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# The Political Epidemiology of Infant Mortality: A Health Crisis Among Montana American Indians

GREGORY R. CAMPBELL

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## INTRODUCTION

. . . politics is medicine on a large scale.  
—Rudolphe Virchow

Although Virchow's often-quoted declaration was made over a hundred years ago, the statement summarizes the current health dilemma faced by Native Americans. Native American health, like so many other aspects of their lives, is intimately intertwined with a legal and political-economic structure which often determines individual and societal well-being. The health problems faced by many Native Americans today are a result of their political-economic status vis-a-vis the dominant society. For example, the current epidemics of substance abuse, diabetes, violence, and suicide, to name a few, are rooted in the political and economic relationships American Indians have with the federal government. The solutions to such health problems transcend the boundaries of medical technology and treatment, requiring political change, not just an administrative restructuring in current health policy or an infusion of the latest medical technology.<sup>1</sup>

This is not to deny that tremendous progress has been made in American Indian health. Most of the diseases that plagued pre-twentieth century Indian people have been controlled or

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nearly eradicated through massive public health efforts, but their treatment has remained largely reactionary or crisis oriented, addressing only the clinical manifestations of the disease rather than its causes.<sup>2</sup> Certainly, medical technology and public health efforts have gone far in controlling infectious and environmental diseases, but these efforts have not made significant inroads into certain health problems that are firmly anchored in the political and economic spheres of contemporary American Indian life. One such health problem is infant mortality.

As a socioepidemiologic measure, infant mortality has two main components which reflect somewhat different biological and social conditions: neonatal mortality (deaths of infants within the first 28 days of life) and postneonatal mortality (deaths of infants from 28 days to one year). Neonatal rates reflect the pre-existing health conditions of the mother and the medical care she and her infant neonate receive during pregnancy and shortly after delivery. Postneonatal mortality is more reflective of post-birth socioeconomic, environmental, and medical care conditions. Taken together, these two rates indicate the quality of life and medical care available to various segments of any population. As Newman has stated,

No cold statistic expresses more eloquently the difference between a society of sufficiency and a society of deprivation than the infant mortality rate.<sup>3</sup>

The primary purpose of this study is to assess the relationship between social disadvantage and infant mortality among the American Indian population of Montana from 1979 to 1987. A second objective is to examine some of the important factors associated with social disadvantage that promote infant mortality. Finally, it is hoped that this analysis will be of value in reformulating health policy within a wider social and political framework.

### POLITICAL EPIDEMIOLOGY OF INFANT MORTALITY

Since the placement of American Indians on reservations, the federal government has held the responsibility of providing health care to American Indians. Historically, as part of the Bureau of Indian Affairs' assimilation program, agency physi-

cians set about wresting control of American Indians from their "medicine men" and "superstitious practices." Subsidiary to this assimilationist agenda was the institution of public health measures on reservations, but only as part of the "civilization" process.<sup>4</sup> This destruction of the Indians' ways of life and economies had consequences for Indian health beyond exposure to European-borne diseases:

By destroying the old ways and not providing acceptable alternatives, Europeans left the natives in a dilemma. The native manners of coping with health problems remained unchanged while conditions, specifically, diet, and cleanliness changed around them.<sup>5</sup>

Because public health measures were intimately intertwined with federal policy designed to destroy American Indian traditions and lifeways, the acceptance of many health practices by Indian people was marginal at best. The rejection and failure of public health measures is reflected in the continued epidemic and chronic infectious diseases that afflicted American Indians at a significantly higher rate than the white population.<sup>6</sup>

The high morbidity and mortality were grim testimony to the impoverished and oppressive conditions American Indians were forced to live under. One statistic that pointed out the human cost of these "diseases of poverty" was infant mortality. In a 1912 national health survey, the United States government found that the infant death rate for American Indians was 42.8 percent higher than the national average for non-Indians. Responding to the crisis, President Taft recommended to Congress that \$253,350 be appropriated for American Indian health care. In his message to Congress, Taft proclaimed,

As guardians of the welfare of the Indians, it is our immediate duty to give the race a fair chance for an unmaimed birth, a healthy childhood, and a physically efficient maturity.<sup>7</sup>

That fiscal year, Congress appropriated only \$90,000 to solve the nationwide Indian health crisis, including infant mortality.

Four years later, the Indian Bureau launched the "Save the Babies" campaign. Field nurses traveled throughout Indian country, instructing Indian women on "proper" child care. From all

indications, the program operated under the ethnocentric assumption that high rates of infant mortality were due to cultural ignorance and the incompetence of Indian mothers in infant care, rather than to malnutrition, unsanitary living conditions, and cultural oppression. Consequently, the program had few successes. Infant mortality rates continued to be well above the national average. Among Montana's Indian population, for example, a 1932 health survey by state epidemiologists revealed that the infant mortality rate was three times the prevailing rate for white Montanans.<sup>8</sup>

The high infant mortality rates among Montana Indians mirrored national trends for American Indians until the mid-1950s. In 1955, American Indian infants were still 2.38 times as likely to die as white infants. After American Indian health care was transferred to the Public Health Service that same year, the infant mortality rate for Native Americans declined by 84 percent nationwide.<sup>9</sup> By 1982, the American Indian rate was below the national average for all races. During this period, all ethnic groups in the United States experienced a 55 percent decline in infant mortality.<sup>10</sup>

In fact, since 1910 there has been a 92 percent decline in infant mortality for all races in the United States.<sup>11</sup> The decline in infant mortality experienced by American Indians, then, paralleled the overall decrease among all segments of society. It seems infant mortality rates were influenced more by changes in the economic and political climate than by the mass infusion of health practices and technology.<sup>12</sup>

Since 1982, the national infant mortality rate has begun a slight increase, although in Montana the rate for all races has continued to decline. Recently, a statewide coalition of citizens and health professionals called "Healthy Mothers, Healthy Babies" released preliminary demographic data which suggests that Montana's 1988 infant mortality rate may reach an all-time low.<sup>13</sup> Unfortunately, not all segments of Montana's population experienced a decline in infant mortality of similar magnitude. This statistical proclamation masks the disparity that exists between the infant mortality rates of Montana's Indian people and non-Indian citizens. These differences reflect the inequitable distribution of political and economic resources in the state of Montana and are a sensitive indicator of the health status of Montana's Indian population.

