only includes American Indian/Alaska Native people living within an Indian Health Service Health Service Delivery Area (IHS HSDA). The numbers cited in this report include all American Indian/Alaska Native people with county of residence within the boundaries of Michigan, Minnesota, and Wisconsin, regardless of that county being in an IHS HSDA.

Race

The following tables display racial distribution data for the individual three states and the project area. This information is provided for an overall picture of the racial composition of the Great Lakes EpiCenter project area. Table 1.1a displays U.S. Census population data from the 1990 and the 2000 Censuses for the Great Lakes EpiCenter project area. The proportion of AI/AN people in the three state project area has remained about the same (0.8%) from 1990 to 2000. This compares to the U.S. AI/AN population which comprised 0.9% of the total population (AI/AN alone selected for race on the census).

Table 1.1a
Race Distribution for Project Area

Race	1990		2000	
	#	%	#	%
White	16,406,745	88.4	17,136,192	84.7
African American	1,628,115	8.8	1,888,933	9.3
AI/AN	148,166	0.8	160,674	0.8
Asian	232,698	1.3	407,241	2.0
Other	146,441	0.8	286,505	1.4
2+Races			342,053	1.7
Total	18,562,165	100	20,221,598	100.0

Source: 1990 and 2000 U.S. Census

TABLE 1.1b
Race Distribution for Michigan

Race	1990		2000	
	#	%	#	%
White	7,756,086	83.4	7,966,053	80.2
African American	1,291,706	13.9	1,412,742	14.2
AI/AN	55,638	0.6	58,479	0.6
Asian	104,983	1.1	176,510	1.8
Other	86,884	0.9	132,244	1.3
2+Races			192,416	1.9
Total	9,295,297	100.0	9,938,444	100.0

Source: 1990 and 2000 U.S. Census

Table 1.1c
Race Distribution for Minnesota

Race	1990		2000	
	#	%	#	%
White	4,133,189	94.5	4,400,282	89.5
African American	94,798	2.2	171,731	3.5
AI/AN	49,507	1.1	54,967	1.1
Asian	76,771	1.8	141,968	2.9
Other	20,834	0.5	67,789	1.4
2+Races			82,742	1.7
Total	4,375,099	100	4,919,479	100.0

Source: 1990 and 2000 U.S. Census

TABLE 1.1d
Race Distribution for Wisconsin

Race	1990		2000	
	#	%	#	%
White	451,4315	92.3	4,769,857	88.9
African American	244,305	5.0	304,460	5.7
AI/AN	39,725	0.8	47,228	0.9
Asian	53,058	1.1	88,763	1.7
Other	40,366	0.8	86,472	1.6
2+Races			66,895	1.2
Total	4,891,769	100	5,363,675	100.0

Source: 1990 and 2000 U.S. Census

Age and Sex

Both age and sex influence patterns of morbidity, mortality, and utilization of health services. Therefore, the analysis of the age-sex distribution of the population is important in assessing the health of a community.

Age distribution is important for public health planning because age plays a role in disease and health of a community. See Appendix A for a listing of prevalent health problems associated with age. Age distribution also helps illustrate how many people will be in the older age groups in the future.

Gender also plays an important role in the health of a community. For many diseases, males and females have different morbidity and mortality rates. Disease conditions or injuries can affect one sex more dramatically than the other or can affect one sex exclusively. Average life expectancy also differs by gender.

Tables 1.2a-d display the age and sex distribution for each of the three states in the project area and the aggregate for the project area. The AI/AN population in the project area are much younger than that of all races in the project area. Table 1.2a shows that almost half of the project area population (46.1%) is under 25 years as compared to all races in the project area (35.6%). In addition, there is a large difference between AI/AN and all races for the 65 years and above age group, 4.8% and 12.3% respectively. This information is important because a younger population encounters different health issues than an older population. For example, injuries and infectious diseases tend to impact the health of younger groups as opposed to chronic diseases, which primarily affect older age groups. The sex distribution between AI/AN and all races in the project area is similar.

TABLE 1.2a
Age and Sex Distribution for American Indian/Alaska Natives and All Races in Project Area, 2000

Age	Males		AI/AN Females		Total		Males		All Races Females		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
0-4	7,106	8.9	6,786	8.4	13,892	8.6	687,686	6.9	649,719	6.5	1,337,405	6.7
5-14	16,321	20.4	15,848	19.6	32,169	20.0	1,541,646	15.5	1,438,466	14.3	2,980,112	14.9
15-24	14,449	18.1	13,741	17.0	28,190	17.5	1,440,019	14.5	1,352,962	13.5	2,792,981	14.0
25-44	25,237	31.5	25,510	31.6	50,747	31.6	3,029,020	30.4	2,967,725	29.6	5,996,745	30.0
45-64	13,651	17.1	14,390	17.8	28,041	17.5	2,220,080	22.3	2,211,276	22.0	4,431,356	22.2
65-74	2,259	2.8	2,643	3.3	4,902	3.1	592,341	5.9	669,217	6.7	1,261,558	6.3
75 +	984	1.2	1,749	2.2	2,733	1.7	446,975	4.5	743,680	7.4	1,190,655	6.0
Total	80,007	100.0	80,667	100.0	160,674	100.0	9,957,767	100.0	10,033,045	100.0	19,990,812	100.0

Source: 2000 U.S. Census

TABLE 1.2b
Age and Sex Distribution for American Indian/Alaska Natives and All Races in Michigan, 2000

Age	Males		AI/AN Females		Total		Males		All Races Females		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
0-4	2,338	8.0	2,228	7.6	4,566	7.8	343,816	7.1	328,189	6.5	672,005	6.8
5-14	5,389	18.5	5,283	18.0	10,672	18.2	765,445	15.7	726,748	14.3	1,492,193	15.0
15-24	5,048	17.3	4,811	16.4	9,859	16.9	693,290	14.2	670,416	13.2	1,363,706	13.7
25-44	9,593	32.9	9,447	32.3	19,040	32.6	1,475,557	30.3	1,484,987	29.3	2,960,544	29.8
45-64	5,506	18.9	5,740	19.6	11,246	19.2	1,094,028	22.5	1,136,950	22.4	2,230,978	22.4
65-74	917	3.1	1,056	3.6	1,973	3.4	290,607	6.0	352,273	7.0	642,880	6.5
75 +	400	1.4	723	2.5	1,123	1.9	210,352	4.3	365,786	7.2	576,138	5.8
Total	29,191	100.0	29,288	100.0	58,479	100.0	4,873,095	100.0	5,065,349	100.0	9,938,444	100.0

Source: 2000 U.S. Census

TABLE 1.2c
Age and Sex Distribution for American Indian/Alaska Natives and All Races in Minnesota, 2000

Age	Males		AI/AN Females		Total		Males		All Races Females		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
0-4	2,675	9.8	2,538	9.2	5,213	9.5	168,829	6.9	160,765	6.5	329,594	6.7
5-14	5,941	21.7	5,851	21.2	11,792	21.5	375,030	15.4	355,859	14.3	730,889	14.9
15-24	5,180	18.9	4,901	17.7	10,081	18.3	355,572	14.6	341,273	13.7	696,845	14.2
25-44	8,241	30.1	8,494	30.8	16,735	30.4	755,951	31.0	741,369	29.8	1,497,320	30.4
45-64	4,315	15.8	4,580	16.6	8,895	16.2	533,402	21.9	537,163	21.6	1,070,565	21.8
65-74	715	2.6	768	2.8	1,483	2.7	137,353	5.6	158,472	6.4	295,825	6.0
75 +	287	1.0	481	1.7	768	1.4	109,494	4.5	188,947	7.6	298,441	6.1
Total	27,354	100.0	27,613	100.0	54,967	100.0	2,435,631	100.0	2,483,848	100.0	4,919,479	100.0

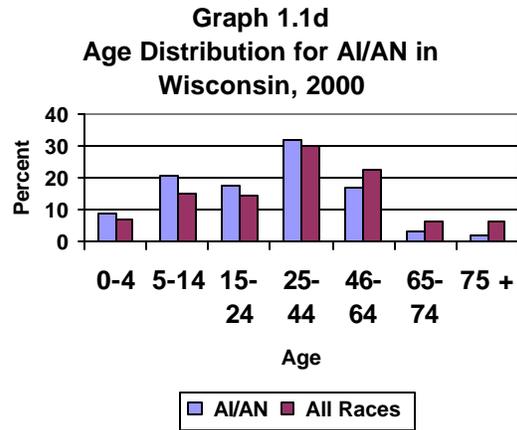
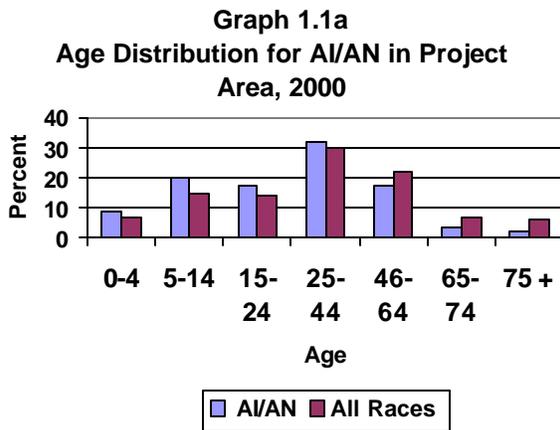
Source: 2000 U.S. Census

TABLE 1.2d
Age and Sex Distribution for American Indian/Alaska Natives and All Races in Wisconsin, 2000

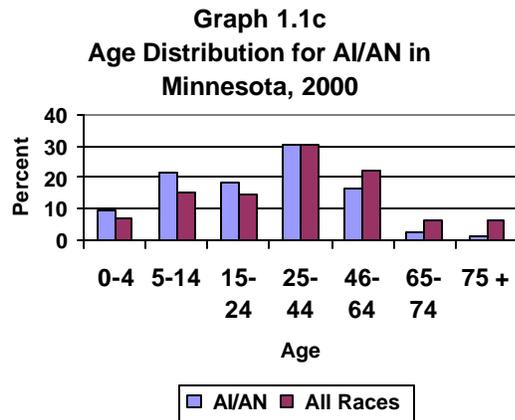
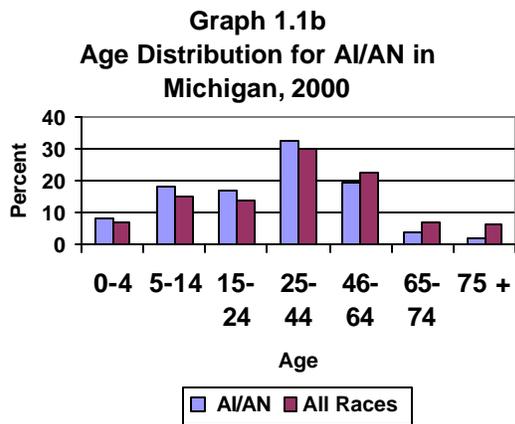
Age	Males		AI/AN Females		Total		Males		All Races Females		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
0-4	2,093	8.9	2,020	8.5	4,113	8.7	175,041	6.6	160,765	6.5	335,806	6.5
5-14	4,991	21.3	4,714	19.8	9,705	20.5	401,171	15.1	355,859	14.3	757,030	14.7
15-24	4,221	18.0	4,029	17.0	8,250	17.5	391,157	14.8	341,273	13.7	732,430	14.3
25-44	7,403	31.6	7,569	31.8	14,972	31.7	797,512	30.1	741,369	29.8	1,538,881	30.0
45-64	3,830	16.3	4,070	17.1	7,900	16.7	592,650	22.4	537,163	21.6	1,129,813	22.0
65-74	627	2.7	819	3.4	1,446	3.1	164,381	6.2	158,472	6.4	322,853	6.3
75 +	297	1.3	545	2.3	842	1.8	127,129	4.8	188,947	7.6	316,076	6.2
Total	23,462	100.0	23,766	100.0	47,228	100.0	2,649,041	100.0	2,483,848	100.0	5,132,889	100.0

Source: 2000 U.S. Census

Graphs 1.1a-d better illustrate the differences in age distribution between AI/AN and all races in each state and in the project area.



Source: 2000 U.S. Census



Socioeconomic Status

Differences in socioeconomic status account for much of the variation in patterns of disease morbidity and mortality. Low socioeconomic status is related to social stressors such as poor access to medical care, poor quality medical care, unhealthy or unsafe living conditions, and low education levels. This report presents information on AI/AN educational attainment, income level, employment status, and family characteristics.

Education

Education has been shown to positively correlate with health status. Low levels of education are risk factors for a number of diseases because of its association with tobacco use, poor dietary habits, lack of physical activity, and less appropriate medical care.

The project area data for 2000 in Table 1.3a shows that high school completion or higher was lower in the AI/AN population (76.1%) than the all races population (85.0%), but showed a 14.1% improvement from 1990. For the bachelor's degree or higher level, the all races population in the project area had more than twice the completion level as the AI/AN population (23.3% to 9.9%, respectively), but showed a 39.4% improvement from 1990.

TABLE 1.3a
Educational Attainment for American Indian/Alaska Natives and All Races in Project Area, 1990 & 2000

Educational Attainment	AI/AN Percent			All Races Percent		
	1990	2000	% Change	1990	2000	% Change
Less than 9 th grade	9.8	6.6	-33.0	8.4	4.9	-41.3
9 th to 12 th , no diploma	23.5	17.4	-26.0	13.0	10.1	-22.2
High school diploma or GED	33.8	33.3	-1.6	33.7	31.6	-6.2
Some college, no degree	20.7	26.1	+26.2	25.3	22.8	-10.0
Associate's degree	14.1	6.8	-51.8	7.3	7.3	-0.1
Bachelor's degree	4.7	6.9	+45.9	12.3	15.4	+25.4
Graduate or professional degree	2.4	3.0	+25.8	6.2	7.9	+27.2
High school diploma or higher	66.7	76.1	+14.1	78.6	85.0	+8.1
Bachelor's degree or higher	7.1	9.9	+39.4	18.5	23.3	+25.9

Source: 1990 and 2000 U.S. Censuses

TABLE 1.3b
Educational Attainment for American Indian/Alaska Natives and All Races in Michigan, 1990 & 2000

Educational Attainment	AI/AN Percent			All Races Percent		
	1990	2000	% Change	1990	2000	% Change
Less than 9 th grade	9.5	6.6	-30.5	7.8	4.7	-39.7
9 th to 12 th , no diploma	22.7	17.0	-25.1	15.5	11.9	-23.2
High school diploma or GED	33.5	32.1	-4.2	32.3	31.3	-3.1
Some college, no degree	21.2	26.8	+26.4	20.4	23.3	+14.2
Associate's degree	5.5	7.1	+29.1	6.7	7.0	+4.5
Bachelor's degree	4.9	7.4	+51.0	10.9	13.7	+25.7
Graduate or professional degree	2.7	2.9	+7.4	6.4	8.1	+26.6
High school diploma or higher	67.8	76.3	+12.5	76.7	83.4	+8.7
Bachelor's degree or higher	7.6	10.3	+35.5	17.3	21.8	+26.0

Source: 1990 and 2000 U.S. Censuses

TABLE 1.3c
Educational Attainment for American Indian/Alaska Natives and All Races in Minnesota, 1990 & 2000

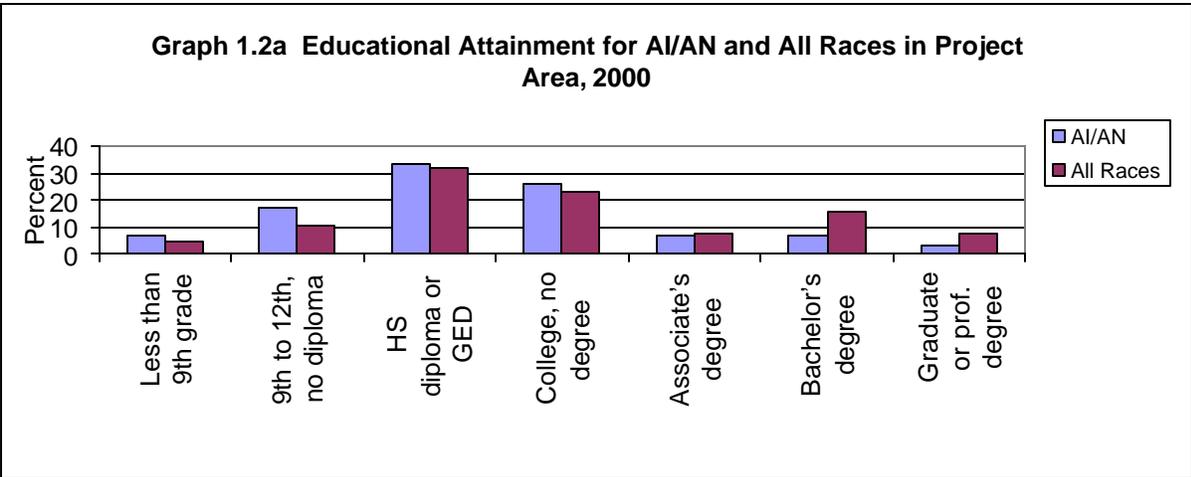
Educational Attainment	AI/AN Percent			All Races Percent		
	1990	2000	% Change	1990	2000	% Change
Less than 9 th grade	9.3	7.4	-20.0	8.6	5.0	-41.6
9 th to 12 th , no diploma	22.6	18.1	-20.0	9.0	7.0	-21.9
High school diploma or GED	33.3	32.2	-3.4	33.0	28.8	-12.6
Some college, no degree	20.3	27.2	+34.1	19.0	24.0	+26.3
Associate's degree	6.9	6.3	-9.3	8.6	7.7	-10.7
Bachelor's degree	5.3	6.1	+15.1	15.6	19.1	+22.6
Graduate or professional degree	2.3	2.7	+17.7	6.2	8.3	+34.0
High school diploma or higher	68.1	74.5	+9.4	82.4	87.9	+6.7
Bachelor's degree or higher	7.6	8.8	+15.9	21.8	27.4	+25.8