POPULATION AT RISK:  
THE DEMOGRAPHICS OF SOCIAL DISADVANTAGE

Of the 786,690 people residing in Montana, 37,715, or 4.78 percent of the total state population, are American Indian or Alaska Native.<sup>14</sup> Of the 4.78, 99.7 percent are identified as American Indians. Approximately 36 percent of the total American Indian population resides on one of the seven reservations (Table 1).

Montana's American Indian population is young and growing (Table 2, Figure 1). In 1970, the median age of American Indians living in Montana was 17.2 years. By 1980, the population had aged 3.1 years to 20.3 years. While the state's American Indian population is aging, it remains relatively young when compared with the 29.0 years for the non-Indian population. Figure 1 compares the population structure of Montana American Indians to American Indians in the United States and all races in Montana and the United States. In all instances, the Montana American

**TABLE 1**  
**Total Population, Males and Females, and Sex Ratios for**  
**Montana American Indians Residing on Reservations, 1980**

Reservations	Total Population	Males	Females	Sex Ratio
Blackfeet	5,528	2,728	2,800	97.4
Crow	3,948	1,930	2,018	95.6
Flathead	3,626	1,871	1,755	106.6
Fort Belknap	1,876	972	904	107.5
Fort Peck	4,247	2,090	2,157	96.8
Northern Cheyenne	3,069	1,519	1,550	98.0
Rocky Boy	1,545	761	784	97.0

Source: U.S. Department of Commerce, U.S. Bureau of the Census, American Indian Areas and Alaskan Villages: 1980. Supplementary Report (Washington, D.C.: U.S. Government Printing Office, 1984); U.S. Department of Commerce, U.S. Bureau of the Census, American Indians, Eskimos, and Aleuts on Identified Reservations and in the Historic Areas of Oklahoma (Excluding Urbanized Areas), Part 1 and 2 (Washington, D.C.: U.S. Government Printing Office, 1985).

Indian age structure is younger, with fewer people surviving with age.

The population structure points to two relevant facts with regard to infant mortality. First, the dependency ratio among Montana's American Indian population is high. A high percentage of children and youth relying on fewer adults creates a popula-

**TABLE 2**  
**Percent Age Distribution, Montana and United States American Indians and Montana and United States All Races, 1980**

Population <sup>1</sup> Structure	<u>American Indians</u>		<u>All Races</u>	
	Montana	U.S.	Montana	U.S.
<5	12.8	10.7	8.1	7.2
5-9	11.3	10.5	7.7	7.3
10-14	12.2	11.1	7.8	8.0
15-19	13.0	12.0	9.5	9.3
20-24	9.8	10.4	9.3	9.4
25-29	8.2	8.6	9.1	8.6
30-34	7.3	7.4	7.7	7.7
35-39	5.2	5.8	6.1	6.1
40-44	4.4	4.7	5.0	5.1
45-49	3.4	4.0	4.5	4.8
50-54	3.2	3.5	4.7	5.1
55-59	2.2	3.1	4.6	5.1
60-64	2.0	2.3	4.4	4.4
65-69	1.7	1.9	3.7	3.8
70-74	1.0	1.3	2.7	3.0
75-79	.8	.9	1.9	2.1
80-84	.4	.4	1.1	1.2
85+	.3	.4	1.1	.9

<sup>1</sup> Percentages may not add to 100 percent due to rounding.

Source: U.S. Department of Commerce, U.S. Bureau of the Census, American Indian Areas and Alaskan Villages: 1980. Supplementary Report (Washington, D.C.: U.S. Government Printing Office, 1984); U.S. Department of Commerce, U.S. Bureau of the Census, American Indians, Eskimos, and Aleuts on Identified Reservations and in the Historic Areas of Oklahoma (Excluding Urbanized Areas), Part 1 and 2 (Washington, D.C.: U.S. Government Printing Office, 1985); U.S. Department of Health and Human Services, Indian Health Service, Chart Series Book, April 1988 (Washington, D.C.: U.S. Government Printing Office).

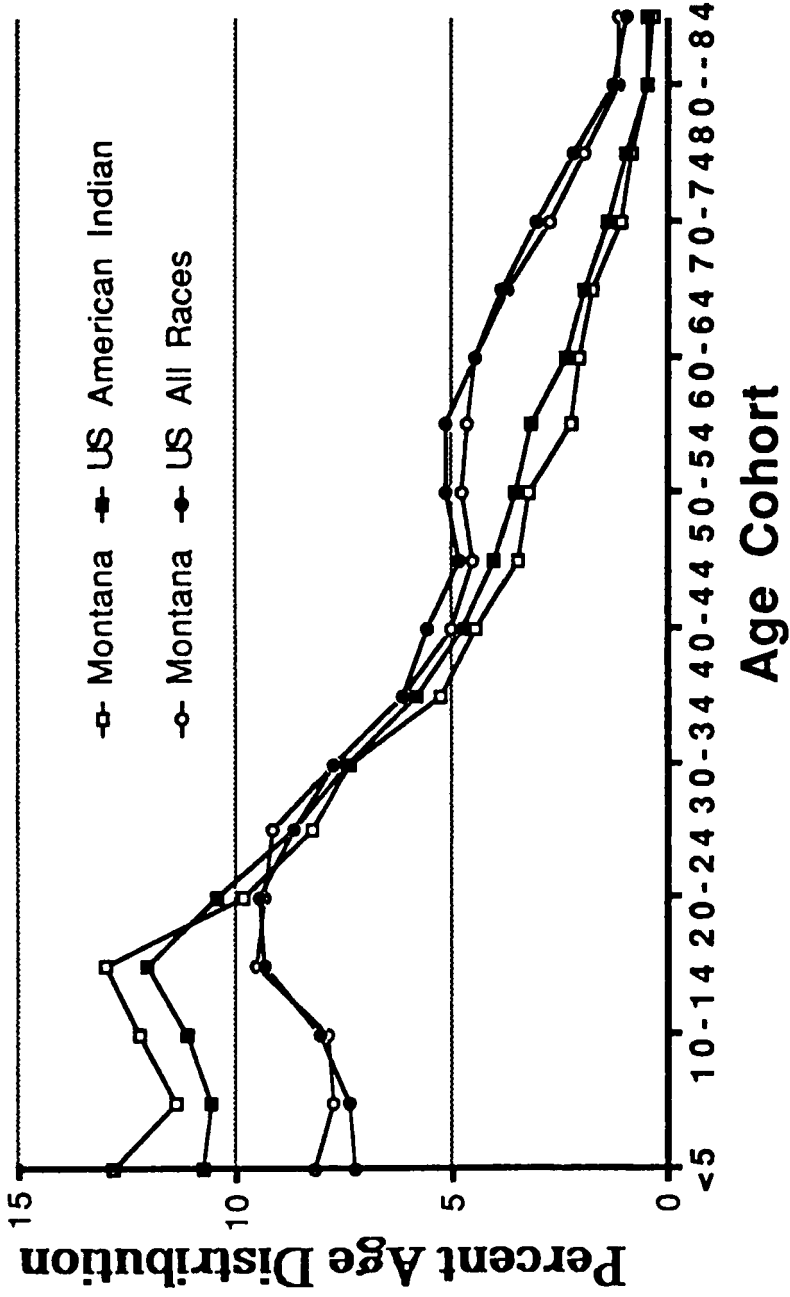


FIGURE 1: Percent Age Distribution, Montana and United States American Indians and Montana and United States All Races



tion structure with more dependents to be cared for on limited household economic resources. Second, the population structure is indicative of a population that has a high birth rate. Dependency and a high birth rate place infants at a greater mortality risk, especially under strained economic and health resources.

The birth rate for Montana American Indians is 33.9 per 1,000. This rate is higher than the United States birth rate for the American Indian population and exceeds the all races rate in Montana and the United States. Such a high rate of birth leads to a large completed family size.<sup>15</sup>

Both issues are of vital concern for maternal and infant health. Maternal mortality rates are higher in women bearing a large number of children, bearing children at an early age, or birthing late in their reproductive careers. Too many births result in a pattern of maternal and infant depletion. Shortened birth intervals affect infant care, pose a greater health risk to the mother, and lower birth weights.<sup>16</sup> These demographic risk factors are compounded when they are located in the socioeconomic arena of social disadvantage.

### **Poverty and Underdevelopment**

Montana's Indian people are a largely underserved and economically dependent people. Montana's reservations are relatively isolated, divorced from many services, and marginal in the rural economic sector. According to the 1980 census, the median family income among Montana's American Indian population was \$11,767. This income is below the 1980 median income for most other Montanans and \$1,933 below the national median family income for American Indians living in other regions (Table 3). This income disparity parallels the differential poverty rate between American Indians and other Montana citizens. Statewide, 30.8 percent of American Indian people live below the poverty level, although the level of poverty varies for each reservation (Table 4).

As an underserved and underdeveloped population, Montana Indian people are acutely affected by the rising trend of poverty in rural America. On a national level, between 1970 and 1983, the total percentage of people in America living below the poverty line rose from 12.6 percent to 15.2 percent.<sup>17</sup> To place this national percentage change in perspective, the

**TABLE 3**  
**Demographic and Socioeconomic Characteristics,**  
**U.S. American Indians and All Races Compared to**  
**Montana American Indians and All Races, 1980**

<b>Demographic and Socioeconomic Characteristics</b>	<b>U.S. American Indians</b>	<b>Montana American Indians</b>	<b>U.S. All Races</b>	<b>Montana All Races</b>
Median Age . . . . .	22.6	20.3	30.0	29.0
Birth Rate per 1,000 . . . . .	27.9	33.9	15.9	18.0
Percent of Total U.S. Population . . . . .	0.6	n.a.	100.0	n.a.
Percent of Total Montana Population . . . . .	n.a.	4.78	n.a.	100.0
Median Family Income . . . . .	\$13,700	\$11,767	\$19,900	\$15,420
Mean Family Income . . . . .	\$16,500	\$14,101	\$23,600	\$17,994
Median Per Capita Income of Persons with Income:				
Male . . . . .	\$8,077	\$4,839	\$12,192	\$11,563
Female . . . . .	\$4,263	\$3,123	\$5,263	\$4,417
Percent of Persons Below the Poverty Level . . . . .	28.2	30.8	12.4	9.2
Percent of Persons Residing in a Rural Area . . . . .	47.0	73.5	26.0	46.0
Percent of Persons in Labor Force 16 Yrs. or Older:				
Male . . . . .	68.5	54.8	75.1	75.2
Female . . . . .	47.7	46.9	49.9	49.0
Percent of High School Graduates . . . . .	55.3	51.4	66.5	74.3

Source: U.S. Department of Health and Human Services, Indian Health Service Chart Series Book: April 1988 (Rockville, MD: Health Resources and Services Administration); U.S. Department of Commerce, Bureau of the Census, United States 1980 Census of Population (Washington, D.C.: U.S. Government Printing Office).

**TABLE 4**  
**Percent Unemployment and Poverty**  
**by Reservation, Montana, 1980**

Reservations	Percent of Persons Age 16 or Older	Percent of Unemployment	Percent of Households in Poverty
Blackfeet	61.7	37.0	35.6
Crow	61.0	40.3	31.8
Flathead	62.4	33.0	31.9
Fort Belknap	59.3	44.0	42.2
Fort Peck	59.1	39.3	39.9
Northern Cheyenne	55.5	33.4	45.4
Rocky Boy	56.2	34.0	36.7

Source: U.S. Department of Commerce, U.S. Bureau of the Census, American Indian Areas and Alaskan Villages: 1980. Supplementary Report (Washington, D.C.: U.S. Government Printing Office, 1984); U.S. Department of Commerce, U.S. Bureau of the Census, American Indians, Eskimos, and Aleuts on Identified Reservations and in the Historic Areas of Oklahoma (Excluding Urbanized Areas), Part 1 and 2 (Washington, D.C.: U.S. Government Printing Office, 1985).

35 million people below the poverty line in 1983 exceeded the entire population of all but 23 countries in that year, including such major nations as Argentina, Austria, Canada, Sweden, and Taiwan.<sup>18</sup>

By 1987, this rate had climbed to a staggering 54 million people, many of whom reside in rural America.<sup>19</sup>

In 1980, 73.5 percent of Montana's American Indians were residing in rural areas (Table 3). Although only 36.04 percent of Montana's American Indians currently reside on reservations, 37.46 percent live off-reservation in surrounding rural communities. The remainder of the American Indian population resides in urban areas.

The current settlement geography of the state's Indian population is largely a function of economics. Most Indian people perceive better employment opportunities off the reservation. While off-reservation American Indians may have better access to em-

ployment opportunities in Montana towns and cities, poverty remains acute. In one of the most economically diverse cities in the state, Missoula, 58.3 percent of urban Indian households were below the 1988 revised poverty line, and 51 percent of heads of households were unemployed.<sup>20</sup> These dismal socioeconomic statistics can be extended to most urban areas in the state and magnified for those Indian people living on reservations.