Source: 1990 and 2000 U.S. Censuses

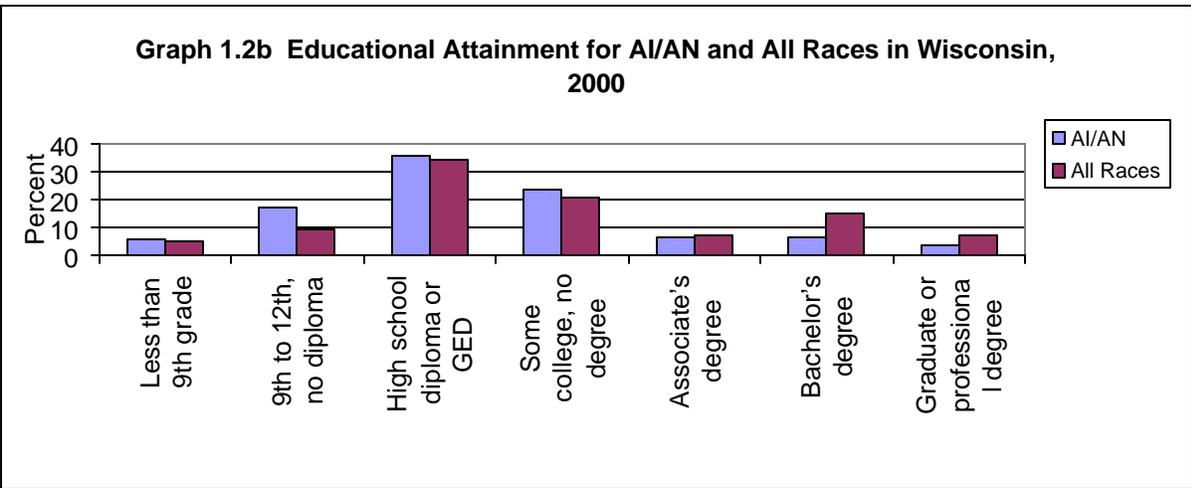
TABLE 1.3d
Educational Attainment for American Indian/Alaska Natives and All Races in Wisconsin, 1990 & 2000

Educational Attainment	AI/AN Percent			All Races Percent		
	1990	2000	% Change	1990	2000	% Change
Less than 9 th grade	8.5	5.6	-34.6	8.2	5.4	-34.7
9 th to 12 th , no diploma	35.0	17.1	-51.1	16.1	9.6	-40.6
High school diploma or GED	27.8	36.0	+29.4	31.9	34.6	+8.4
Some college, no degree	16.2	24.0	+48.3	14.3	20.6	+44.0
Associate's degree	4.7	6.9	+47.1	6.1	7.5	+23.0
Bachelor's degree	3.0	6.9	+131.2	10.4	15.3	+46.7
Graduate or professional degree	4.8	3.5	-27.6	2.1	7.2	+241.1
High school diploma or higher	56.5	77.3	+36.8	75.7	85.1	+12.4
Bachelor's degree or higher	7.8	10.4	+33.5	15.2	22.4	+47.5

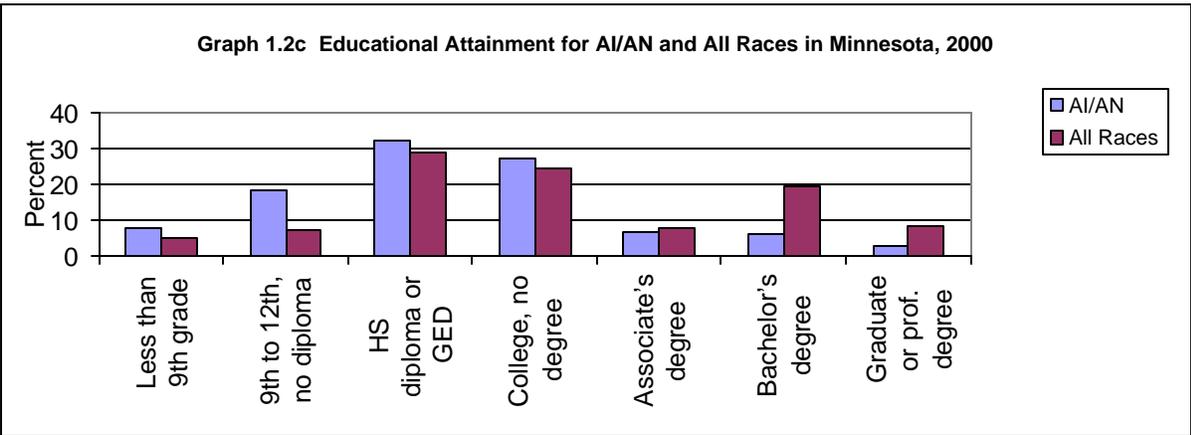
Source: 1990 and 2000 U.S. Censuses



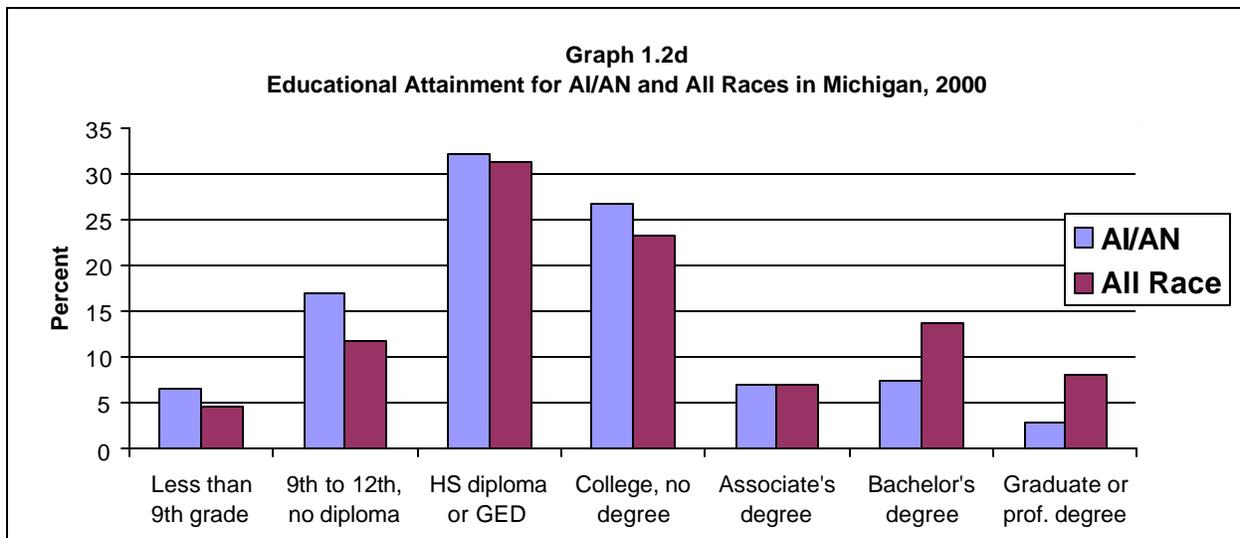
Source: 2000 U.S. Census



Source: 2000 U.S. Census



Source: 2000 U.S. Census



Source: 2000 U.S. Census

Income

Low income is correlated with high rates of chronic disease. This association is related to problems of access to care, obstacles in obtaining and using health insurance, and higher levels of risk behaviors. As with education, Table 1.4a shows that income levels for the project area AI/AN population were lower than for the project area all races population, but there is a shrinking disparity in household income over the same time. About twice as many AI/AN households (14.6%) had income under \$10,000 than households of all races (7.6%). More AI/AN households (38.1%) had income under \$25,000 compared to 25.5% of the households of all races in the project area.

TABLE 1.4a Household Income for American Indian/Alaska Natives and All Races Project Area, 1989 & 1999

Household Income	AI/AN Percent			All Races Percent		
	1989	1999	Change	1989	1999	Change
Less than \$10,000	30.1	14.6	-51.5	14.8	7.6	-48.6
\$10,000 to \$14,999	12.3	7.6	-38.0	8.8	5.7	-35.3
\$15,000 to \$24,999	20	15.9	-20.5	17.3	12.2	-29.3
\$25,000 to \$34,999	14.1	11.2	-20.8	16.2	12.6	-22.1
\$35,000 to \$49,999	12.8	17.1	+33.8	19.3	17.0	-11.7
\$50,000 to \$74,999	8	17.9	+123.8	15.5	21.6	+39.3
\$75,000 or \$99,999	1.9	7.6	+301.8	4.7	11.4	+143.1
\$100,000 or more	0.9	5.1	+465.3	3.4	11.8	+246.9

Source: 1990 and 2000 U.S. Censuses

TABLE 1.4b Household Income for American Indian/Alaska Natives and All Races Michigan, 1989 & 1999

Household Income	AI/AN Percent			All Races Percent		
	1989	1999	Change	1989	1999	Change
Less than \$10,000	26.0	12.1	-53.5	15.5	8.3	-46.5
\$10,000 to \$14,999	10.0	7.0	-30.0	8.6	5.8	-32.6
\$15,000 to \$24,999	19.8	13.9	-29.8	16.4	12.4	-24.4
\$25,000 to \$34,999	15.7	14.0	-10.8	15.3	12.4	-19.0
\$35,000 to \$49,999	14.7	17.8	+21.1	18.7	16.5	-11.8
\$50,000 to \$74,999	10.1	19.9	+97.0	16.3	20.6	+26.4
\$75,000 or \$99,999	2.7	9.3	+244.4	5.4	11.4	+111.1
\$100,000 or more	1.1	5.9	+436.4	3.8	12.7	+234.2

Source: 1990 and 2000 U.S. Censuses

TABLE 1.4c Household Income for American Indian/Alaska Natives and All Races Minnesota, 1989 & 1999

Household Income	AI/AN Percent			All Races Percent		
	1989	1999	Change	1989	1999	Change
Less than \$10,000	35.8	18.0	-49.7	13.9	6.7	-51.5
\$10,000 to \$14,999	13.2	8.7	-34.1	8.6	5.4	-37.3
\$15,000 to \$24,999	19.0	17.8	-6.3	17.5	11.4	-34.9
\$25,000 to \$34,999	11.9	13.4	+12.6	16.6	12.4	-25.6
\$35,000 to \$49,999	11.5	15.6	+35.7	19.7	17.0	-13.7
\$50,000 to \$74,999	6.2	15.5	+150.0	15.6	22.4	+43.6
\$75,000 or \$99,999	1.5	6.0	+300.0	4.5	12.1	+168.2
\$100,000 or more	0.9	4.9	+444.4	3.6	12.6	+250.7

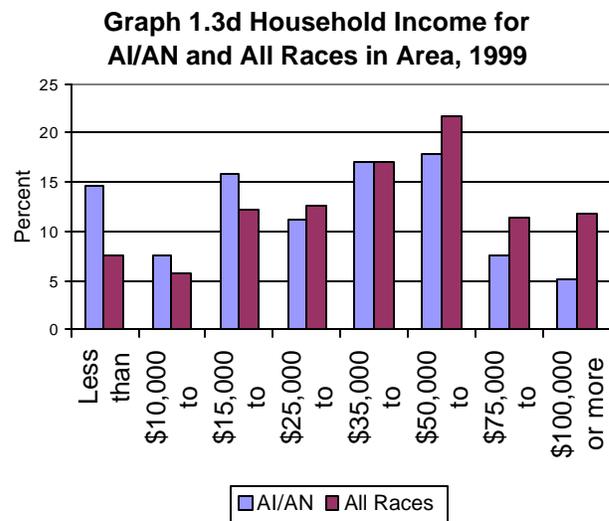
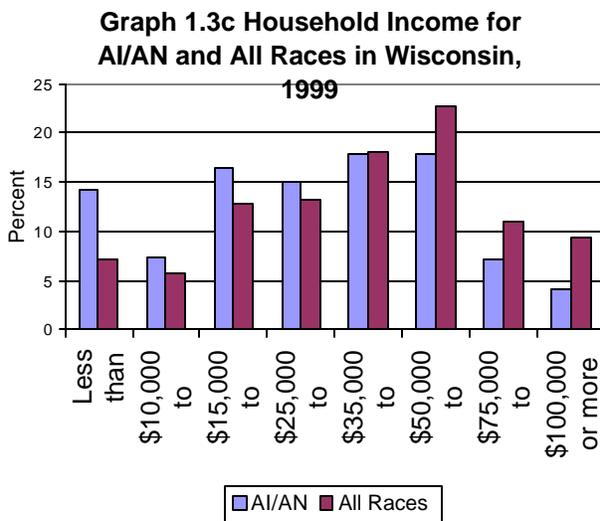
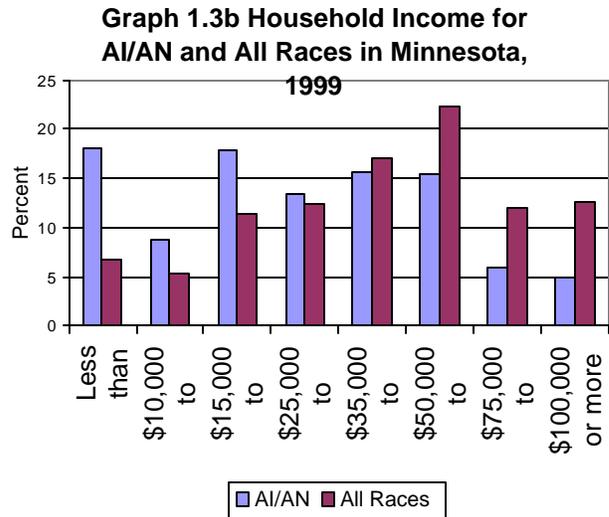
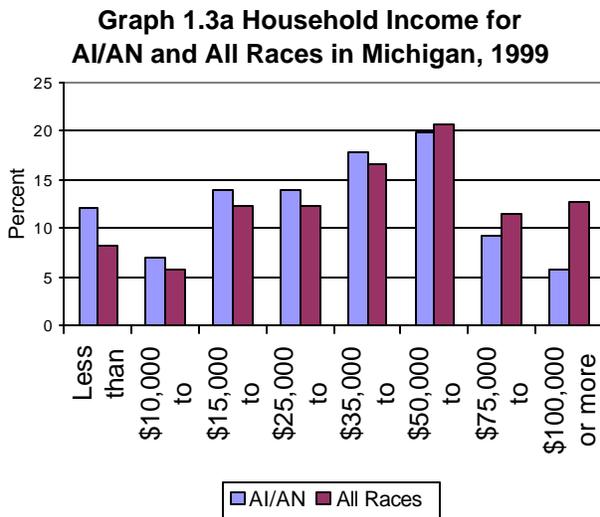
Source: 1990 and 2000 U.S. Censuses

TABLE 1.4d Household Income for American Indian/Alaska Natives and All Races Wisconsin, 1989 & 1999

Household Income	AI/AN Percent			All Races Percent		
	1989	1999	Change	1989	1999	Change
Less than \$10,000	29.6	14.2	-51.9	24	7.1	-70.2
\$10,000 to \$14,999	14.8	7.3	-50.9	9.4	5.8	-38.1
\$15,000 to \$24,999	21.7	16.4	-24.4	18.7	12.7	-32.1
\$25,000 to \$34,999	14.2	15.0	+5.7	17.4	13.2	-24.0
\$35,000 to \$49,999	11.2	17.9	+59.8	20.2	18.1	-10.4
\$50,000 to \$74,999	6.8	17.8	+161.6	14.1	22.7	+61.2
\$75,000 or \$99,999	1.1	7.2	+550.4	3.6	10.9	+201.4
\$100,000 or more	0.6	4.2	+606.9	2.6	9.4	+262.5

Source: 1990 and 2000 U.S. Censuses

Graphs 1.3a-d illustrate the disparities in income levels between the AI/AN population and all races for 1999.



Source for Graphs 1.3a-d: 2000 U.S. Census

Employment

Employment status and occupation are important in that health care benefits are often tied to full-time employment. In addition, there is a general tendency for those with lower income to experience a lower health status than those with a higher income. Table 1.5a shows that unemployment for AI/AN in the project area decreased from 17.3% in 1990 to 8.2% in 2000.

TABLE 1.5a
American Indian/Alaska Native Employment for the Service Area, 1990 and 2000

Employment	AI/AN Percent			All Races Percent		
	1990	2000	Change	1990	2000	Change
In Labor Force	62.8	65.5	+4.3	66.3	67.4	+1.7
<i>In Armed Forces</i>	0.3	0.1	-66.7	0.2	0.1	-50.0
<i>Employed</i>	82.5	91.7	+11.2	93.1	96.5	+3.7
<i>Unemployed</i>	17.3	8.2	-52.6	6.6	3.4	-48.5
Not in Labor Force	37.2	34.5	-7.3	33.7	32.6	-3.3

Source: 1990 and 2000 U.S. Censuses

TABLE 1.5b
American Indian/Alaska Native Employment for Michigan, 1990 and 2000

Employment	AI/AN Percent			All Races Percent		
	1990	2000	Change	1990	2000	Change
In Labor Force	65.6	66.2	+0.8	64.1	64.6	+0.7
<i>In Armed Forces</i>	0.3	0.1	-53.5	0.3	0.1	-72.8
<i>Employed</i>	84.0	89.0	+6.0	91.5	94.1	+2.9
<i>Unemployed</i>	15.7	10.8	-31.1	8.2	5.8	-29.6
Not in Labor Force	34.4	33.8	-1.6	35.9	35.4	-1.2

Source: 1990 and 2000 U.S. Censuses

TABLE 1.5c
American Indian/Alaska Native Employment for Minnesota, 1990 and 2000

Employment	AI/AN Percent			All Races Percent		
	1990	2000	Change	1990	2000	Change
In Labor Force	58.2	63.0	+8.2	69.7	71.2	+2.1
<i>In Armed Forces</i>	0.1	0.1	+0.7	0.2	0.1	-38.7
<i>Employed</i>	79.9	85.1	+6.4	94.7	95.9	+1.2
<i>Unemployed</i>	19.9	14.8	-25.7	5.1	4.1	-21.1
Not in Labor Force	41.8	37.0	-11.5	30.3	28.8	-4.9

Source: 1990 and 2000 U.S. Censuses

TABLE 1.5d
American Indian/Alaska Native Employment for Wisconsin, 1990 and 2000

Employment	AI/AN Percent			All Races Percent		
	1990	2000	Change	1990	2000	Change
In Labor Force	63.9	67.2	+5.2	67.6	69.1	+2.2
<i>In Armed Forces</i>	0.3	0.0	-100.0	0.2	0.1	-50.1
<i>Employed</i>	82.7	87.6	+5.9	94.6	95.2	+0.7
<i>Unemployed</i>	17.0	12.4	-26.9	5.2	4.7	-10.1
Not in Labor Force	36.1	32.8	-9.2	32.4	30.9	-4.6

Source: 1990 and 2000 U.S. Censuses

Family Households

Family households are a measure of the makeup of families in terms of head(s) of households present and children present. Tables 1.6a-d shows that the percent of single parent households is approximately 2-3 times higher among AI/AN than in the general population, but with the exception of Michigan, the rate of increase is much lower than in the general population.