The rise in poverty among Montana American Indians mirrors the increase in rural and urban poverty in the West (which includes Montana), where the poverty rate rose 4.7 percent, compared to a 2.5 percent increase in the South.<sup>21</sup> Data from 1987 reveal that the poverty rate in rural America was 50 percent higher than in urban areas.<sup>22</sup>

The growing poverty in the Rocky Mountain region is reflected in per capita personal income. In 1989, this became the first region to record a per capita income below that of the Southeast since 1929. Per capita personal income in Montana is one of the lowest in the United States, 77 percent of the United States average.<sup>23</sup> This figure represents a \$-3,774 dollar difference from the 1988 national average.<sup>24</sup> Forecasts for Montana predict minimal economic growth which could easily be reversed by a national recession, further industrial site closures, continued decline in world prices in agriculture, cattle, or oil, and a deceleration of Montana's service industry.<sup>25</sup> The fragility of Montana's economy points out the dependent economic relationship the state has with other United States regions and the world economy.

The dramatic demographic and economic shifts in Montana are the result of rising unemployment coming on the heels of the deterioration of many rural-based industries which have been adversely affected by national and global economic changes. Since Montana's Indian people are a marginal labor force in the rural-based economic sector, they are usually the first to feel the adverse effects of an eroding economy. These economic shifts will impact the health and well-being of Montana's Indian people.

There is overwhelming evidence for the association of social disadvantage with infant mortality.<sup>26</sup> Closely associated with social disadvantage are a number of factors that contribute significantly to infant mortality. Low birth weight, inadequate nutrition, maternal socioeconomic status, high parity (or the number of children previously born alive to a woman), low educational attainment, disrupted families, substance abuse, and barriers to

adequate reproductive and infant medical care are correlates to low socioeconomic status and risk factors of infant mortality. These risk factors are critically examined below.

## INTERNAL-EXTERNAL RISK FACTORS

### **Low Birth Weight**

Low birth weight for a newborn is usually defined as less than 2,500 grams, or approximately 5.5 pounds. While genetic predisposition cannot be completely discounted, there is a persuasive body of literature that clearly indicates that low birth weight is associated with poverty.<sup>27</sup> The effects of economic and social disadvantage on neonatal mortality are mediated through low birth weight. Paneth and his associates have pointed out that "women at social disadvantage deliver smaller babies who, because of their smaller size, are subject to a higher force of mortality."<sup>28</sup> Between 1981 and 1983, 6.2 percent of all American Indian and Alaska Native infants were of low birth weight, compared to 6.8 percent for all United States races.<sup>29</sup> At first glance, this statistic suggests that American Indian infants are at a lower risk of being low birth weight compared to the general population.

Most recently, Kramer has argued that the percentage differential between the nationwide American Indian and the United States low birth weight rates are due to better nutrition.<sup>30</sup> Her argument rests on the assumption that commodity subsidies and other governmental food supplement programs provide American Indian women with a nutritional edge over the other socially disadvantaged women. While her argument contains a degree of logic, it ignores the political and economic realities of American Indian life. In a 1983 study to examine the impact of budget cuts implemented by the Reagan administration, 26 percent of the Northern Cheyenne were eliminated from the federal Food Stamp Program.<sup>31</sup> Contrary to Kramer's assumption, food assistance declined dramatically under the Reagan administration, and there is little indication that this trend will be reversed by the Bush administration.

Moreover, a large body of literature indicates that American Indians, especially young children, continue to be an undernourished segment of the American population.<sup>32</sup> Children and

infants are still seen at Indian Health Service facilities with marasmus, kwashiorkor, and anemia.<sup>33</sup>

In addition, low birth weight as a statistical measure has been developed from data drawn largely from a non-Indian population sample. In a survey of mean birth weights of more than 14,000 infants distributed among eighteen American Indian groups, Adams and Niswander<sup>34</sup> discovered that, on the average, American Indian birth weights remained consistently higher than those of non-Indians. Moreover, of the eighteen tribes surveyed, the Cheyenne of Montana and Oklahoma exhibited the highest mean birth weight (3,840 grams) of any tribe surveyed. Biological evidence seems to suggest that American Indian infants tend to be larger, calling into question the validity of the .4 percent differential in low birth weight between American Indians and the general population. It may be that prematurity for American Indian infants, as Smith<sup>35</sup> argued, cannot be designated on the basis of weight alone. Recent evidence reveals that infants with very high birth weights are at risk for mortality or developmental retardation.<sup>36</sup> Further research may indicate that larger infants could partially account for the greater survivorship of American Indian infants through the neonatal period and may have some influence on American Indian postneonatal mortality.

In light of these arguments, the comparative birth weight data for Montana from 1980 through 1987 in Table 5 suggest that birth weight remains a force in American Indian infant mortality. Within the seven-year time span for which data are available, American Indian women delivered fewer low birth weight infants than white mothers 75 percent of the time. Although Indian mothers delivered fewer low birth weight babies, low birth weight/respiratory distress syndrome accounted for 72 percent of neonatal deaths in 1985–86.<sup>37</sup> While low birth weight alone cannot be discounted as a factor in infant mortality, it becomes more important when considered with other variables that result in infant death.

Of particular importance is the duration of gestation. The length of the gestational period directly influences birth weight and, hence, survival. Any factor that would have even a modest effect on gestational weight could influence infant survival.<sup>38</sup> Among Montana's American Indian women, such factors as socioeconomic status, substance abuse, pre- and postnatal care have a significant effect on pregnancy outcome.<sup>39</sup>

**TABLE 5**  
**Low Birth Weight Resident Live Births, Montana**  
**Whites and American Indians, 1980–1987**

Year	Whites	American Indians
1980	56.31	59.51
1981	55.55	52.59
1982	57.29	44.95
1983	56.46	53.14
1984	58.07	63.19
1985	56.87	53.45
1986	60.88	44.16
1987	55.37	53.39

Source: Department of Health and Environmental Sciences, Records and Statistics Bureau (Helena, MT: State of Montana).

### **Maternal Demographic and Socioeconomic Characteristics**

American Indian women are subject to a number of socioeconomic factors that adversely affect infant survivorship, particularly during the postneonatal period. Demographically, maternal age and parity are critical variables in infant mortality.<sup>40</sup> Too young mothers or too old mothers pose greater infant health risks. Many Montana American Indian women begin their reproductive careers early and continue bearing children after the age of 35.

Maternal age is not only a critical demographic variable for reproductive outcome, but impacts socioeconomic status as well. The median age for Indian women living on reservations was 19.7 years (Table 6). A significant proportion of these women were already heads of household. Over 20 percent of reservation households listed on the 1980 census were headed by females.

The large percentage of female-headed households reflects the fragmented social network in which mothers must raise their infants. Evidence suggests that household attitudes are an important determinant in infant mortality.<sup>41</sup> A family's willingness and ability to prevent infant death exert an influence independent of household economics and external environment.<sup>41</sup> The mother, according to Basu,

**TABLE 6**  
**Summary of Female Age and Household Characteristics**  
**for Montana American Indians Residing on Reservations, 1980**

Reservations	Median Age	Median Age, Females	Percent with Female Householder, No Husband	Persons per Family
Blackfeet	20.7	20.9	21.36	4.49
Crow	20.1	20.7	23.41	5.23
Flathead	21.8	22.0	24.03	4.11
Fort Belknap	19.3	19.5	28.12	4.83
Fort Peck	19.4	19.6	28.84	4.63
Northern Cheyenne	18.1	19.1	28.05	4.76
Rocky Boy	17.8	18.5	25.67	5.24

Source: U.S. Department of Commerce, U.S. Bureau of the Census, *American Indian Areas and Alaskan Villages: 1980. Supplementary Report* (Washington, D.C.: U.S. Government Printing Office, 1984); U.S. Department of Commerce, U.S. Bureau of the Census, *American Indians, Eskimos, and Aleuts on Identified Reservations and in the Historic Areas of Oklahoma (Excluding Urbanized Areas), Part 1 and 2* (Washington, D.C.: U.S. Government Printing Office, 1985).

is of prime importance in this situation, and it is her knowledge, autonomy in household decision-making, and ability to interact with outside agencies, that define the level of child mortality even if the outer limits are set by economic resources of the household and the medical facilities in the area.<sup>43</sup>

In other words, there is an element of volition on the part of the mother and the household in assuring infant survival. But this volition is mitigated by the disruption of family life and child-rearing practices.<sup>44</sup> Traditional patterns of child-tending are often distorted by social disorganization and the women's roles and desires which conflict with the responsibilities of motherhood. American Indian household social disorganization and personal alienation are rooted in poverty, unemployment, substance abuse, and fragmented household formation.<sup>45</sup>



Another household factor that negatively affects infant survivorship is overcrowding. A significant proportion of Montana American Indian households have more than one person residing in a room.<sup>46</sup> A breakdown by reservations was as follows: Blackfeet (21.1 percent); Crow (37.7 percent); Flathead (12.4 percent); Fort Belknap (37.4 percent); Fort Peck (24.8 percent); Northern Cheyenne (28.8 percent); and Rocky Boy (34.0 percent).<sup>47</sup> These data complement the family size data in Table 6, in that reservation families tend to be quite large.

Larger families have higher mortality at each birth order through both biological and behavioral mechanisms. An average family size of 4.7 persons confers a higher risk of dying at all stages of family formation, especially when crowding is taken into consideration.<sup>48</sup> Unfortunately, the exact causal mechanisms cannot be ascertained at this time, but the risks involve shorter birth intervals, high parity, disrupted family formation patterns, and the prevailing socioeconomic nexus in the household.<sup>49</sup>

Some Montana American Indian newborn infants are subjected to overcrowded conditions and a substandard level of living. Median family income is correlated with household formation. Households headed by women are far more likely to live in impoverished conditions than are married couple households or other reservation households (Table 7).

Many reservation households lack complete plumbing facilities, refrigeration, or central heating (Table 8). The lack of these household necessities increases infants' risk for contracting illness. Not surprisingly, the second leading cause of American Indian infant deaths in Montana was diseases, most of which were preventable.<sup>50</sup>

### **Low Educational Attainment**

There is an association between infant mortality and parents' level of education.<sup>51</sup> In Montana, 59.2 percent of white females completed high school, while only 51.4 percent of Indian females finished their school careers. This 7.8 percent differential becomes worse when statistics are examined from reservation to reservation (Table 9).

Many young Indian women's educational careers are interrupted because of pregnancy. Nationally, in 1983 21 percent of

**TABLE 7**  
**Median Reservation Income by Family, Married, and**  
**Female Head of Household, 1980**

Reservations	Median Income by		
	Family	Married	Female Head of Household, No Husband
Blackfeet	\$10,406	\$11,600	\$7,096
Crow	\$12,139	\$13,716	\$9,218
Flathead	\$10,661	\$12,621	\$6,366
Fort Belknap	\$ 9,836	\$10,834	\$5,911
Fort Peck	\$10,474	\$13,953	\$5,825
Northern			
Cheyenne	\$ 9,717	\$12,449	\$5,535
Rocky Boy	\$10,966	\$11,987	\$8,244

Source: U.S. Department of Commerce, U.S. Bureau of the Census, American Indian Areas and Alaskan Villages: 1980. Supplementary Report (Washington, D.C.: U.S. Government Printing Office, 1984); U.S. Department of Commerce, U.S. Bureau of the Census, American Indians, Eskimos, and Aleuts on Identified Reservations and in the Historic Areas of Oklahoma (Excluding Urbanized Areas), Part 1 and 2 (Washington, D.C.: U.S. Government Printing Office, 1985).

American Indian mothers were teenagers. While the exact figures were not available for American Indian teenage pregnancies in Montana, it was cited as an important health risk in infant mortality.<sup>53</sup>

**Substance Abuse**

An important contributing factor to low birth weight and infant mortality is substance abuse, particularly of tobacco and alcohol, by the mother. In a national survey, it was found that 55 percent of all American Indians age 17 or older smoke cigarettes, compared to only 35 percent among the Anglo population.<sup>54</sup> Although epidemiological data are not immediately available for Montana's American Indian population, these statistics probably would be comparable.<sup>55</sup>

**TABLE 8**  
**Household Socioenvironmental Conditions by**  
**Reservation, Montana, 1980**

Reservations	Percent of Households without			
	Complete Plumbing	Central Heating	Refrigeration	Telephone
Blackfeet	5.5	41.7	1.2	56.6
Crow	7.5	36.4	.7	40.7
Flathead	2.4	46.9	.6	30.2
Fort Belknap	3.8	22.6	.5	65.8
Fort Peck	2.3	23.2	.7	38.8
Northern				
Cheyenne	4.3	24.5	1.9	56.8
Rocky Boy	1.3	19.2	.6	60.3

Source: U.S. Department of Commerce, U.S. Bureau of the Census, *American Indian Areas and Alaskan Villages: 1980. Supplementary Report* (Washington, D.C.: U.S. Government Printing Office, 1984); U.S. Department of Commerce, U.S. Bureau of the Census, *American Indians, Eskimos, and Aleuts on Identified Reservations and in the Historic Areas of Oklahoma (Excluding Urbanized Areas), Part 1 and 2* (Washington, D.C.: U.S. Government Printing Office, 1985).