TABLE 1.6a
American Indian/Alaska Native Family Households in Project Area, 1990 and 2000

Household Characteristics	AI/AN Percent			All Races Percent		
	1990	2000	Change	1990	2000	Change
Married couple family with own children under 18 years	25.1	24.2	-3.3	27.2	30.9	+13.7
Married couple family with no children under 18 years	16.8	15.3	-8.5	29.9	24.9	-16.9
Male householder (no wife) with children under 18 years	4.1	5.8	+41.5	1.3	2.6	+94.3
Female householder (no husband) with children under 18 years	19.3	18.5	-4.3	6.6	8.3	+24.9
Non-family households	25.7	27.5	+6.9	29.2	28.5	-2.4

Source: 1990 and 2000 U.S. Censuses

TABLE 1.6b**American Indian/Alaska Native Family Households in Michigan, 1990 and 2000**

Household Characteristics	AI/AN Percent			All Races Percent		
	1990	2000	Change	1990	2000	Change
Married couple family with own children under 18 years	27.1	28.1	+3.6	30.0	26.3	-12.5
Married couple family with no children under 18 years	18.9	20.0	+5.6	24.7	29.7	+20.3
Male householder (no wife) with children under 18 years	4.8	2.9	-39.0	2.7	1.4	-48.2
Female householder (no husband) with children under 18 years	13.5	14.7	+8.6	9.2	7.7	-16.7
Non-family households	28.3	26.4	-6.7	27.7	28.2	+2.0

Source: 1990 and 2000 U.S. Censuses

TABLE 1.6c**American Indian/Alaska Native Family Households in Minnesota, 1990 and 2000**

Household Characteristics	AI/AN Percent			All Races Percent		
	1990	2000	Change	1990	2000	Change
Married couple family with own children under 18 years	21.2	21.3	+0.4	28.6	32.4	+13.5
Married couple family with no children under 18 years	12.9	12.2	-5.7	29.6	24.5	-17.1
Male householder (no wife) with children under 18 years	5.5	7.1	+28.9	1.3	2.4	+88.7
Female householder (no husband) with children under 18 years	25.6	22.2	-13.2	5.3	7.1	+35.0
Non-family households	24.7	27.7	+11.9	30.9	29.6	-4.2

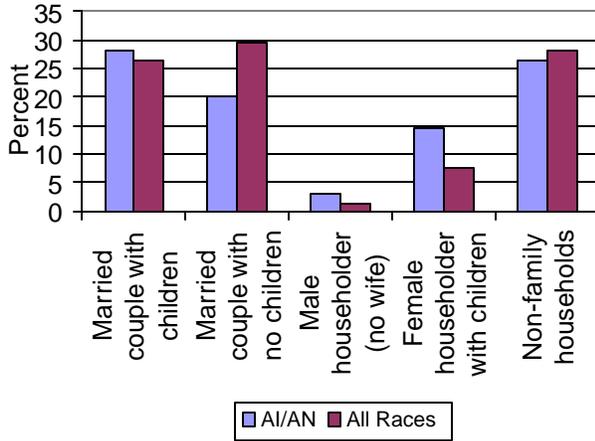
Source: 1990 and 2000 U.S. Censuses

TABLE 1.6d**American Indian/Alaska Native Family Households in Wisconsin, 1990 and 2000**

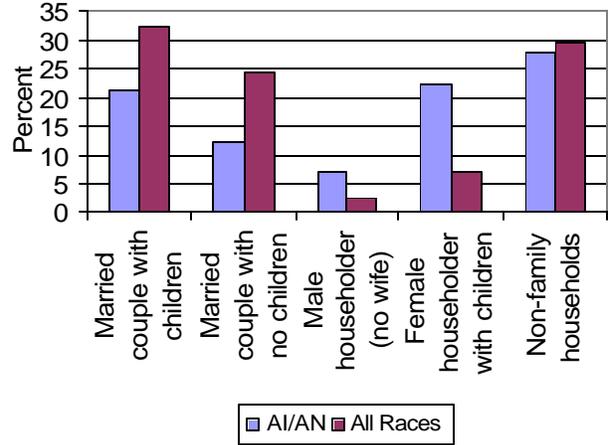
Household Characteristics	AI/AN Percent			All Races Percent		
	1990	2000	Change	1990	2000	Change
Married couple family with own children under 18 years	24.8	23.7	-4.5	27.6	31.1	+12.4
Married couple family with no children under 18 years	16.1	14.1	-12.9	30.6	25.5	-16.9
Male householder (no wife) with children under 18 years	4.4	5.8	+32.2	1.3	2.5	+102.5
Female householder (no husband) with children under 18 years	19.5	21.0	+7.9	5.8	7.6	+29.8
Non-family households	25.8	26.3	+1.9	29.6	29.1	-1.8

Source: 1990 and 2000 U.S. Censuses

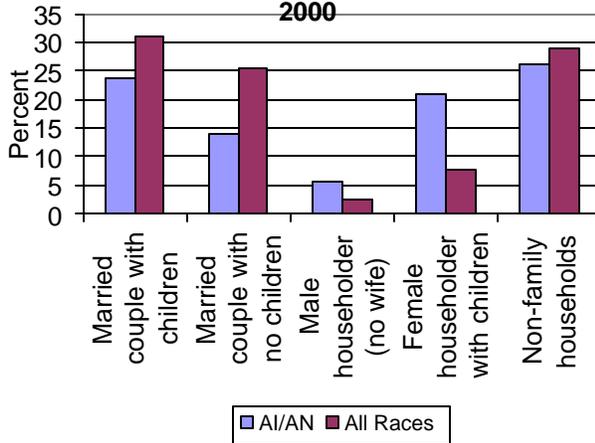
Graph 1.4a Family Households for AI/AN and All Races in Michigan, 2000



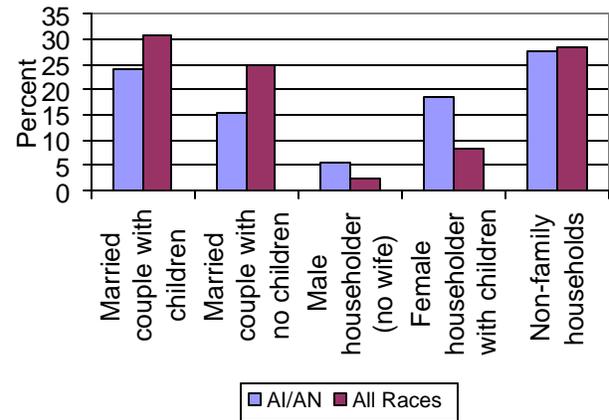
Graph 1.4b Family Households for AI/AN and All Races in Minnesota, 2000



Graph 1.4c Family Households for AI/AN and All Races in Wisconsin, 2000



Graph 1.4d Family Households for AI/AN and All Races in Project Area, 2000



Source for Graphs 1.4a-d: 2000 U.S. Census

SECTION 2 MORTALITY

This section contains mortality data for the leading causes of death in 2000 and age adjusted mortality for selected causes of death for each of the three states and the project area. This section also contains graphs, which depict mortality trends over time. American Indian/Alaska Native data presented in this section are from death certificates. It is important to note that the underlying cause of death reported on a death certificate does not necessarily reflect all contributing factors affecting a death. However, death certificate information is an important source of data because it is routinely collected following guidelines and connects cause of death, race, and county of residence. Appendix B lists the ICD-9 and ICD-10 codes used for categorizing the underlying causes of death.

In the project area, for 2000, heart disease remained the highest cause of death for American Indian/Alaskan Native at 22.7%. Four of the top five causes of death were due to chronic diseases, resulting in 63.2% of all deaths in 2000. The proportion of deaths due to cancer decreased from 1998 (20.3%) to 2000 (18.5%). The proportion of deaths from unintentional injuries, diabetes and chronic obstructive pulmonary disease all increased at some point between 1998 and 2000.

TABLE 2.1a
Leading Causes of Death for American Indian/Alaska Natives in Project Area
1998-2000

Cause of Death	2000		1999		1998	
	#	%	#	%	#	%
1. Heart Disease	222	22.7	213	22.4	215	22.5
<i>Ischemic Heart Disease</i>	164	73.9	164	77.0	154	71.6
<i>Hypertensive Heart Disease</i>	9	4.1	11	5.2	2	0.9
2. Cancer	181	18.5	183	19.3	194	20.3
<i>Lung Cancer</i>	54	29.8	68	37.2	75	58.9
<i>Breast Cancer</i>	12	6.6	18	9.8	11	5.7
3. Unintentional Injury	101	10.3	102	10.7	80	8.4
<i>Motor Vehicle Accidents</i>	57	56.4	48	47.1	43	53.8
<i>Falls</i>	13	12.9	8	7.8	6	7.5
4. Diabetes	63	6.4	69	7.3	49	5.1
5. Chronic Lower Resp. Disease	51	5.2	49	5.2	48	5.0
Sub-total	618	63.2	616	64.9	586	61.3
TOTAL	978	100.0	949	100.0	957	100.0

Sources: 1998-2000 death files from the Michigan Department of Community Health, the Minnesota Center for Health Statistics, and the Wisconsin Bureau of Health Information.

TABLE 2.1b
Leading Causes of Death for American Indian/Alaska Natives in Michigan 1998-2000

Cause of Death	2000		1999		1998	
	#	%	#	%	#	%
1. Heart Disease	114	29.2	107	27.2	103	27.5
<i>Ischemic Heart Disease</i>	91	79.8	87	81.3	69	67.0
<i>Hypertensive Heart Disease</i>	5	4.4	2	1.9	1	1.0
2. Cancer	77	19.7	93	23.6	80	21.4
<i>Lung Cancer</i>	31	40.3	39	41.9	32	40.0
<i>Breast Cancer</i>	8	10.4	9	9.7	4	5.0
3. Unintentional Injury	22	5.6	33	8.4	26	7.0
<i>Motor Vehicle Accidents</i>	13	59.1	10	30.3	15	57.7
<i>Falls</i>	5	22.7	3	9.1	1	3.8
4. Chronic Lower Resp. Disease	27	6.9	25	6.3	28	7.5
5. Diabetes	25	6.4	24	6.1	16	4.3
Sub-total	265	67.9	282	71.6	253	67.6
TOTAL	390	100.0	394	100.0	374	100.0

Source: 1997-2000 Death Files from Michigan Department of Community Health

TABLE 2.1c
Leading Causes of Death for American Indian/Alaska Natives in Minnesota 1998-2000

Cause of Death	2000		1999		1998	
	#	%	#	%	#	%
1. Cancer	61	16.9	55	17.2	66	19.3
<i>Lung Cancer</i>	15	24.6	19	34.5	32	48.5
<i>Breast Cancer</i>	3	4.9	5	9.1	3	4.5
2. Heart Disease	53	14.6	52	16.3	62	18.1
<i>Ischemic Heart Disease</i>	34	64.2	39	75.0	44	71.0
<i>Hypertensive Heart Disease</i>	3	5.7	6	11.5	1	1.6
3. Unintentional Injury	56	15.5	36	11.3	35	10.2
<i>Motor Vehicle Accidents</i>	30	53.6	18	50.0	17	48.6
<i>Falls</i>	5	8.9	2	5.6	4	11.4
4. Diabetes	24	6.6	23	7.2	20	5.8
5. Chronic Lower Resp. Disease	17	4.7	13	4.1	11	3.2
Sub-total	211	58.3	179	55.9	194	56.7
TOTAL	362	100.0	320	100.0	342	100.0

Source: 1998-2000 death files from Minnesota Center for Health Statistics

TABLE 2.1d
Leading Causes of Death for American Indian/Alaska Natives in Wisconsin 1998-2000

Cause of Death	2000		1999		1998	
	#	%	#	%	#	%
1. Heart Disease	55	24.3	54	23.0	50	20.7
<i>Ischemic Heart Disease</i>	39	70.9	38	70.4	41	82.0
<i>Hypertensive Heart Disease</i>	1	1.8	3	5.6	0	0.0
2. Cancer	43	19.0	35	14.9	48	19.9
<i>Lung Cancer</i>	8	18.6	10	28.6	11	22.9
<i>Breast Cancer</i>	1	2.3	4	11.4	4	8.3
3. Unintentional Injury	23	10.2	33	14.0	19	7.9
<i>Motor Vehicle Accidents</i>	14	60.9	20	60.6	11	57.9
<i>Falls</i>	3	13.0	3	9.1	1	5.3
4. Diabetes	14	6.2	21	8.9	13	5.4
5. Liver Disease	11	4.9	17	7.2	13	5.4
Sub-total	146	64.6	160	68.1	143	59.3
Total	226	100.0	235	100.0	241	100.0

Source: 1997-2000 Death Files from Wisconsin Bureau of Health Information

Tables 2.2-2.10 compare selected causes of death between populations. The mortality rates are all age-adjusted to a standard population based on the projected population of the United States in 2000. Table 2.2 shows that AI/AN populations had higher overall mortality rates than All Races in each state for 2002.

TABLE 2.2
All Causes Age-adjusted Mortality Rates, 2000 (per 100,000)

AI/AN Michigan	1575.5	All Races Michigan	1056.2
AI/AN Minnesota	1508.9	All Races Minnesota	896.8
AI/AN Wisconsin	1104.4	All Races Wisconsin	865.2
AI/AN Project Area	1408.8	All Races U.S. (1999)	876.8
HP 2010 for AI/AN	NA		

Data Sources: 2000 Death files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information; National data from National Center for Health Statistics; *Healthy People 2010* from DHHS.

TABLE 2.3
All Heart Disease Age-adjusted Mortality Rates, 2000 (per 100,000)

AI/AN Michigan	533.8	All Races Michigan	345.59
AI/AN Minnesota	310.9	All Races Minnesota	214.26
AI/AN Wisconsin	525.6	All Races Wisconsin	253.8
AI/AN Project Area	389.6	All Races U.S. (1999)	267.8
HP2010	NA		

Data Sources: 2000 Death files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information; National data from National Center for Health Statistics; *Healthy People 2010* from DHHS.

TABLE 2.4
Ischemic Heart Disease Age-adjusted Mortality Rates, 2000 (per 100,000)

AI/AN Michigan	436.2	All Races Michigan	256.1
AI/AN Minnesota	181.0	All Races Minnesota	140.8
AI/AN Wisconsin	197.4	All Races Wisconsin	198.5
AI/AN Project Area	284.6	All Races U.S. (1999)	195.6
HP2010	166.0		

Data Sources: 2000 Death files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information; National data from National Center for Health Statistics; *Healthy People 2010* from DHHS.

TABLE 2.5
All Cancer Age-adjusted Mortality Rates, 2000 (per 100,000)

AI/AN Michigan	284.1	All Races Michigan	229.1
AI/AN Minnesota	289.7	All Races Minnesota	217.1
AI/AN Wisconsin	217.7	All Races Wisconsin	198.0
AI/AN Project Area	263.5	All Races U.S. (1999)	202.7
HP2010	159.9		

Data Sources: 2000 Death files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information; National data from National Center for Health Statistics; *Healthy People 2010* from DHHS.

TABLE 2.6
Lung Cancer Age-adjusted Mortality Rates, 2000 (per 100,000)

AI/AN Michigan	128.3	All Races Michigan	62.9
AI/AN Minnesota	62.8	All Races Minnesota	51.8
AI/AN Wisconsin	34.4	All Races Wisconsin	53.7
AI/AN Project Area	80.2	All Races U.S. (1999)	56.0
HP2010	44.9		

Data Sources: 2000 Death files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information; National data from National Center for Health Statistics; *Healthy People 2010* from DHHS.

TABLE 2.7
All Injury Age-adjusted Mortality Rates, 2000 (per 100,000)

AI/AN Michigan	59.8	All Races Michigan	34.8
AI/AN Minnesota	109.7	All Races Minnesota	65.4
AI/AN Wisconsin	61.2	All Races Wisconsin	40.2
AI/AN Project Area	77.3	All Races U.S. (1999)	35.9
HP2010	17.5		

Data Sources: 2000 Death files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information; National data from National Center for Health Statistics; *Healthy People 2010* from DHHS.

TABLE 2.8
Motor Vehicle Crashes Age-adjusted Mortality Rates, 2000 (per 100,000)

AI/AN Michigan	22.0	All Races Michigan	15.4
AI/AN Minnesota	54.4	All Races Minnesota	13.8
AI/AN Wisconsin	28.0	All Races Wisconsin	15.4
AI/AN Project Area	34.3	All Races U.S. (1999)	15.5
HP2010	9.2		

Data Sources: 2000 Death files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information; National data from National Center for Health Statistics; *Healthy People 2010* from DHHS.

TABLE 2.9
Chronic Lower Respiratory Disease (CLRD) Age-adjusted Mortality Rates, 2000 (per 100,000)

AI/AN Michigan	144.6	All Races Michigan	52.9
AI/AN Minnesota	100.6	All Races Minnesota	45.6
AI/AN Wisconsin	47.0	All Races Wisconsin	43.0
AI/AN Project Area	149.6	All Races U.S. (1999)	45.7
HP2010	60.0		

Data Sources: 2000 Death files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information; National data from National Center for Health Statistics; *Healthy People 2010* from DHHS.

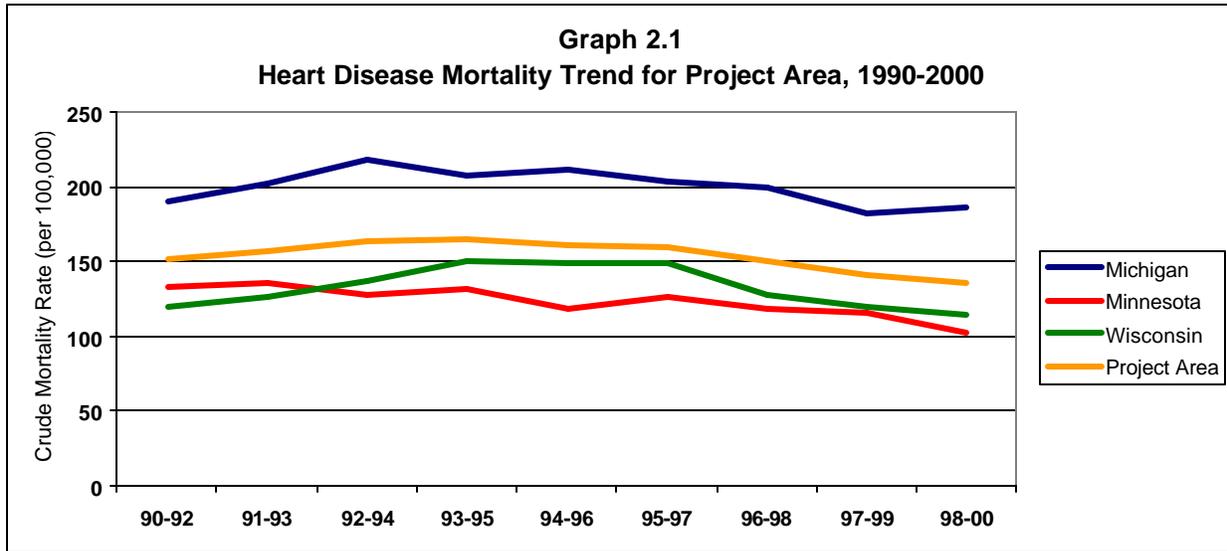
TABLE 2.10
Diabetes Age-adjusted Mortality Rates, 2000 (per 100,000)

AI/AN Michigan	98.8	All Races Michigan	31.4
AI/AN Minnesota	98.4	All Races Minnesota	28.9
AI/AN Wisconsin	74.2	All Races Wisconsin	24.5
AI/AN Project Area	91.6	All Races U.S. (1999)	25.2
HP2010	45.0		

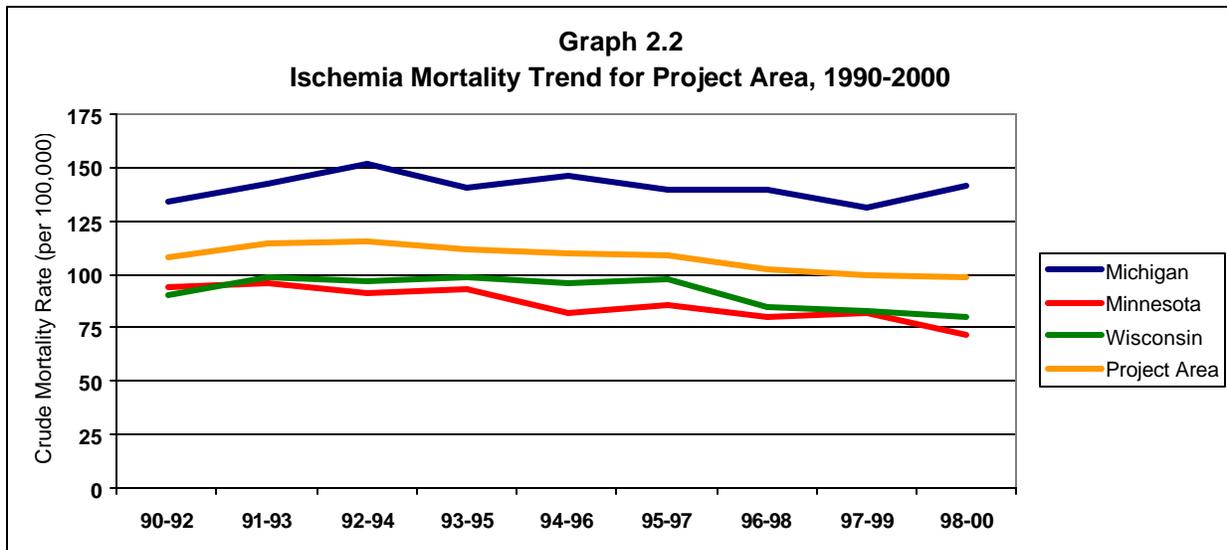
Data Sources: 2000 Death files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information; National data from National Center for Health Statistics; *Healthy People 2010* from DHHS.

Mortality Trends for Selected Causes of Death

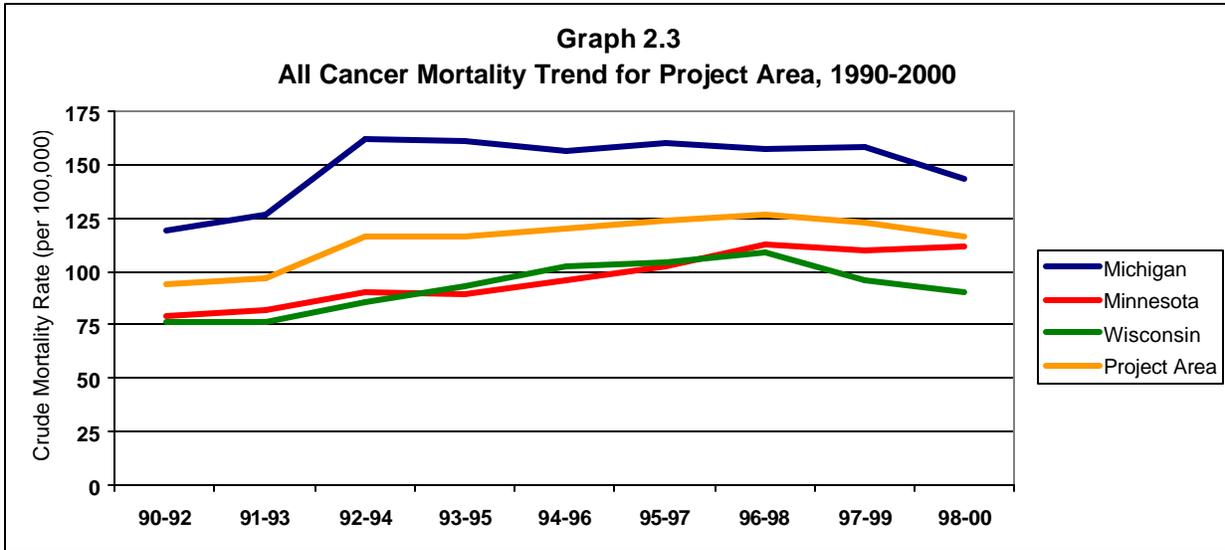
Graphs 2.1-8 display mortality rate trends for the AI/AN population for selected causes of death from 1990-2000. Following death rates over time allows one to track changes in death rates for a population.



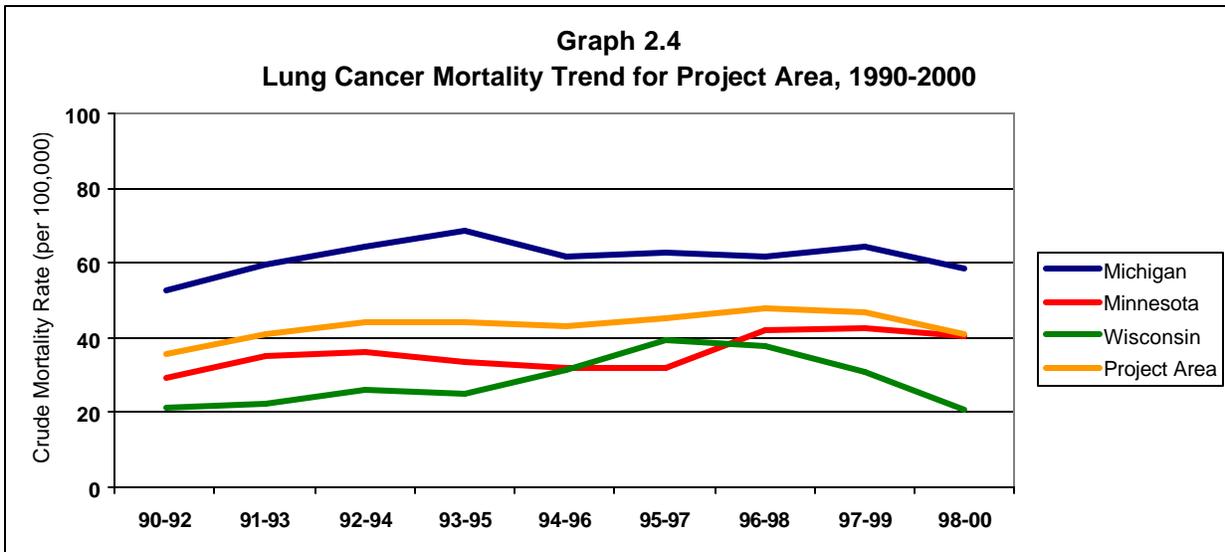
Data Sources: 1990-2000 Death files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information



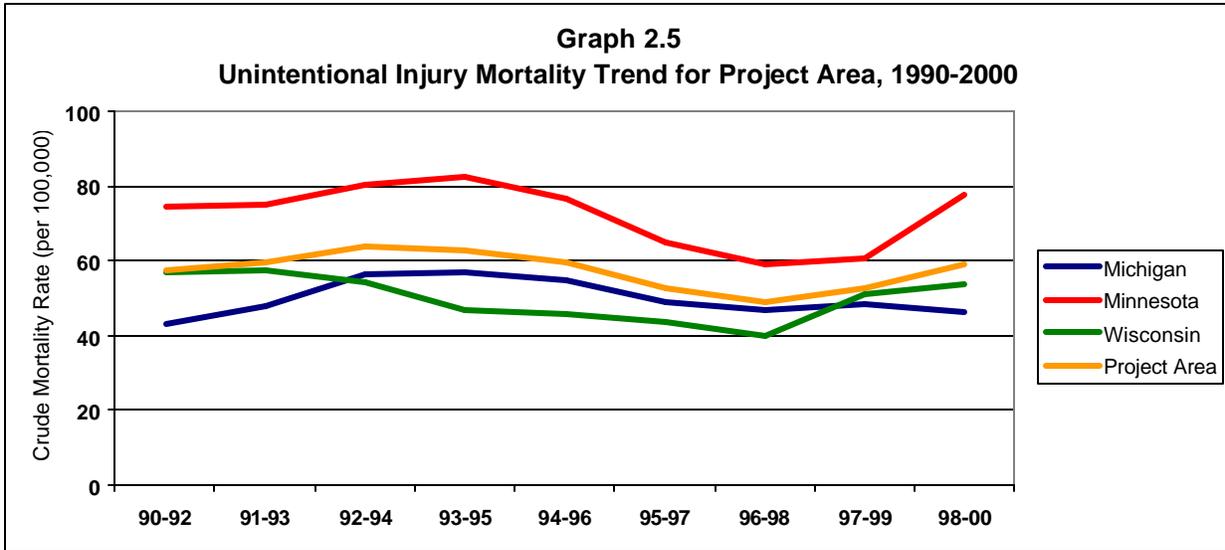
Data Sources: 1990-2000 Death files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information



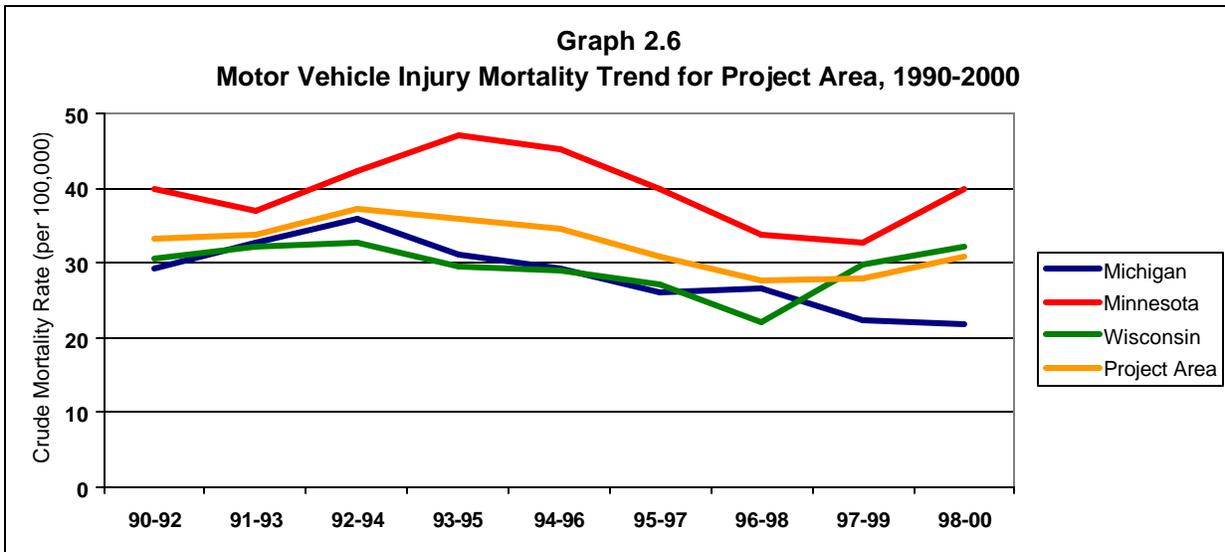
Data Sources: 1990-2000 Death files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information



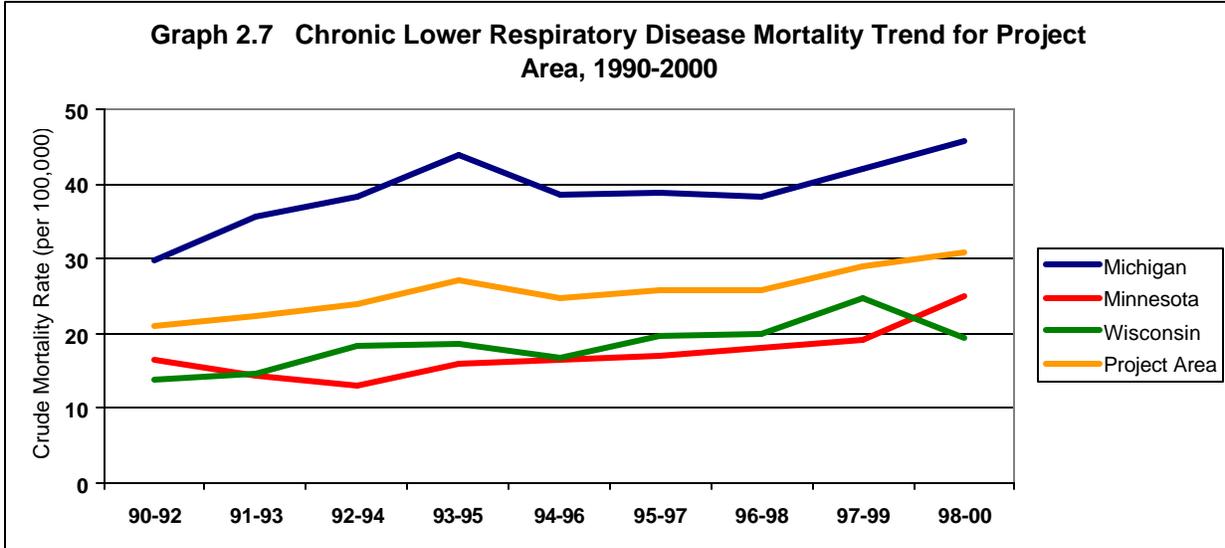
Data Sources: 1990-2000 Death files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information



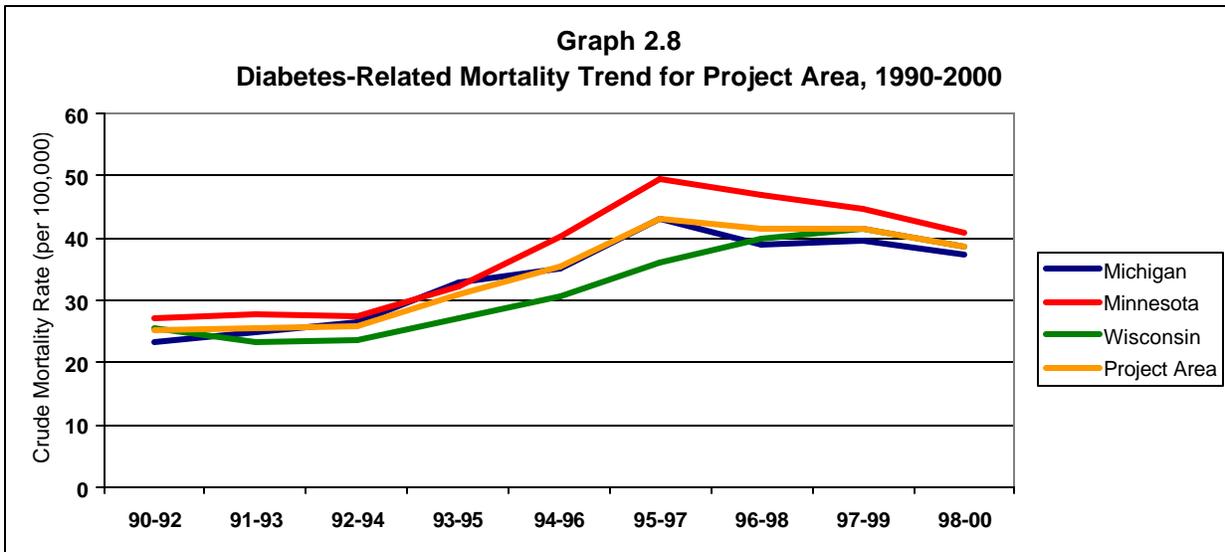
Data Sources: 1990-2000 Death files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information



Data Sources: 1990-2000 Death files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information



Data Sources: 1990-2000 Death files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information