Excessive drinking has long been recognized as a contributing factor to American Indian morbidity and mortality. There has been a plethora of literature exploring the question of why American Indians abuse alcohol. Explanations range from the psychological to the biological.<sup>56</sup> While many of these explanations provide a partial answer to the alcohol question, it is evident that American Indian alcoholism occurs as a result of economic, political, and social powerlessness associated with their dependency status as a colonized people.

Although American Indian women represent 51.4 percent of the Indian population in Montana, very little research has been conducted to determine gender differences in abuse of alcohol.<sup>57</sup> Recent studies of the non-Indian population demonstrate that women attempting to overcome an alcohol addiction differ significantly from their male counterparts, indicating that gender plays an important role in drinking behavior and treatment strategies. These studies have found that women differ from men in

**TABLE 9**  
**Percent of American Indian Females Who Completed High School**  
**and Median Years Completed in Montana, 1980**

Reservations	Percent Females Who Are High School Graduates	Median School Years Completed
Blackfeet	53.8	12.1
Crow	50.1	12.0
Flathead	56.4	12.2
Fort Belknap	58.1	12.3
Fort Peck	48.8	11.9
Northern Cheyenne	50.4	12.0
Rocky Boy	42.4	12.0

Source: U.S. Department of Commerce, U.S. Bureau of the Census, American Indian Areas and Alaskan Villages: 1980. Supplementary Report (Washington, D.C.: U.S. Government Printing Office, 1984); U.S. Department of Commerce, U.S. Bureau of the Census, American Indians, Eskimos, and Aleuts on Identified Reservations and in the Historic Areas of Oklahoma (Excluding Urbanized Areas), Part 1 and 2 (Washington, D.C.: U.S. Government Printing Office, 1985).

alcohol consumption patterns, demographics, and psychosocial characteristics.

Clinically, female drinkers in treatment are more likely to have primary affective disorder and liver disease. Sociologically, women alcoholics experience greater instability in their marriages and in their family of origin, are perceived more negatively by their families and communities, and have spouses who are also alcoholics. Such characteristics have been found to lead to low self-esteem, feelings of powerlessness and inadequacy, and physical and sexual abuse.

The role of alcohol abuse among American Indian women is beginning to emerge as a factor in infant mortality.<sup>58</sup> Nationwide clinical and epidemiological data indicate that American Indians remain significantly overrepresented in the reported cases of fetal alcohol syndrome. American Indian women have a higher mortality rate for cirrhosis of the liver than American Indian men, and

Indian women are more "severe problem drinkers" than their male counterparts.<sup>59</sup> American Indian women not only suffer from the effects of alcohol abuse, but experience parallel problems to those of non-Indian women.

The epidemiological implications of alcoholism for American Indian women are higher rates of suicide and alcohol-related deaths than white women. Furthermore, American Indian women between the ages of 15 and 34 develop cirrhosis of the liver 37 times more frequently than Anglo women of the same age cohort.<sup>60</sup> Despite these tragic statistics, Indian women have been underrepresented in state, IHS, and tribal alcohol treatment facilities. Only last year, the Salish and Kootenai reported for the first time that more women than men were treated for substance abuse at their tribally controlled alcohol/substance abuse program.<sup>61</sup>

The severity of drinking among American Indian women is hidden for complex social and economic reasons. In many Native American families, women provide a large degree of social and economic stability.<sup>62</sup> An alcohol study conducted among Montana American Indians recorded a significant difference between the sexes admitted to a facility for treatment. Further investigation revealed that there was a greater reluctance among Montana Indian women to admit they had a drinking problem because of expressed need to care for the rest of the family members.<sup>63</sup> Their reluctance to seek treatment was prompted also by the real possibility that their children would be removed from their care by social welfare.<sup>64</sup> Thus the cost of seeking treatment was perceived by Montana Indian women as too great, although the continuance of substance abuse carries a high reproductive price.

Gracia noted that 50 percent of those Montana Indian women who were admitted to the hospital for alcohol treatment were between 21 and 35 years of age (the peak childbearing years). Forty-seven percent of those admitted were 36 years or older, indicating that alcohol abuse had continued through the completion of their childbearing period.<sup>65</sup> Such drinking behavior has profound consequences for childbirth and child-rearing. According to a comparative study of fetal alcohol syndrome, 10.3 per 1,000 live births among Plains Indians were afflicted with fetal alcohol syndrome.<sup>66</sup>

Compounding the risk of infant mortality is the fact that the age of first exposure to alcohol is dropping dramatically. A 1988 Billings Area Indian Health Service survey of adolescents who

had ever used alcohol or drugs revealed that 65 percent of seventh grade Indian students reported having gotten drunk. By twelfth grade, 92 percent admitted to having been intoxicated.<sup>67</sup> Although the data were not broken down by sex, the statistics point to an overall decline in the age of drinking onset for Montana's Indian youth. Women begin to drink at a younger age and continue to drink during pregnancy. This behavior places them and their infants at a significant health risk.