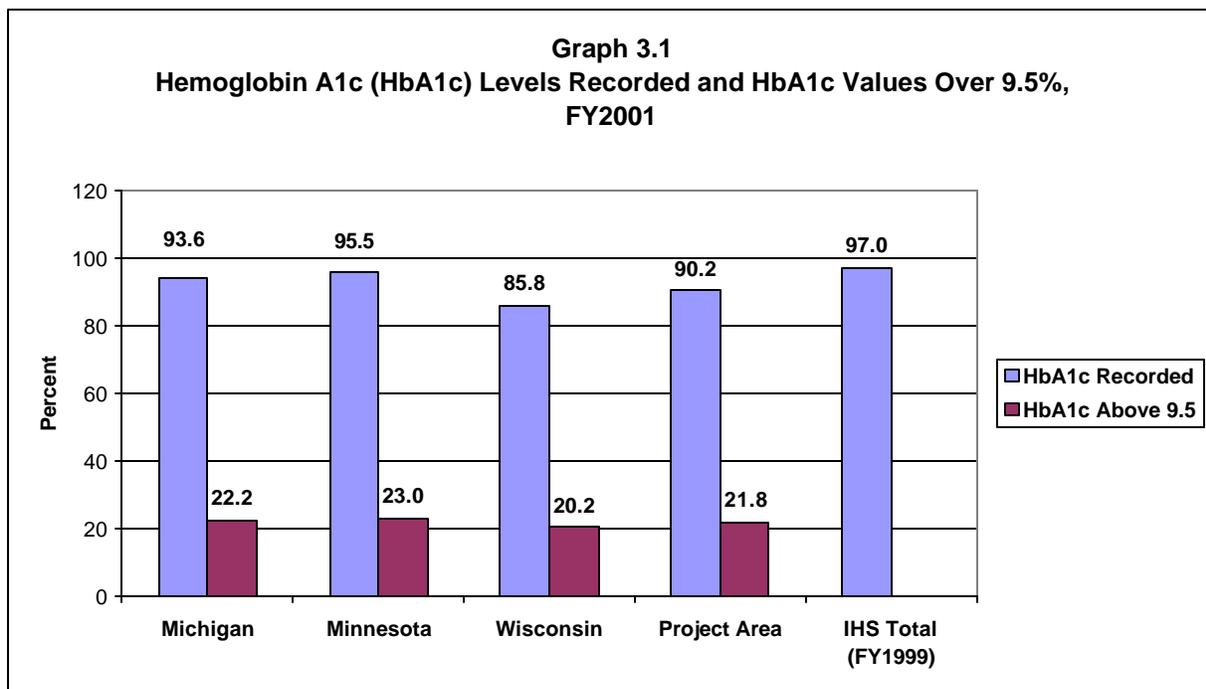


Data Sources: 1990-2000 Death files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information

SECTION 3 DIABETES

Section 3 contains diabetes information taken from diabetes audits at Tribal Health Centers. Comparisons between states may not be valid in that not all Tribal diabetes programs completed diabetes audits in FY2000 and are therefore not included in the state data.

Graph 3.1 displays the percent of people who had at least one Hemoglobin A1c (HbA1c) test during FY2001 and the percent that had an HbA1c result of 9.5% or higher. These are two Health plan Employer Data and Information Set (HEDIS) measures. Most diabetes patients received at least one HbA1c test during the year and 22% had HbA1c values over 9.5% in the project area. An HbA1c value of greater than 9.5% would mean poorly controlled glucose levels.



Source: Tribal Diabetes Audits

Table 3.1 displays diabetes chart audit data from each of the three states and compares it to Bemidji Area and IHS Total diabetes audit data. The age and sex distribution in the project area is comparable to that of the IHS total population. Completion of immunization levels (influenza, pneumonia, and tetanus) are slightly below the IHS total levels. There are twice as many diabetic smokers in the project area as in the IHS total population.

TABLE 3.1
Selected Indicators from tribal Diabetes Chart Audits for Michigan, Minnesota, Wisconsin, Project Area, and IHS Total, FY2001

Indicator	MI Percent	MN Percent	WI Percent	Project Area Percent	IHS Total Percent*
Sex Distribution					
Male	38	43	47	44	39
Female	62	57	53	56	61
Age Distribution					
Less than 15 years	2	0	1	1	0
15-44 years	24	23	27	26	23
45-64 years	55	51	47	50	50
65 years and older	20	25	24	23	26
HbA1c Level recorded	94	96	86	93	97
HbA1c >9.5	22	23	20	26	NA
Annual Exams					
Diabetics receiving annual eye exam	43	53	33	41	54
Diabetics receiving annual foot exam	56	70	48	56	59
Diabetics receiving annual dental exam	23	26	25	25	30
Immunizations					
Influenza vaccination	47	56	47	48	54
Pneumonia vaccination	43	73	39	50	71
Tetanus vaccination	44	84	46	57	79
Total cholesterol tested in past year	75	75	69	71	72
Creatinine tested in past year	81	82	72	76	90
Diabetics who are obese	51	54	48	50	46
Diabetics with hypertension	33	31	28	30	NA
Diabetics currently smoking	34	40	34	35	18
Diabetes Education					
Diet instruction	48	47	48	49	57
Exercise instruction	39	40	41	41	28
Other diabetes related education	61	66	50	55	64
PPD status known	49	69	37	49	71

* IHS Total is from FY1999

Source: Tribal diabetes programs at Tribal health centers. Data was collected in FY 2001 diabetes chart audits from Michigan, Minnesota, and Wisconsin.

Note: The Project Area is the same as the Bemidji Area in this table and the IHS Total data is weighted.

SECTION 4

COMMUNICABLE DISEASES

Section 4 contains data on sexually transmitted diseases (STDs). Please note that these data represent only cases reported by local health departments and that the degree and completeness of reporting by physicians, hospitals, and clinical laboratories to local health departments varies significantly. Racial non- and misclassification is also prevalent, so AI/AN cases may not be identified as such. It is likely that the number of cases reported severely under-represents the true incidence of disease.

Some communicable diseases besides STDs are reported to health departments. These diseases are usually vaccine-preventable, highly infectious, and/or can cause severe conditions, including death. The attack rates of many of these diseases are very low and may occur in a cluster at a specific time in a specific place as opposed to it being an ongoing health problem. For example, the majority of salmonellosis cases in a given year could be from a single outbreak at one community dinner. Therefore, determining a trend over time would be extremely difficult and may not accurately reflect the general health of the AI/AN population in the three-state region.

See Appendix C for a listing of conditions reportable to local health departments in Minnesota, Michigan, and Wisconsin.

Table 4.2a-d displays information on four sexually transmitted diseases: Chlamydia; gonorrhea; herpes type 1 & 2; and syphilis. Table 4.2a shows that in 2000, the numbers and rates are highest for Chlamydia in the project area with the next highest being gonorrhea. The numbers of cases vary greatly by year and it is not clear if this represents fluctuation in burden of disease or changes related to reporting. The upward trend in Chlamydia is probably due to increased screening rather than an increase in the numbers of infected persons.

TABLE 4.2a
Numbers and Rates (per 100,000) for Selected Sexually Transmitted Diseases in American Indian/Alaska Natives in Project Area 1996-2000

Disease	1996		1997		1998		1999		2000	
	#	rate								
Chlamydia	225	142.4	308	193.8	450	281.7	604	375.3	623	387.7
Gonorrhea	65	41.1	85	53.5	78	48.8	129	80.1	113	70.3
Herpes: Types 1 & 2	NA	NA								
Syphilis: Primary and secondary	1	0.6	1	0.6	2	1.3	0	0.0	4	2.5

NA=Not available

Source: Michigan Department of Community Health, Minnesota Center for Health Statistics, Sexually Transmitted Disease Department, and Wisconsin Department of Health and Family Services, Bureau of Communicable Disease

TABLE 4.2b
Numbers and Rates (per 100,000) for Selected Sexually Transmitted Diseases in American Indian/Alaska Natives in Michigan 1996-2000

Disease	1996		1997		1998		1999		2000	
	#	rate								
Chlamydia	0	0.0	19	31.9	12	20.1	34	56.8	39	66.7
Gonorrhea	0	0.0	6	10.1	8	13.4	8	13.4	10	17.1
Herpes Types 1 & 2	NA									
Syphilis (primary and secondary)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

NA=Not available

Source: Michigan Department of Community Health

TABLE 4.2c
Numbers and Rates (per 100,000) for Selected Sexually Transmitted Diseases in American Indian/Alaska Natives in Minnesota 1996-2000

Disease	1996		1997		1998		1999		2000	
	#	rate								
Chlamydia	210	374.6	249	441.3	269	471.6	350	608.5	316	574.8
Gonorrhea	61	108.8	69	122.3	46	80.6	82	142.6	72	131.0
Herpes Types 1 & 2	NA	NA								
Syphilis (primary and secondary)	0	0.0	0	0.0	1	1.8	0	0.0	1	1.8

NA=Not available

Source: Minnesota Center for Health Statistics, sexually transmitted disease department

TABLE 4.2d
Numbers and Rates (per 100,000) for Selected Sexually Transmitted Diseases in American Indian/Alaska Natives in Wisconsin 1996-2000

Disease	1996		1997		1998		1999		2000	
	#	rate	#	rate	#	rate	#	rate	#	rate
Chlamydia	15	35.4	40	93.3	169	323.3	220	505.4	268	567.5
Gonorrhea	4	9.4	10	23.3	24	55.8	39	89.6	31	65.6
Herpes Types 1 & 2	2	4.7	7	16.3	21	48.8	28	64.3	35	74.1
Syphilis (primary and secondary)	1	2.4	1	2.3	1	2.3	0	0.0	3	6.4

Source: Wisconsin Department of Health and Family Services, Bureau of Communicable Disease

SECTION 5

MATERNAL AND CHILD HEALTH

Section 5 contains health information on AI/AN mothers and children in the project area. The data included is primarily from birth certificates but also includes information from the Women, Infants, and Children (WIC) program.

Infant mortality rate (IMR) is commonly used as an indicator of community health status, since children under one year of age are highly susceptible to disease. IMR measures the number deaths to children less than one year divided by the number of live births in a given year then multiplied by 1000. Table 5.1 and Graph 5.1 show that the IMR for the project area in 2000 was 7.3 deaths per 1,000 live births. This was higher than the IHS total population (4.5 deaths/1000 live births) and All Races within the project area (7.1 deaths/1000 live births).

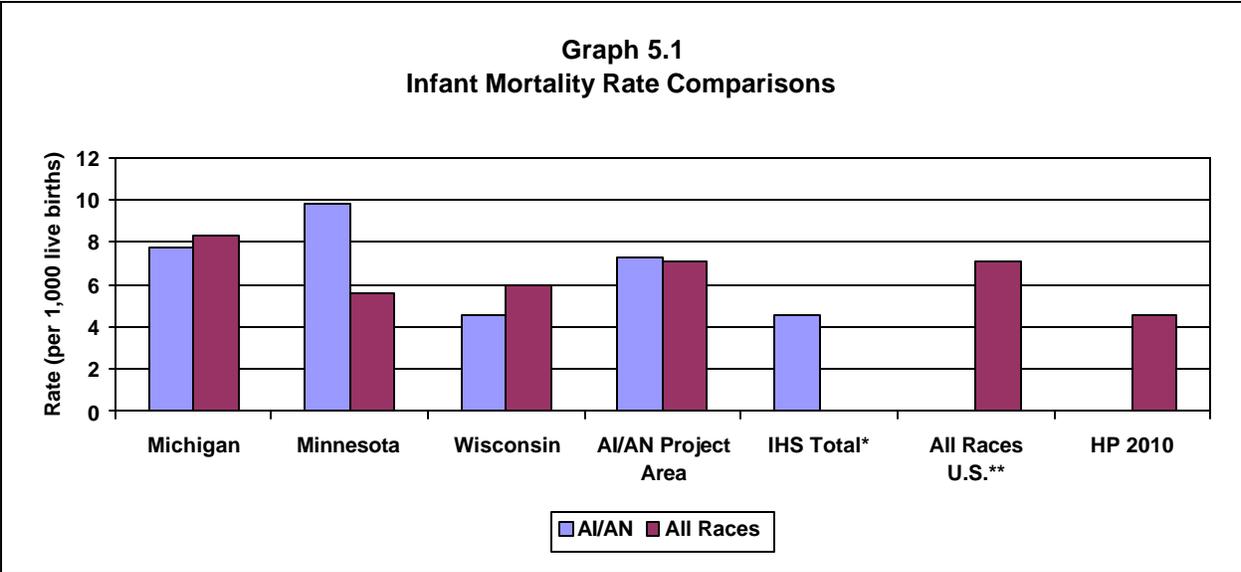
TABLE 5.1
Comparison of Infant Mortality Rates (per 1,000 live births), 2000

AI/AN Michigan	7.7	All Races Michigan	8.2
AI/AN Minnesota	9.8	All Races Minnesota	5.6
AI/AN Wisconsin	4.5	All Races Wisconsin	6.0
AI/AN Project Area	7.3	All Races Project Area	7.1
IHS Total*	4.5	All Races U.S.**	7.1
HP 2010	4.5		

Data Sources: 2000 death files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information.

*Data from [Regional Differences in Indian Health 1998-2000](#) (1994-1996 data)

** NCHS. *Health, United States, 2002 with Urban and Rural Health Chartbook*. Hyattsville, MD: 2002



Sources: 2000 Death Files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information; *Regional Differences in Indian Health 1998-2000*; NCHS. *Health, United States, 2002 with Urban and Rural Health Chartbook*. Hyattsville, MD: 2002

Birth Weight

Birth weight is a valuable indicator of health for both the infant and mother. Low birth weight babies are at a higher risk of death within the first year of life, since they may be more susceptible to illness due to lack of physical development (prematurity). Table 5.2 and Graph 5.2 shows that the AI/AN project area population had a higher percent of low birth weight babies compared to the total IHS population (6.3 to 6.0, respectively). The low birth weight rates were lower for AI/AN project area babies (6.3%) than for all races in the project area (7.1%). Both AI/AN and all races low birth weight rates failed to reach the HP2010 goal of 5.0%.

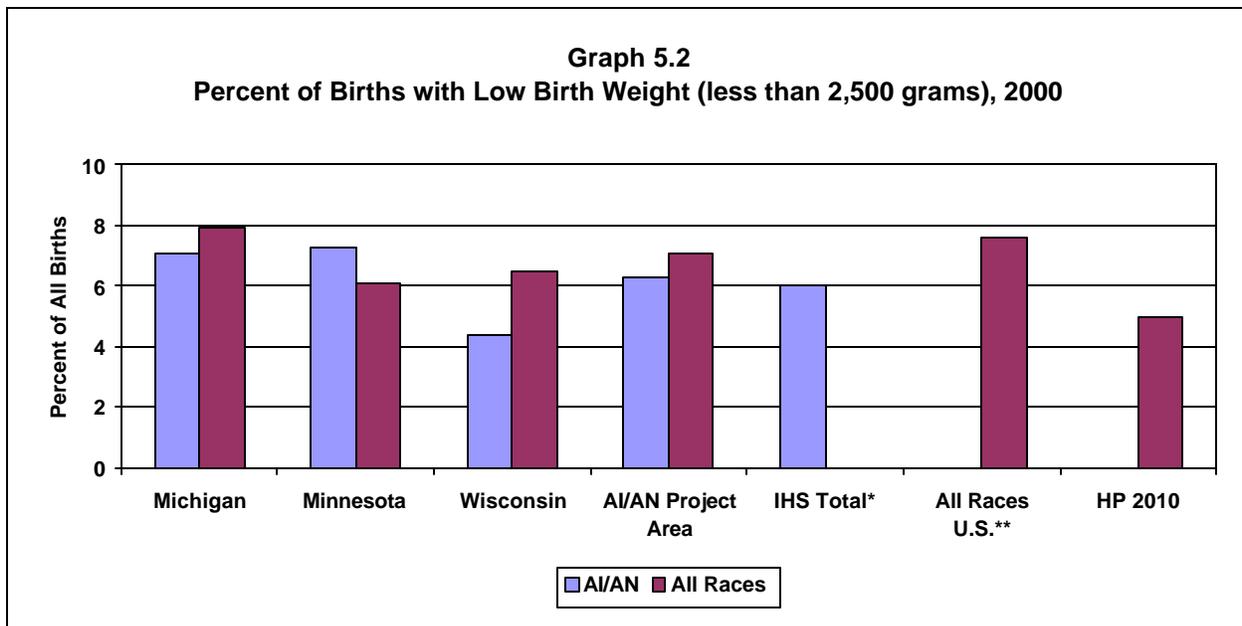
**TABLE 5.2
Percent of Low Birth Weight Births (less than 2,500 grams), 2000**

AI/AN Michigan	7.1	All Races Michigan	7.9
AI/AN Minnesota	7.3	All Races Minnesota	6.1
AI/AN Wisconsin	4.4	All Races Wisconsin	6.5
AI/AN Project Area	6.3	All Races Project Area	7.1
IHS Total*	6.0	All Races U.S.**	7.6
HP 2010	5.0		

Data Sources: 2000 Birth Files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information.

**Regional Differences in Indian Health, 1998-2000 (1994-1996 data)*

** NCHS. *Health, United States, 2002 with Urban and Rural Health Chartbook*. Hyattsville, MD: 2002



Sources: Data Sources: 2000 Birth Files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information.