### **Child Abuse**

Directly linked to substance abuse is child neglect and abuse. Child abuse occurs among American Indians at rates comparable to the non-Indian population. While little is known about the clinical spectrum of Indian maltreatment of children, factors associated with abuse are poverty, the breakdown of family structure and relationships, situational stress, and the changing perception and value of children.<sup>68</sup> Recent studies of high-risk mothers (socially disadvantaged, unskilled, poorly nourished, poorly educated) giving birth to high-risk infants (premature, of low birth weight, or malformed) revealed that these infants remained at high risk throughout childhood for greater morbidity and mortality, and for severe child abuse and neglect.<sup>69</sup>

Child abuse and neglect may have important implications for the high postneonatal death rates among Montana's American Indian infants.<sup>70</sup> During the 1980-1986 period, a number of infant deaths were linked to parental neglect (pneumonia, congenital anomaly, suffocation in the crib and by foreign bodies, aspiration of food), and to overt child abuse. Aside from the child abuse death, some of these infants were victims of "benign neglect." On this matter, it is important to note, as Scheper-Hughes stated, that benign neglect

is difficult to recognize and identify, since it rarely exists apart from other, more "natural" threats to the child's survival (infectious disease, poor sanitation, inadequate diet, etc.). . . . Parental implication in the death of their infants involves in this case, acts of omission, rather than acts of commission, such as failing to note or respond to signs of malnutrition, dehydration and other serious threats to survivability. Deaths from

selective neglect are gradual and always compound with other exogeneous factors.<sup>71</sup>

Benign neglect is difficult to ascertain and, in most cases, is recorded as accidental or as sudden infant death syndrome. These two categories ranked fourth and first among the five leading causes of American Indian postneonatal deaths in Montana.<sup>72</sup>

### **Sudden Infant Death Syndrome**

The most elusive cause of postneonatal mortality is sudden infant death syndrome, or SIDS. While the specific cause or causes of SIDS remain unknown, most demographic factors positively associated with sudden infant death are low birth weight, young maternal age, low maternal education, and maternal unwed status. All of these factors are markers of low socioeconomic status and prevail among Montana's maternal population.<sup>73</sup>

The leading cause of American Indian infant death is sudden infant death syndrome, which occurs at twice the national average.<sup>74</sup> Paralleling the national trends, SIDS is the leading cause of death among American Indian infants in Montana. Twenty-three percent of infants who died of SIDS in 1986 and 1987 were American Indians.<sup>75</sup> The large proportion of SIDS deaths points to a solution beyond current biomedical practices and institutional arrangements.

### **Institutional Barriers**

Since 1980, the service population of the Indian Health Service has increased at a rate of approximately 2.8 percent annually.<sup>76</sup> Overall, this dramatic increase in service demand contrasts with the decline in political and economic support for health care among the Indian communities. In 1987, the Reagan budget proposed a 16 percent cutback in the Indian Health Service, a 13 percent reduction in basic Indian education, and an 8 percent cut in the Bureau of Indian Affairs' funding.<sup>77</sup> These budget cuts were coupled with a withdrawal of federal support from WIC, AFDC, and Medicaid, programs that are used by Indian people.

As declining federal dollars and commitment toward Indian people continue, poverty among Montana Indians deepens, creating conditions for the further deterioration of health. Such a cycle places a greater burden on the Indian Health Service,

which is already understaffed and underfunded. As the Indian Health Service is forced to carry a greater patient load, the quality of care declines, and health priorities must necessarily shift according to the erosion of funding.

Coupled with this general decline in care, there are a number of barriers to effective maternal and infant care. Many Indian people, whether they reside on the reservation or in urban areas, must often travel long distances for care. Table 10 shows the percent of Indian people residing on a reservation who utilized the local Indian Health Service facility in the last twelve months, and their approximate travel time to the facility. Most Montana Indians rely on the Indian Health Service, but 12 to 36 percent of the reservation patients must travel over thirty minutes to receive medical attention. This access problem is compounded in urban areas.

**TABLE 10**  
**Indian Health Service Utilization and Travel Time**  
**to the Health Facility, 1980**

Reservations	Percent Persons Who Utilized an IHS Facility within the Last Twelve Months	Travel Time to IHS Facility	
		Less Than 30 Mins.	Greater Than 30 Mins.
Blackfeet	96.2	81.7	12.4
Crow	95.1	50.5	34.6
Flathead	33.3	69.5	24.9
Fort Belknap	97.3	48.2	36.4
Fort Peck	92.7	84.5	12.6
Northern Cheyenne	94.7	74.5	13.0
Rocky Boy	98.2	83.8	15.7

Source: U.S. Department of Commerce, U.S. Bureau of the Census, American Indian Areas and Alaskan Villages: 1980. Supplementary Report (Washington, D.C.: U.S. Government Printing Office, 1984); U.S. Department of Commerce, U.S. Bureau of the Census, American Indians, Eskimos, and Aleuts on Identified Reservations and in the Historic Areas of Oklahoma (Excluding Urbanized Areas), Part 1 and 2 (Washington, D.C.: U.S. Government Printing Office, 1985).



A 1989 health survey among American Indians residing in Missoula County (a non-reservation county) revealed that 45 percent faced difficulties in obtaining health care because they were forced to travel to their home reservations for treatment.<sup>78</sup> This statistic is significant in light of the distances each Montana tribal member had to travel one-way from Missoula for treatment: Salish-Kootenai, 69 miles; Blackfeet, 205 miles; Chippewa-Cree, 284 miles; Assiniboine-Sioux, 491 miles; Gros Ventre, 330 miles; Crow, 386 miles; and Northern Cheyenne, 424 miles. A previous study among the Tohono O'odham (Papago) demonstrated that the average rate of use of health facilities for well baby visits in the first year of life fell proportionately and significantly as travel time to the facility increased.<sup>79</sup> This situation exists for many Montana American Indian mothers, especially those mothers living off-reservation.

Even if the clinic is located within a reasonable distance, many Indian people do not have access to reliable transportation, and they find it impossible to visit the health facility on a regular basis. These factors, combined with long clinic waits and, at times, an apathetic or culturally insensitive medical staff, discourage the equitable distribution of medical resources.

The maldistribution of medical resources is exemplified by national statistics. In 1983, only 12.9 percent of pregnant American Indian women received first trimester care.<sup>80</sup> This poor statistic stands in sharp contradiction to Indian Health Service priorities which focus on primary and tertiary maternal care.<sup>81</sup> Furthermore, in 1986, the Indian Health Service spent less than \$100 per person on medical care.<sup>82</sup> For Montana's American Indians, the impact of IHS's scarce resources is already being felt. Between 1981 and 1989, the Billings Area Indian Health Service experienced a 35.02 percent increase in use, compared to a 29.56 percent overall growth in all areas (Table 11; Figure 2).