**Regional Differences in Indian Health, 1998-2000* (1994-1996 data)

** NCHS. *Health, United States, 2002 with Urban and Rural Health Chartbook*. Hyattsville, MD: 2002

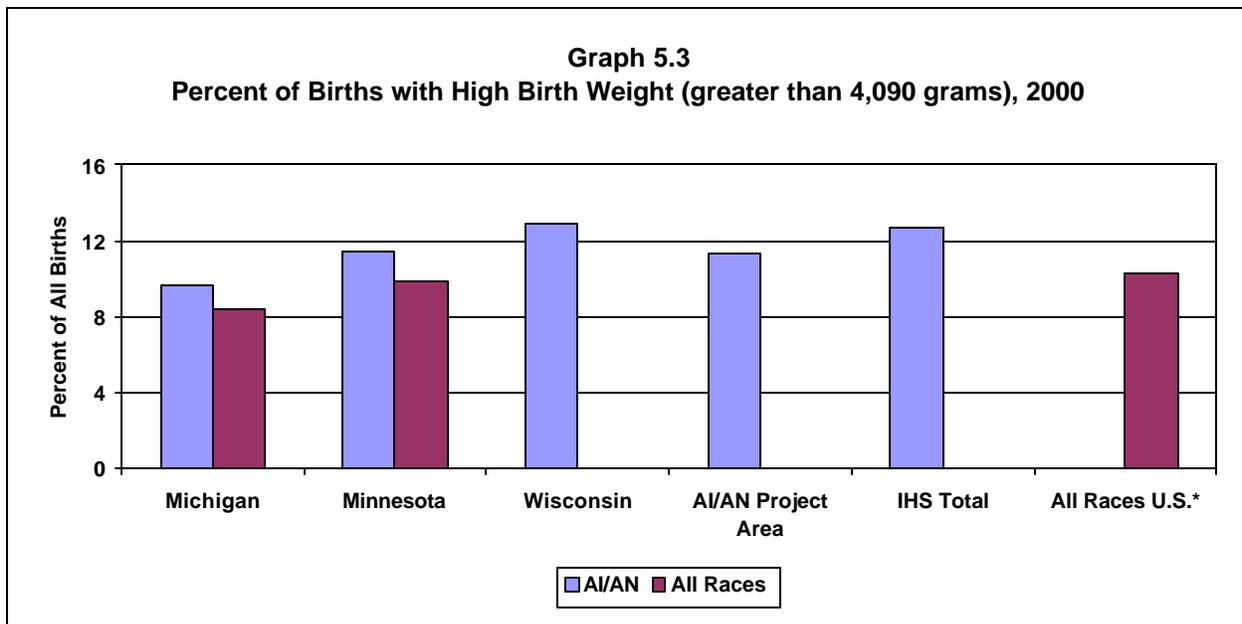
High birth weight is an important indicator because these babies may have increased risk of developing diabetes, metabolic problems, or obesity throughout their lifetime. These problems, such as diabetes, can be serious and life threatening. The high birth weight of a baby can also cause problems for mothers during delivery and may be an indicator that the mother has diabetes or other metabolic disorders. Table 5.3 and Graph 5.3 display the comparison of high birth weight babies for different populations. The AI/AN project area had a lower percentage of high birth weight babies (11.3%) than the IHS population (12.7%), but more than All Races in the U.S. (10.3%).

TABLE 5.3
Percent of High Birth Weight Births (greater than 4,090 grams), 2000

AI/AN Michigan	9.6	All Races Michigan	8.4
AI/AN Minnesota	11.4	All Races Minnesota	9.8
AI/AN Wisconsin	12.9	All Races Wisconsin	NA
AI/AN Project Area	11.3	All Races Project Area	NA
IHS Total*	12.7	All Races U.S. (1995)*	10.3
HP 2010	--		

Sources: 2000 birth files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information.

*Data from *Regional Differences in Indian Health 1998-2000* (1994-1996 data)



Sources: 2000 birth files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information.

*Data from *Regional Differences in Indian Health 1998-2000* (1994-1996 data)

Prenatal Care

The trimester prenatal care began has traditionally been used as an indicator of birth outcomes. Receiving prenatal care in the first trimester could assist with the detection of potential health problems early in a pregnancy. Early care during pregnancy allows for early education and consultation about nutrition, exercise and basic care during pregnancy and birth for both parents.

Table 5.4 and Graph 5.4 display information on the percentage of births in which the mother began prenatal care in the first trimester. Of AI/AN births in the project area, 72.0% began prenatal care in the first trimester compared to 66.5% of AI/AN in the total IHS population, but was much lower than All Races in the U.S. (84.3%). The AI/AN rate remains well below the HP2010 goal of 90%.

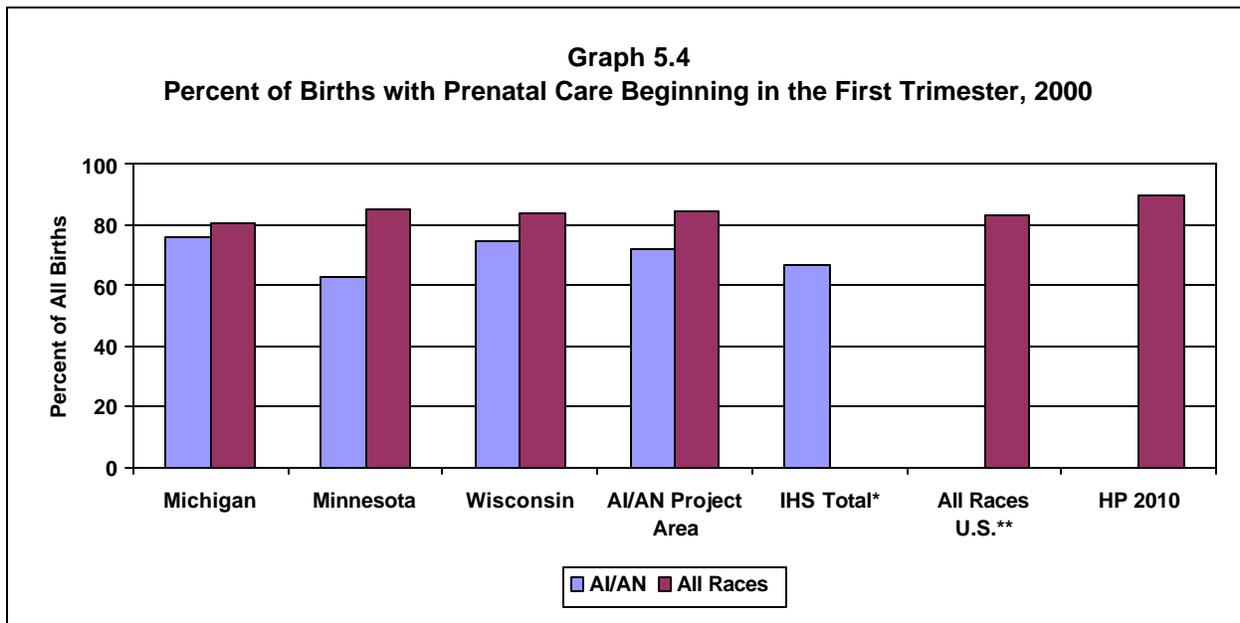
TABLE 5.4
Percent of Births with Prenatal Care Beginning in the First Trimester, 2000

AI/AN Michigan	76.3	All Races Michigan	80.5
AI/AN Minnesota	62.6	All Races Minnesota	84.9
AI/AN Wisconsin	74.8	All Races Wisconsin	83.9
AI/AN Project Area	72.0	All Races Project Area	84.3
IHS Total*	66.5	All Races U.S.**	83.2
HP 2010	90.0		

Data Sources: 2000 birth files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information.

*Indian Health Service. *Regional Differences in Indian Health 1998-2000* (1994-1996 data)

**NCHS. *Health, United States, 2002, with Urban and Rural Health Chartbook*. Hyattsville, MD: 2002



Data Sources: 2000 Birth Files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information.

*Indian Health Service. *Regional Differences in Indian Health 1998-2000* (1994-1996 data)

**NCHS. *Health, United States, 2002, with Urban and Rural Health Chartbook*. Hyattsville, MD: 2002

Smoking During Pregnancy

Smoking during pregnancy is an important indicator of both child and maternal health outcomes. Mothers who smoke during pregnancy are at personal risk for smoking related illness and their babies are at risk as infants and children for a host of problems. Smoking during pregnancy has been linked to prematurity, low birth weight in infants, asthma, and chronic ear infections in children. Table 5.5 and Graph 5.5 shows that 36.7% of AI/AN mothers in the project area had smoked during pregnancy. This percentage is much higher than the IHS population (20.4%), All Races in the project area (16.9%), and All Races in the U.S. (12.6%).

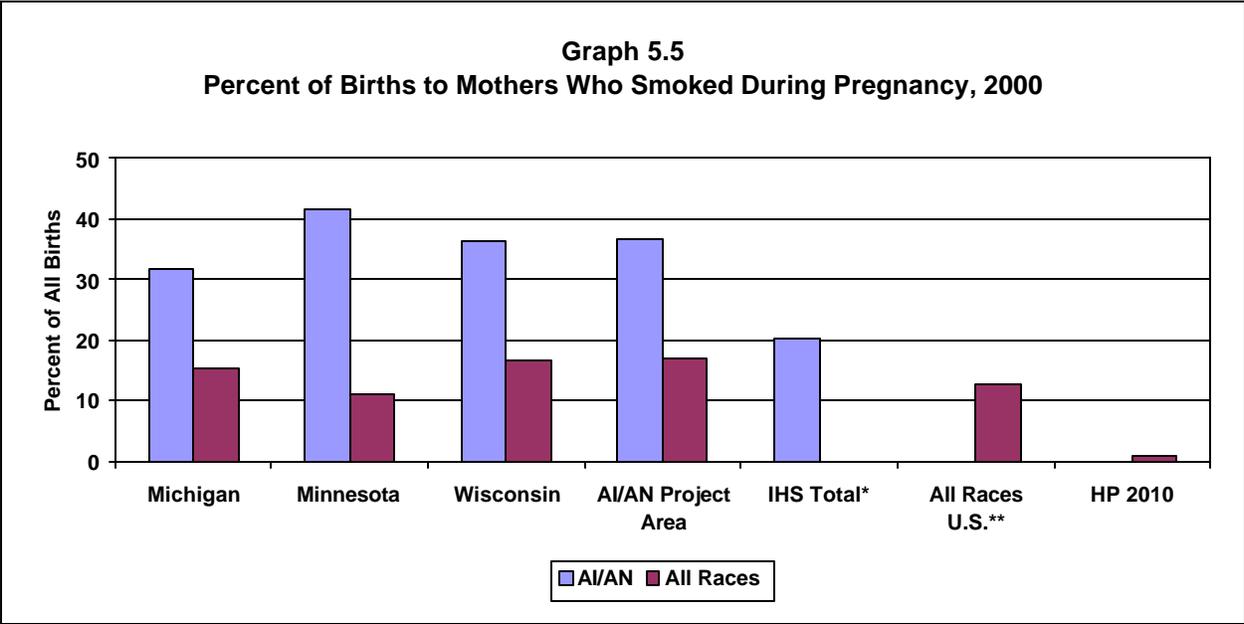
TABLE 5.5
Percent Births to Mothers Who Smoked During Pregnancy, 2000

AI/AN Michigan	31.6	All Races Michigan	15.4
AI/AN Minnesota	41.6	All Races Minnesota	11.1
AI/AN Wisconsin	36.2	All Races Wisconsin	16.5
AI/AN Project Area	36.7	All Races Project Area	16.9
IHS Total*	20.4	All Races U.S. **	12.6
HP 2010	1.0		

Data Sources: 2000 Birth Files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information.

*Indian Health Service. *Regional Differences in Indian Health 1998-2000* (1994-1996 data)

**NCHS. *Health, United States, 2002, with Urban and Rural Health Chartbook*. Hyattsville, MD: 2002



Data Sources: 2000 Birth Files from Michigan Department of Community Health, Minnesota Center for Health Statistics, and Wisconsin Bureau of Health Information.

*Indian Health Service. *Regional Differences in Indian Health 1998-2000* (1994-1996 data)

**NCHS. *Health, United States, 2002, with Urban and Rural Health Chartbook*. Hyattsville, MD: 2002

Childhood Obesity

Data on childhood obesity is important because of the risk factors obesity may present later in terms of chronic health problems. Childhood obesity is defined as weight for height greater than the 95th percentile.

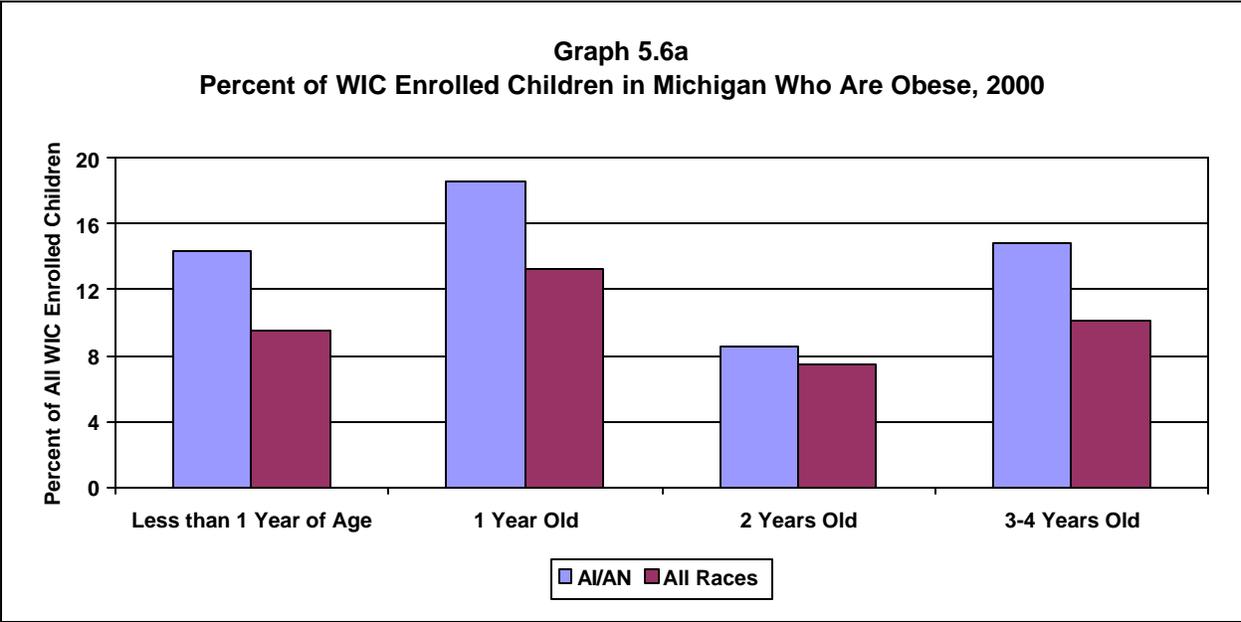
Table 5.6 displays data from the WIC Program on childhood obesity. Obesity levels for AI/AN children in all three states within the project area are higher than for all races. The differences between the AI/AN children and all races children increase with increasing age. These data only include children who qualify and receive services from the WIC Program.

TABLE 5.6
Percent of WIC Enrolled Children Who Are Obese, 2000

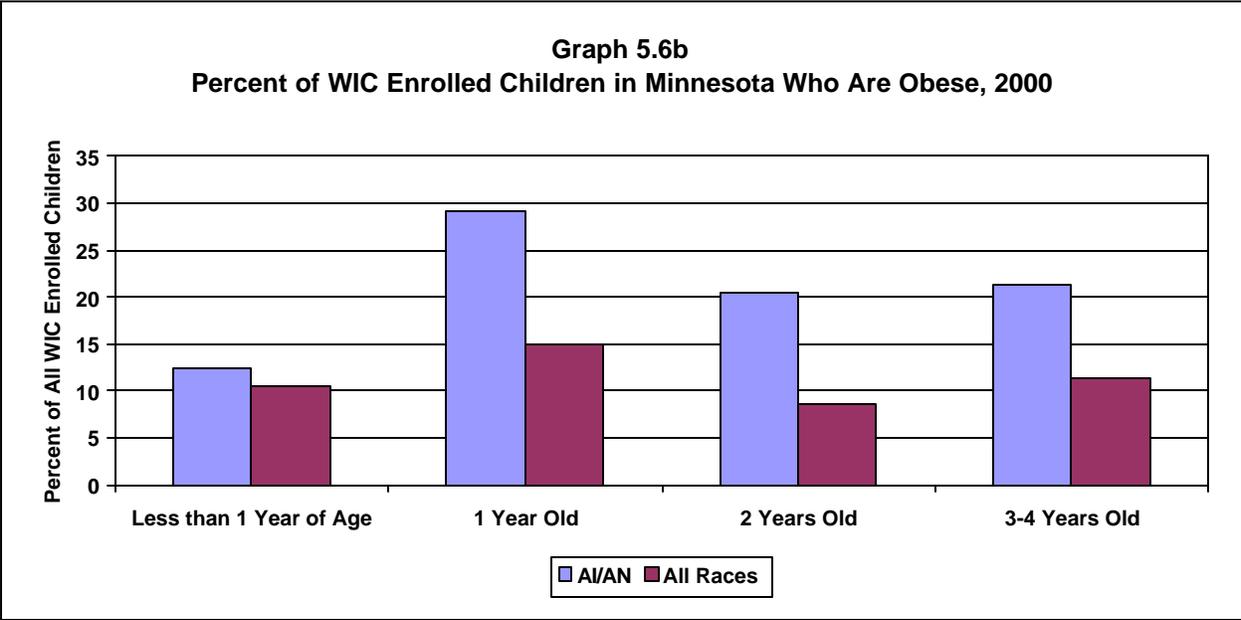
Age	Michigan		Minnesota		Wisconsin	
	AI/AN	All Races	AI/AN	All Races	AI/AN	All Races
<1 year	14.3	9.5	12.4	10.5	13.6	7.7
1 year	18.6	13.2	29.2	14.9	22.0	15.1
2 years	8.6	7.4	20.4	8.7	--	--
3-4 years	14.8	10.1	21.4	11.3	20.9*	11.4*

* Children 2-4 years of age

Source: Pediatric Nutrition Surveillance, Table 10, 2000 Annual Summary for Michigan, Minnesota, and Wisconsin

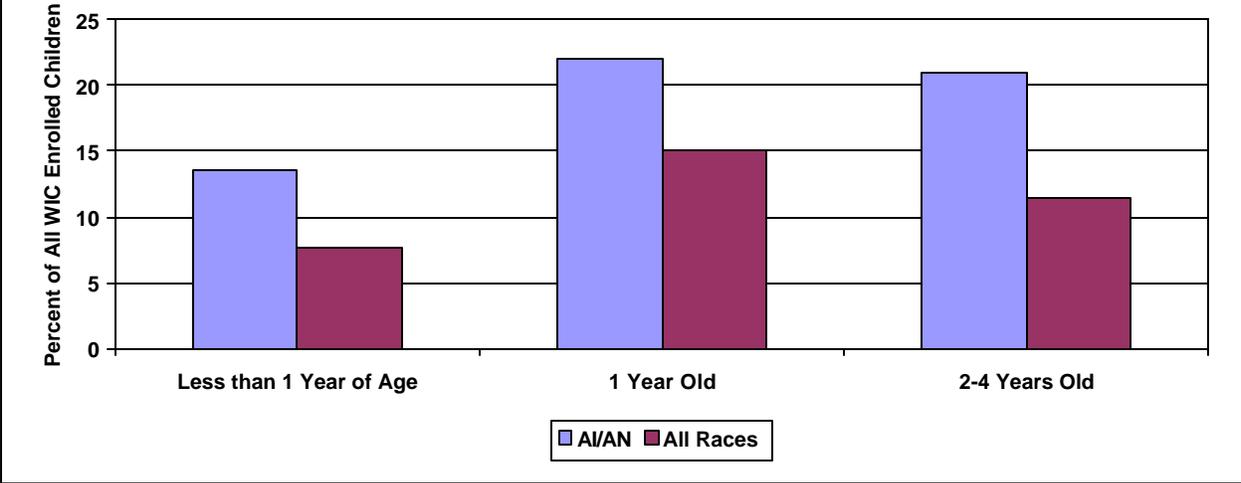


Source: Pediatric Nutrition Surveillance, Table 10, 2000 Annual Summary for Michigan, Minnesota, and Wisconsin



Source: Pediatric Nutrition Surveillance, Table 10, 2000 Annual Summary for Michigan, Minnesota, and Wisconsin

Graph 5.6c
Percent of WIC Enrolled Children in Wisconsin Who Are Obese, 2000



Source: Pediatric Nutrition Surveillance, Table 10, 2000 Annual Summary for Michigan, Minnesota, and Wisconsin

SECTION 6

CONCLUSION

The data included in this report comes from a variety of local, state, and national sources. Although limited, the health information in this report shows some areas of accomplishment as well as areas needing improvement. The following conclusion discusses some of the health indicators from different sections of this report. Appendix C contains resources for additional information.

The demographic and social indicators section of this report mainly presents comparisons of information from the 1990 and 2000 censuses. Census 2000 data is used in this report where possible.

The mortality section displays information on death by ranking the causes of death and comparing death rates between different populations. Ranking by American Indian/Alaska Native number of deaths shows that the top five causes of death in the project area for 2000 are: 1) heart disease; 2) cancers; 3) unintentional injury; 4) diabetes, and 5) chronic lower respiratory disease. Mortality trends are also presented in Section 5 of this report.

Health information on risk factors associated with chronic disease and the top causes of AI/AN mortality such as smoking, obesity, level of exercise, drug and alcohol use, and hypertension, among others, is not yet available to the EpiCenter on a state or Bemidji Area level. However, some small projects have provided information that provides some insight as to the levels of risk factors for AI/AN people. One in particular, the Inter-Tribal Heart Project, was a comprehensive assessment of cardiovascular disease risk factors for Tribes in Minnesota and Wisconsin. Youth Tobacco Surveys at the state and tribal level will also serve as a source of information about youth tobacco use. Determination of risk factor prevalence is extremely important for AI/AN communities because many of the top causes of death and chronic disease directly result from risk factors which can be modified or prevented through a targeted approach to programming for community health.

The diabetes section in this report contains locally collected information. Tribal diabetes programs throughout the nation are reporting required diabetes data to IHS. Indicators from FY1999 IHS Diabetes Audits are displayed in this section. Some indicators are more difficult to track than others, especially when the services are not provided directly by Tribal Health facilities.

Data in the communicable disease section of this report show that of all the sexually transmitted diseases that occurred, Chlamydia had the highest rates. The change in rates for Chlamydia over time is attributed more to increased testing for the disease than an actual increase in prevalence. This information helps target the group most affected by preventable diseases like STDs.

Severe injury data is not included in this report because there is no longer a reliable IHS database for severe injury. The Bemidji Area office is working with project area Tribes to develop local severe injury databases.

One of the more glaring indicators reported is for the Project Area, the average rate of smoking during pregnancy is about 37% but for some Tribal communities, as many as half the women having babies in 2000 smoked during their pregnancy. This high percentage becomes even more dramatic when compared to all races (16.9%). In Michigan, 31.6% of AI/AN women smoked during pregnancy compared to 15.4% for all races. And in Minnesota, the disparity is even greater with 41.6% of AI/AN women smoking during pregnancy compared to 11.1% of women of all races. Smoking can cause many health problems for both the mothers and their babies. This may be an issue that can be addressed by increasing prevention efforts of already existing prenatal programs. Tribal health centers may want to examine this issue within their own communities.

APPENDIX A

Age relates directly to patterns of morbidity and mortality. The following table lists the most prevalent health problems associated with each age group.

Age group	Health Problem Associations	Examples of Illnesses and Injuries
Infants	Prematurity, Injury, and Infectious Disease	birth defects, pneumonia, sudden infant death syndrome, poisonings, burns, and falls
Childhood	Injury, Infectious Disease, and Abuse	poisonings, burns, falls, vehicle crashes, influenza, ear/nose/throat (ENT) infections, bone fractures, and skin abrasions
Adolescence	Risk-taking Behaviors, Injury, Infectious Disease, and Sexual Behaviors	burns, bone fractures, spinal injury, poisonings, firearm and automobile-related trauma, abuse of chemicals, use of tobacco products, sexually-transmitted diseases, ENT infections, influenza, and unplanned pregnancy
Adulthood 24-44	Risk-taking Behaviors, Injury, and Infectious Disease	bone fractures, lacerations, spinal injury, firearm-related trauma, abuse of chemicals, use of tobacco products, influenza, and asthma
Adulthood 45-64	Chronic Disease and Risk-taking Behavior	cancer, heart disease, hypertensive disease, dental disease, arthritis, consumption of tobacco products, abuse of chemicals, and improper dietary practices
Adulthood 65+	Acute Disease, Injury, and Chronic Disease	influenza and pneumonia, falls, burns, suicides, cancer, heart disease, and cerebrovascular disease

Source: J.A. Rice. *Community Assessment: The First Step in Community Health Planning*. Chicago, Illinois: American Hospital Association, 1993.

APPENDIX B

Underlying Cause of Death ICD-9 and ICD-10 Codes

Cause of Death	ICD-9 Codes	ICD-10 Codes
Cancer	140-208	C00-C97
Chronic Liver Disease	571	K70-K73-K74
Chronic Obstructive Pulmonary Disorder	490-494, 496	J40-J47
Diabetes	250	E10-E14
Heart Disease	390-398, 402, 404-429	I00-I09, I11, I13, I20-I51
Homicide	E960-E969	X85-Y09, Y87.1
Kidney Disease	580-589	N00-N07, N17-N19, N25-N27
Pneumonia and Influenza	480-487	J10-J18
Stroke	430-434, 436-438	I60-I69
Suicide	E950-E959	X60-X84, Y87.0
Unintentional Injury	E800-E869, E880- E929	V01-X59, Y85-Y86

ICD-9 is International Classification of Diseases, 9th Edition

ICD-10 is International Classification of Diseases, 10th Edition

APPENDIX C

Communicable Disease Reporting Requirements for Minnesota, Michigan and Wisconsin

Minnesota Department of Health, Communicable Diseases - Chapter 4605

4605.7000 DEFINITIONS.

Subpart 1. **Case.** "Case" means a person infected with a particular infectious agent or having a particular disease diagnosed by a physician.

Subpart 2. **Carrier.** "Carrier" means a person identified as harboring a specific infectious agent and who serves as a potential source of infection.

Subp. 3. **Commissioner.** "Commissioner" means the state commissioner of health or authorized officers, employees, or agents of the Minnesota Department of Health (MDH).

Subp. 4. **Infection control practitioner.** "Infection control practitioner" means any person designated by a hospital, nursing home, medical clinic, or other health care facility as having responsibility for prevention, detection, reporting, and control of infections within the facility.

Subp. 5. **Isolation.** "Isolation" means the separation, for the period of communicability, of an infected person from others in places and under the condition as to prevent or limit the direct or indirect transmission of the infectious agent to those who are susceptible or may spread the agent to others.

Subp. 6. **Board of health.** "Board of health" means authorized administrators, officers, agents, or employees of the county, multi-county, or city board of health organized under Minnesota Statutes, sections 149A.09 to 145A.14.

Subp. 7. **Medical laboratory.** "Medical laboratory" means any facility that receives, forwards, or analyzes specimens of original material from the human body, or referred cultures of specimens obtained from the human body, and reports the results to physicians who use the data for purposes of patient care.

Subp. 8. **Physician.** "Physician" means any person who is licensed by the Minnesota Board of Medical Examiners to practice medicine.

Subp. 9. **Suspected case.** "Suspected case" means a person having a condition or illness in which the signs and symptoms resemble those of a recognized disease.

Subp. 10. **Veterinarian.** "Veterinarian" means any person who is licensed by the Minnesota Board of Veterinary Medicine to practice veterinary medicine.

Subp. 11. **Public health hazard.** "Public health hazard" means the presence of an infectious agent or condition in the environment which endangers the health of a specified population.

4605.7010 PURPOSE.

This chapter establishes a process and assigns responsibility for reporting, investigating, and controlling disease.

4605.7020 APPLICABILITY.

This chapter applies to cases, suspected cases, and deaths from communicable diseases and syndromes, reporting of disease, and disease control.

4605.7030 PERSONS REQUIRED TO REPORT DISEASE.

Subp. 1. **Physicians.** When attending a case, suspected case, or death from any of the diseases in part 4605.7040, the physician shall report within one working day to the commissioner, unless previously reported, the information outlined in part 4605.7090.

Subp. 2. **Health care facilities.** Hospitals, nursing homes, medical clinics, or other health care facilities must designate that all individual physicians report as specified in subpart 1; or the health care facility must designate an infection control practitioner or other person as responsible to report to the commissioner, within one working day of knowledge of a case, suspected case, carrier, or death from any of the diseases and syndromes in part 4605.7040, and the information specified in part 4605.7090.

Subp. 3. **Medical laboratories.** All medical laboratories must provide to the commissioner, within one working day of completion, the results of microbiologic cultures, examinations, immunologic assays for the presence of antigens and antibodies, and any other laboratory tests, which are indicative of the presence of any of the diseases in part 4605.7040 and the information specified in part 4605.7040 as is known.

The medical laboratory must forward to the Minnesota Department of Health, public health laboratory all isolates specified in part 4605.7040.

Subp. 4. **Comprehensive reports.** Any institution, facility, or clinic, staffed by physicians and having medical laboratories which are required to report, as in subparts 1, 2, and 3, may, upon written notification of the commissioner, designate a single person or group of persons to report cases, suspected cases, carriers, deaths, or results of medical laboratory cultures, examinations, and assays for any of the diseases listed in part 4605.7040 to the commissioner.

Subp. 5. **Veterinarians and veterinary medical laboratories.** The commissioner of health shall, under the following circumstances, request certain reports of clinical diagnosis of disease in animals and reports of laboratory tests on animals: A. The disease is common to both animals and humans. B. The disease may be transmitted directly or indirectly to and between humans and animals. C. The persons who are afflicted with the disease are likely to suffer complications, disability, or death as a result. D. Investigation based veterinarian and veterinary medical laboratory reports will assist in the prevention and control of disease among humans.

Subp. 6. **Others.** Unless previously reported, it shall be the duty of every other licensed health care provider who provides care to any patient who has or is suspected of having any of the diseases listed in part 4605.7040 to report within one working day to the commissioner as much of the information outlined in part 4605.7090 as is known.

4605.7040 DISEASE AND REPORTS; ISOLATE SUBMISSIONS.

Cases, suspect cases, carriers, and deaths due to the following diseases and infectious agents shall be reported. The diseases followed by an asterisk shall be reported immediately by telephone to the commissioner.

- A. Amebiasis (*Entamoeba histolytica*)
- B. Anthrax* (*Bacillus anthracis*)
- C. Babesiosis (*Babesia* sp.)
- D. Blastomycosis (*Blastomyces dermatitidis*)
- E. Botulism* (*Clostridium botulinum*)
- F. Brucellosis (*Brucella* sp.)
- G. Campylobacteriosis (*Campylobacter* sp.) Submit isolates to the MDH, Public Health Laboratory
- H. Cat Scratch disease (infection caused by *Bartonella* species)
- I. Chancroid* (*Haemophilus ducreyi*)
- J. *Chlamydia trachomatis* infections
- K. Cholera* (*Vibrio cholerae*) Submit isolates to the MDH, Public Health Lab
- L. Cryptosporidiosis (*Cryptosporidium parvum*)
- M. Dengue virus infection
- N. Diphtheria (*Corynebacterium diphtheriae*) Submit isolates to the MDH, Public Health Lab
- O. *Diphyllobothrium latum* infection
- P. Ehrlichiosis (*Ehrlichia* sp.)
- Q. Encephalitis (caused by viral agents)
- R. Enteric *Escherichia coli* infection (*E. coli* O157:H7, other enterohemorrhagic *E. coli*, enteropathogenic *E. coli*, enteroinvasive *E. coli*) Submit isolates to the MDH, Public Health Lab
- S. Giardiasis (*Giardia lamblia*)
- T. Gonorrhea (*Neisseria gonorrhoea* infections)
- U. *Haemophilus influenzae* disease (all invasive disease) Submit isolates to the MDH, Public Health Lab
- V. Hantavirus infection
- W. Hemolytic uremic syndrome
- X. Hepatitis (all primary viral types including A, B, C, D, and E)
- Y. Histoplasmosis (*Histoplasma capsulatum*)
- Z. Human Immunodeficiency Virus (HIV) infection, including Acquired Immunodeficiency Syndrome (AIDS)
- AA. Influenza (unusual case incidence or laboratory confirmed cases)
- BB. Kawasaki disease
- CC. Legionellosis (*Legionella* sp.)
- DD. Leprosy (*Mycobacterium leprae*)
- EE. Leptospirosis (*Leptospira interrogans*)
- FF. Listeriosis (*Listeria monocytogenes*) Submit isolates to the MDH, Public Health Lab

- GG. Lyme disease (*Borellia burgdorferi*)
- HH. Malaria (*Plasmodium* species)
- II. Measles* (Rubeola)
- JJ. Meningitis (caused by *Haemophilus influenzae*, *Neisseria meningitidis*, or *Streptococcus pneumoniae*, viral agents) Submit bacterial isolates to the MDH, Public Health Lab
- KK. Meningococemia (*Neisseria meningitidis*) Submit isolates to the MDH, Public Health Lab
- LL. Mumps*
- MM. Pertussis* (*Bordetella pertussis*) Submit isolates to the MDH, Public Health Lab
- NN. Plague (*Yersinia pestis*)
- OO. Poliomyelitis*
- PP. Psittacosis (*Chlamydia psittaci*)
- QQ. Q Fever (*Coxiella burnetii*)
- RR. Rabies* (animal and human cases and suspects)
- SS. Retrovirus infections (other than HIV)
- TT. Reye's Syndrome
- UU. Rheumatic Fever (cases meeting the Jones Criteria only)
- VV. Rubella and Congenital Rubella Syndrome
- WW. Rocky Mountain Spotted Fever (*Rickettsia rickettsii*, *R. canada*)
- XX. Salmonellosis, including typhoid (*Salmonella* sp.) Submit isolates to the MDH, Public Health Lab
- YY. Shigellosis (*Shigella* sp.) Submit isolates to the MDH, Public Health Lab
- ZZ. Streptococcal disease (all invasive disease caused by Groups A and B streptococci and *S. pneumoniae*) Submit isolates to the MDH, Public Health Lab
- AAA. Syphilis* (*Treponema pallidum*)
- BBB. Tetanus (*Clostridium tetani*)
- CCC. Toxic Shock Syndrome Submit isolates to the MDH, Public Health Lab
- DDD. Toxoplasmosis
- EEE. Trichinosis (*Trichinella spiralis*)
- FFF. Tuberculosis (*Mycobacterium tuberculosis* and *Mycobacterium bovis*) Submit isolates to the MDH, Public Health Lab
- GGG. Tularemia (*Francisella tularensis*)
- HHH. Typhus (*Rickettsia* species)
- III. Yellow Fever
- JJJ. Yersiniosis (*Yersinia* sp.) Submit isolates to the MDH, Public Health Lab

Note: Since this rule was passed in 1997 the following diseases have been added to the above list by the commissioner through public notice in the State Register.

Staphylococcus aureus infection (only deaths or serious disease due to community-acquired methicillin-resistant *S. aureus*) Submit isolates to the MDH, Public Health Lab

4605.7050 UNUSUAL CASE INCIDENCE.

Any pattern of cases, suspected cases, or increased incidence of any illness beyond the expected number of cases in a given period, which may indicate a newly recognized infectious agent, an outbreak, epidemic, or related public health hazard, including suspected or confirmed outbreaks of food or waterborne disease, epidemic viral gastroenteritis, and any disease known or presumed to be transmitted by transfusion of blood or blood products, must be reported immediately by telephone, by the person having knowledge, to the commissioner.

Any unexplained death which may be caused by an infectious agent must be reported by the attending physician, medical examiner or coroner, or by the person having knowledge about the death to the commissioner within one day.

4605.7060 CASES, SUSPECTED CASES, CARRIERS, AND DEATHS DUE TO DISEASE ACQUIRED OUTSIDE THE STATE.

Cases, suspected cases, and deaths due to any infectious disease that a physician determines have been acquired outside the state, and which are considered rare or unusual in Minnesota, or a public health problem in the geographic area of presumed acquisition, must be reported to the commissioner.

4605.7070 OTHER REPORTS.

It shall be the duty of any person in charge of any institution, school, child care facility or camp, or any other person having knowledge of any disease which may threaten the public health, to report immediately the name and address of any persons suspected of having disease to the commissioner.

4605.7075 TUBERCULOSIS; SPECIAL REPORTING

A physician must immediately report to the commissioner of health the name, address, and essential facts of the case if the physician has reason to believe that a person with active pulmonary tuberculosis:

- A. refuses treatment for tuberculosis; or
- B. has not complied with prescribed therapy for tuberculosis.

4605.7080 NEW DISEASES AND SYNDROMES.

The commissioner shall, by public notice, request reporting of newly recognized or emerging diseases and describe a specific, planned mechanism for surveillance of the disease or syndrome including the submission of infectious agents isolated from cases to the Minnesota Department of Health, Public Health Laboratory.

4605.7090 DISEASE REPORT INFORMATION.

Reports that are required in parts 4605.7030 and 4605.7050 shall contain as much of the following information as is known:

- A. disease (whether a case, suspected case, carrier, or death);
- B. date of first symptoms;
- C. primary signs and symptoms;
- D. patient;
 - (1) name;
 - (2) birthdate;
 - (3) ethnic or racial origin;
 - (4) residence address, city, county, and zip code;
 - (5) phone number; and
 - (6) place of work, school, or child care;
- E. date of report;
- F. physician name, address, and phone number;
- G. name of hospital (if any);
- H. name of person reporting (if not physician);
- I. diagnostic laboratory findings and dates of test;
- J. name and locating information of contacts (if any); and
- K. other information pertinent to the case.

4605.7100 REPORTS TO STATE AND LOCAL BOARDS OF HEALTH.

Upon receipt of information or other knowledge of a case, suspected case, or death or any disease or report required in part 4605.7030, the board of health as defined in Minnesota Statutes, section 145A.02, subdivision 2, shall immediately forward same to the commissioner.

4605.7200 RECORDS OF DISEASE.

The commissioner shall maintain records of reports of cases, suspected cases, carriers, and deaths for the disease reports required in this section and shall prepare statewide summary information which shall be made available for each board of health as defined in Minnesota Statutes, section 145A.02, subdivision 2, on request.

4605.7300 COPIES OF DISEASE REPORTS.

Local boards of health operating under agreements in part 4735.0110, subpart 2, shall be forwarded copies of all disease reports and information received by the commissioner which pertain to the jurisdiction and biennial agreement between the commissioner and the board of health as defined in Minnesota Statutes, section 145A.02, subdivision 2.

4605.7400 PREVENTION OF DISEASE SPREAD.

Subpart 1. **Isolation.** The physician attending a case, suspected case, or carrier (or in the absence of a physician, the commissioner) shall make certain that isolation precautions are taken to prevent spread of disease to others.

Subp. 2. **Report of noncompliance.** Physicians shall report immediately to the commissioner the name, address, and other pertinent information for all cases, suspected cases, and carriers who refuse to comply with prescribed isolation precautions. The commissioner shall then seek injunctive relief under Minnesota Statutes, section 145.075, if the person represents a public health hazard.

4605.7500 DISEASE INVESTIGATIONS.

The commissioner shall investigate the occurrence of cases, suspected cases, or carriers of reportable diseases or unusual disease occurrences in a public or private place for the purpose of verification of the existence of disease, ascertaining the source of the disease causing agent, identifying unreported cases, locating contacts of cases, identifying those at risk of disease, determining necessary control measures, and informing the public if necessary.

SEXUALLY TRANSMITTED DISEASE CONTROL

4605.7700 SEXUALLY TRANSMITTED DISEASE; SPECIAL REPORTS.

The following special reports must be given by physicians to the commissioner:

A. Notwithstanding any previous report, physicians who have reason to believe that a person having *Chlamydia trachomatis*, syphilis, gonorrhea, or chancroid has not completed therapy must notify the commissioner immediately of that person's name, address, and other pertinent information.

B. Notwithstanding any previous report, physicians who treat persons infected with *Chlamydia trachomatis*, syphilis, gonorrhea, or chancroid must ensure that sexual contacts are treated or provide the names and addresses of sexual contacts who may also be infected to the commissioner. If known, persons named as sexual contacts or needle-sharing contacts to a person with HIV infection must be reported to the commissioner.

C. Notwithstanding any previous report, physicians must immediately report to the commissioner the name, address, and essential facts of the case for any person known or suspected of being infected with *Chlamydia trachomatis*, syphilis, gonorrhea, or chancroid who refuses treatment.

D. If resources are available, the commissioner may authorize specific outpatient or inpatient facilities to report cases of specific sexually transmitted diseases and clinical syndromes in addition to those specified in part 4605.7040. The diseases and clinical syndromes to be reported shall include urethritis in males, pelvic inflammatory disease, genital herpes simplex infection, ectopic pregnancy, and other sexually transmitted disease as requested by the commissioner.

4605.7800 HEALTH EDUCATION.

Health care providers working with patients having *Chlamydia trachomatis*, syphilis, gonorrhea, or chancroid must tell the patients how to prevent the spread of the sexually transmitted disease, inform them of the importance of complying with treatment instructions, and the need to have all relevant sexual contacts promptly treated for the specific sexually transmitted disease.

Michigan Department of Community Health
PHYSICIAN - DISEASE REPORTING

All Michigan physicians and health care providers are required¹ to report patients with the following conditions to the local health department. To assist health care providers in meeting their obligations to report, the Michigan Department of Community of Health has prepared the list presented below. Lab-confirmed and clinical diagnosis are reportable in the time intervals listed. Reporting allows for appropriate public health follow-up for your patients and assists us in identifying outbreaks not always evident to a sole provider.

IMMEDIATELY

Any unusual occurrence, outbreak, or epidemic of any disease, condition, and/or nosocomial infection.

WITHIN 24 HOURS

AIDS	Hepatitis B in a pregnant woman	Poliomyelitis
Anthrax	Lymphogranuloma venereum	Rabies (human)
Botulism	Measles	Syphilis
Chancroid	Meningococcal disease (meningitis or meningococemia)	Tuberculosis
Cholera	Pertussis	Viral hemorrhagic fevers
Diphtheria	Plague	Yellow fever
Gonorrhea		
Granuloma inguinale		
<i>H. influenzae</i> (meningitis or epiglottitis)		

WITHIN THREE WORKING DAYS

Amebiasis	Hepatitis	Rubella
Blastomycosis	Histoplasmosis	Salmonellosis
Bruceellosis	Kawasaki disease	Shigellosis
<i>Campylobacter</i> enteritis	Legionellosis	Staphylococcal disease, (first 28 days post-partum mother or child)
Chlamydia (genital)	Leprosy	Streptococcal, invasive Group A (normally sterile sites)
Coccidioidomycosis	Leptospirosis	Tetanus
Cryptococcosis	Listeriosis	Toxic shock syndrome
Cryptosporidiosis	Lyme disease	Trachoma
Cyclosporiasis	Malaria	Trichinosis
Dengue fever	Meningitis (bacterial & viral)	Tularemia
<i>E. coli</i> disease (only shiga toxin producers)	Mumps	Typhoid fever
Ehrlichiosis	Psittacosis	Typhus
Encephalitis, viral	Q fever	<i>Yersinia</i> enteritis
Giardiasis	Reye's syndrome	
Guillain-Barré syndrome	Rheumatic fever	
Hantavirus pulmonary syndrome	Rocky Mountain spotted fever	
Hemolytic-uremic syndrome	Rubella (congenital syndrome)	

WITHIN ONE WEEK

HIV Infection	Chicken pox (aggregate numbers)	Influenza (aggregate numbers)
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HOW TO REPORT

Call, mail or fax your local health department
Provide patient demographics, diagnosis and onset date

MICHIGAN DEPARTMENT OF COMMUNITY HEALTH LABORATORY - DISEASE REPORTING

All Michigan laboratories are required to report patients with the following conditions to the local health department. To assist health care providers in meeting their obligations to report, the Michigan Department of Community of Health has prepared the list presented below. Reporting allows for appropriate public health follow-up for your patients and assists us in identifying outbreaks not always evident to a sole provider.

IMMEDIATELY

Any unusual occurrence, outbreak, or epidemic of any disease, condition, and/or nosocomial infection.

WITHIN 24 HOURS

<i>Bacillus anthracis</i>	<i>Mycobacterium tuberculosis</i>
<i>Bordetella pertussis</i>	<i>Neisseria gonorrhoeae</i>
<i>Calymmatobacterium granulomatis</i>	<i>Neisseria meningitidis</i> (sterile sites)
<i>Clostridium botulinum</i>	Poliovirus
<i>Corynebacterium diphtheriae</i>	Rabies virus
<i>Haemophilus ducreyi</i>	<i>Treponema pallidum</i>
<i>Haemophilus influenzae</i> type b (sterile sites)	<i>Vibrio cholerae</i> , serovar 01
Hemorrhagic fever viruses	Yellow fever virus
Hepatitis B surface antigen	<i>Yersinia pestis</i>
Measles (Rubeola) virus	

WITHIN THREE WORKING DAYS

Arboviruses	Influenza virus
<i>Borrelia burgdorferi</i>	<i>Legionella</i> species
<i>Brucella</i> species	<i>Listeria monocytogenes</i>
<i>Campylobacter jejuni</i>	Mumps virus
<i>Chlamydia</i> species	<i>Plasmodium</i> species
<i>Cryptosporidium</i> species	Rubella virus
<i>Cyclospora</i> species	<i>Salmonella</i> species
<i>Entamoeba histolytica</i>	Shiga toxin producing <i>E. coli</i> disease
<i>Francisella tularensis</i>	<i>Shigella</i> species
<i>Giardia lamblia</i>	<i>Trichinella spiralis</i>
Hantavirus	<i>Yersinia enterocolitica</i>
Hepatitis A (anti-HAV IgM)	

HOW TO REPORT

Call, mail or fax your local health department
Provide patient demographics, diagnosis and onset date

Information for Completing
ACUTE AND COMMUNICABLE DISEASE CASE REPORT

WISCONSIN STATUTE CHAPTER 252.05 AND ADMINISTRATIVE RULE CHAPTER HFS 145 REQUIRE REPORTING OF COMMUNICABLE DISEASES.

Persons required to report include any person licensed under ch. 441 and 448, Wis. Stats., or any other person having knowledge that a person has a communicable disease such as:

- ? A person in charge of infection control at a health care facility
- ? School nurses, principals of schools and day care center directors
- ? Laboratory directors

For further information see Wisconsin Administrative Rule HFS 145.

Diseases listed under categories I, II are to be reported to the local city or county health officer located in the local public health department of the patient's place of residence. The category III disease must be reported directly to the state epidemiologist. Complete Demographic and Morbidity Data for diseases in categories I, II, and III. For diseases preceded by an asterisk (*), give vaccination history. Follow-up epidemiologic information may be requested by local or state public health officials. Complete "Reporting Source" for ALL categories. Send copy "A" and copy "B" to the local health officer. Copy "C" may be retained with the patient's record.

REPORT THE FOLLOWING DISEASES TO YOUR LOCAL HEALTH AGENCY

CATEGORY I:

The following diseases are of urgent health importance and shall be reported **IMMEDIATELY BY TELEPHONE** to the patient's local health officer upon identification of a case or suspected case. Complete and mail an Acute and Communicable Disease Case Report (DPH 4151) to the local health officer within 24 hours. Public health intervention is expected as indicated. See s. HFS 145.04 (3) (a).

Anthrax ^{1,4,5}	<i>*Haemophilus influenzae</i>	Plague ^{1,4,5}
Botulism ^{1,4}	invasive disease, (including	<i>*Poliomyelitis</i> ^{1,4,5}
Botulism, infant ^{1,2,4,5}	epiglottitis) ^{1,2,3,5}	Rabies (human) ^{1,4,5}
Cholera ^{1,3,4,5}	<i>*Hepatitis A</i> ^{1,2,3,4,5}	Ricin toxin ^{4,5}
<i>*Diphtheria</i> ^{1,3,4,5}	Hantavirus ^{1,2,4,5}	<i>*Rubella</i> ^{1,2,4,5}
Foodborne or waterborne	<i>*Measles</i> ^{1,2,3,4,5}	Rubella (congenital
outbreaks ^{1,2,3,4}	Meningococcal disease ^{1,2,3,4,5}	syndrome) ^{1,2,5}
	Pertussis (whooping	Smallpox ^{1,4,5}
	cough) ^{1,2,3,4,5}	Tuberculosis ^{1,2,3,4,5}
		Yellow Fever

CATEGORY II:

The following diseases shall be reported to the local health officer on an Acute and Communicable Disease Case Report (DPH 4151) or by other means within 72 hours of the identification of a case or suspect case. Public health intervention is expected as indicated. See s. HFS 145.04 (3) (b).

Amebiasis ^{1,3,4}	Giardiasis ^{3,4}	Meningitis, viral (other than
Arboviral infection	Hemolytic uremic	arboviral)
(encephalitis/meningitis) ^{1,2,4}	syndrome ^{1,2,4}	<i>*Mumps</i> ^{1,2,4,5}
Babesiosis ^{4,5}	<i>*Hepatitis B</i> ^{1,2,3,4,5}	Mycobacterial disease
Blastomycosis ⁵	Hepatitis C ^{1,2}	(nontuberculous)
Brucellosis ⁴	Hepatitis non-A, non-B, (acute) ^{1,2}	Psittacosis ^{1,2,4}
Campylobacter ^{3,4}	Hepatitis D ^{2,3,4,5}	Q fever ^{4,5}
Cat Scratch Disease (Bartonella	Hepatitis E ^{3,4}	Reye syndrome ²
species) ⁵	Histoplasmosis ⁵	Rheumatic fever (newly diagnosed and
Cryptosporidiosis ^{1,2,3,4}	Kawasaki disease ²	meeting the Jones criteria) ⁵
Cyclosporiasis ^{1,4,5}	Legionellosis ^{1,2,4}	Rocky Mountain
<i>E. coli</i> 0157:H7 ^{1,2,3,4}	Leprosy ^{1,2,3,4,5}	spotted fever ^{1,2,4,5}
and other enterohemorrhagic <i>E. coli</i> ,	Leptospirosis ⁴	Salmonellosis ^{1,3,4}
enteropathogenic <i>E. coli</i> , enteroinvasive	Listeriosis ^{2,4}	Sexually transmitted diseases:
<i>E. coli</i>	Lyme disease ^{1,2}	Chancroid ^{1,2,4,5}
enterotoxigenic <i>E. coli</i> ^{1,2,3,4}	Malaria ^{1,2,4}	Chlamydia trachomatis
Encephalitis, viral (other	Meningitis, bacterial (other than	infection ^{1,2,4,5}
than arboviral)	<i>Haemophilus influenzae</i> or	Genital herpes infection
Ehrlichiosis ^{1,5}	meningococcal) ^{2,5}	(1 st episode identified by health
		provider) ²

Gonorrhea ^{1,2,4,5}	Streptococcus pneumoniae (pneumococcus) invasive disease ²	poisonings
Pelvic inflammatory disease ^{2,5}	[*] Tetanus ^{1,2}	Toxoplasmosis
Syphilis ^{1,2,5}	Toxic shock syndrome ^{1,2}	Trichinosis ^{1,2,4}
Shigellosis ^{1,3,4}	Toxic substance related diseases:	Tularemia ^{1,4}
Streptococcus group A invasive disease ^{1,5}	Infant methemoglobinemia	Typhoid fever ^{1,2,3,4}
Streptococcus group B invasive disease ^{1,5}	Lead intoxication (specify Pb levels)	Typhus fever ^{4,5}
	Other metal and pesticide	Varicella (chickenpox) – report by number of cases only
		Yersiniosis ^{3,4}

For diseases preceded by an asterisk (*), give vaccination history.

Also report any suspected outbreaks of other acute or occupationally-related diseases

CATEGORY III:

The following diseases shall be reported to the state epidemiologist on an AIDS case report (DPH 4264) or a Wisconsin Human Immunodeficiency Virus (HIV) Infection Confidential Case Report (DPH 4338) or by other means within 72 hours after identification of a case or suspected case. See s. 252.15 (7) (b), Stats., and s. HFS 145.04 (3) (b).

Acquired Immune Deficiency Syndrome (AIDS) ^{1,2,4}
 Human immunodeficiency virus (HIV) infection ^{2,4}
 CD4+ T-lymphocyte <200/uL, or CD4+ T-lymphocyte percentage of total lymphocytes <14

KEY:

- ¹ Infectious diseases designated as notifiable at the national level.
- ² Wisconsin or CDC follow-up form is required. Local health departments have templates of these forms in the EpiNet manual.
- ³ High-risk assessment by local health department is needed to determine if patient or member of patient's household is employed in food handling, day care or health care.
- ⁴ Source investigation by local health department is needed.
- ⁵ Immediate treatment is recommended, i.e., antibiotic or biologic for the patient or contact or both.

APPENDIX D

RESOURCES

Great Lakes Inter-Tribal Council, Inc.
Great Lakes EpiCenter
Nancy Miller-Korth, Project Coordinator
Chandra Reddy, Medical Epidemiologist
Kimmie Pierce, Epidemiologist
Jingnan Mao, Epidemiologist
Gregory Rachu, Epidemiologist
Dina George, Data Management System
Educator
P.O. Box 9
Lac du Flambeau, WI 54538
(715) 588-3324

Bemidji Area Office
Indian Health Service
Federal Building
522 Minnesota Ave.
Bemidji, MN 56601
(218) 759-3440

Rhineland Field Office
Indian Health Service
9A S. Brown St.
Rhineland, WI 54501
(715)365-5106

Epidemiology Branch
Indian Health Service
5300 Homestead Dr., NE
Albuquerque, NM 87110
(505)248-4226

Wisconsin Department of Health and
Family Services
Bureau of Health Information
1 West Wilson St.
P.O. Box 309
Madison, WI 53701-0309
(608)266-7568

Michigan Department of Community
Health
Lewis Cass Building
320 South Walnut St.
Lansing, MI 48913
(517)373-3740

Minnesota Division of Community
Health Services
Metro Square Building, Suite 460
121 E. Seventh Place, P.O. Box
64975
St. Paul, MN 55164-0975
(612)297-1232

Websites

Centers for Disease Control and Prevention
National Center for Health Statistics
U.S. Census Bureau
Indian Health Service
Great Lakes Inter-Tribal Council
Michigan Dept. of Community Health
Wisconsin Dept. of Health and Family Services
Minnesota Dept. of Health

www.cdc.gov
www.cdc.gov/nchs/
www.census.gov
www.ihs.gov
www.glitc.org
www.mdch.state.mi.us
www.dhfs.state.wi.us
www.health.state.mn.us