Finally, a variable that influences health care and use among Indian people is the cultural and ideological environment. The Indian Health Service, for economic and practical reasons, has homogenized its health care delivery system to serve the widest population possible. But in doing so, Indian Health Service facilities and personnel leave little room for cultural or ideological variation in health treatment and perception of health needs. Among Montana's American Indian population, there exists considerable cultural variation in beliefs about illness, treatment, pregnancy, and infant care. In many instances, cultural needs

**TABLE 11**  
**Indian Health Service Growth Factor, All Areas and**  
**Billings Service Area, 1980-1989**

Year	Percent Growth	
	All Areas	Billings
1981	2.51	4.06
1982	2.57	3.99
1983	3.70	3.94
1984	3.85	3.72
1985	2.70	2.89
1986	2.86	2.91
1987	2.79	2.94
1988	2.74	2.99
1989	2.77	2.92

Source: U.S. Department of Health and Human Services, Indian Health Service, Chart Series Book, April 1988 (Washington, D.C.: U.S. Government Printing Office).

cannot be accommodated at an IHS facility, despite the fact that health beliefs and behavior are intimately tied to cultural traditions and values. These intercultural variations, as Red Horse noted, often create conflicts and stresses between the treatment strategy employed by the Indian Health Service and the Indian people using these facilities.<sup>83</sup> These stressed transactional arrangements retard consistent medical care.

Homogenization of medical treatment promotes individual interests and dilutes tribal, communal, and family needs. Such dilution divorces medical care from the communal basis of American Indian life. Indian Health Service facilities, therefore, are not meeting the complete health care needs of an already underserved population.

## HEALTH DIFFERENTIALS

Substantial differences in health have long been observed between American Indians and non-Indians in the United States. As I argued earlier, infant mortality is a sensitive indicator of

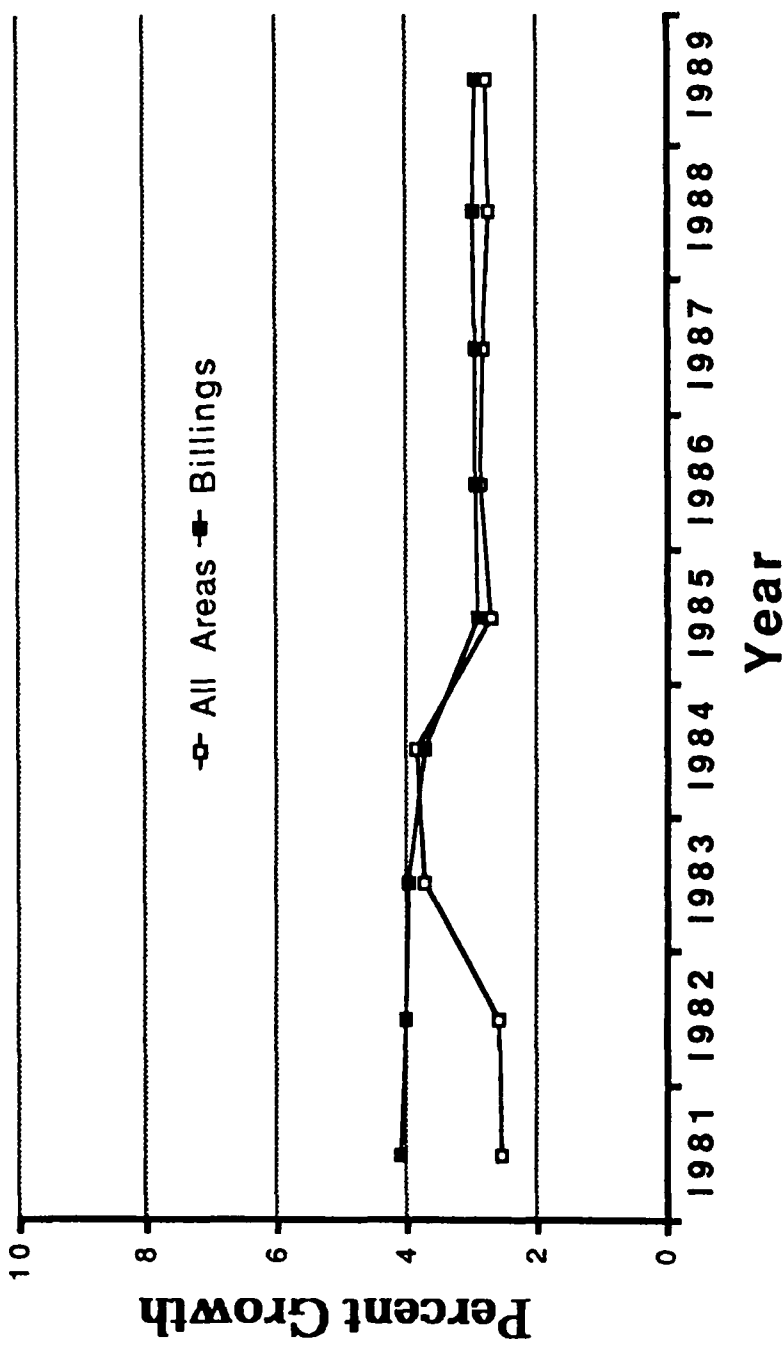


FIGURE 2: Percent Growth in Indian Health Service, Utilization  
All IHS Areas and Billings IHS Area

socioeconomic and health status. As a demographic measurement, the infant mortality rate approximates the chance of dying between live birth and the attainment of the first year of life.<sup>84</sup>

Table 12 and Figure 3 provide graphic evidence of the health disparity that currently exists between American Indians and non-Indians in Montana. During the period under consideration, American Indian infant mortality remained above the declining rates for whites. In fact, between 1979 and 1987, the white infant mortality rate improved by approximately 14 percent, while the American Indian rate eroded by 12 percent. Preliminary statistics of 1988–89 reveal that these trends will continue as the socioeconomic and health gap widens between the state's Indian and non-Indian populations.<sup>85</sup> The erosion of Montana's American Indian infant health becomes even more apparent when the statistics for neonatal, fetal, and postneonatal deaths are examined.

The clinical literature suggests that 95 percent of infant deaths occur during the neonatal period, or the first 28 days of the infant's life.<sup>86</sup> The general factors associated with neonatal deaths are an array of prenatal factors, physiological processes of gestation, or trauma during delivery.<sup>87</sup> Among the American Indian population served by the Billings Area Indian Health Service, the

**TABLE 12**  
**Infant Mortality Rates per 1,000, Montana Whites**  
**and American Indians, 1979–1987**

<b>Year</b>	<b>Whites</b>	<b>American Indians</b>
1979	10.56	13.92
1980	11.78	20.36
1981	10.02	15.63
1982	10.04	10.89
1983	8.60	11.88
1984	8.92	7.89
1985	9.54	16.23
1986	8.72	17.25
1987	9.22	15.82

Source: Department of Health and Environmental Sciences, Records and Statistics Bureau (Helena, MT: State of Montana).

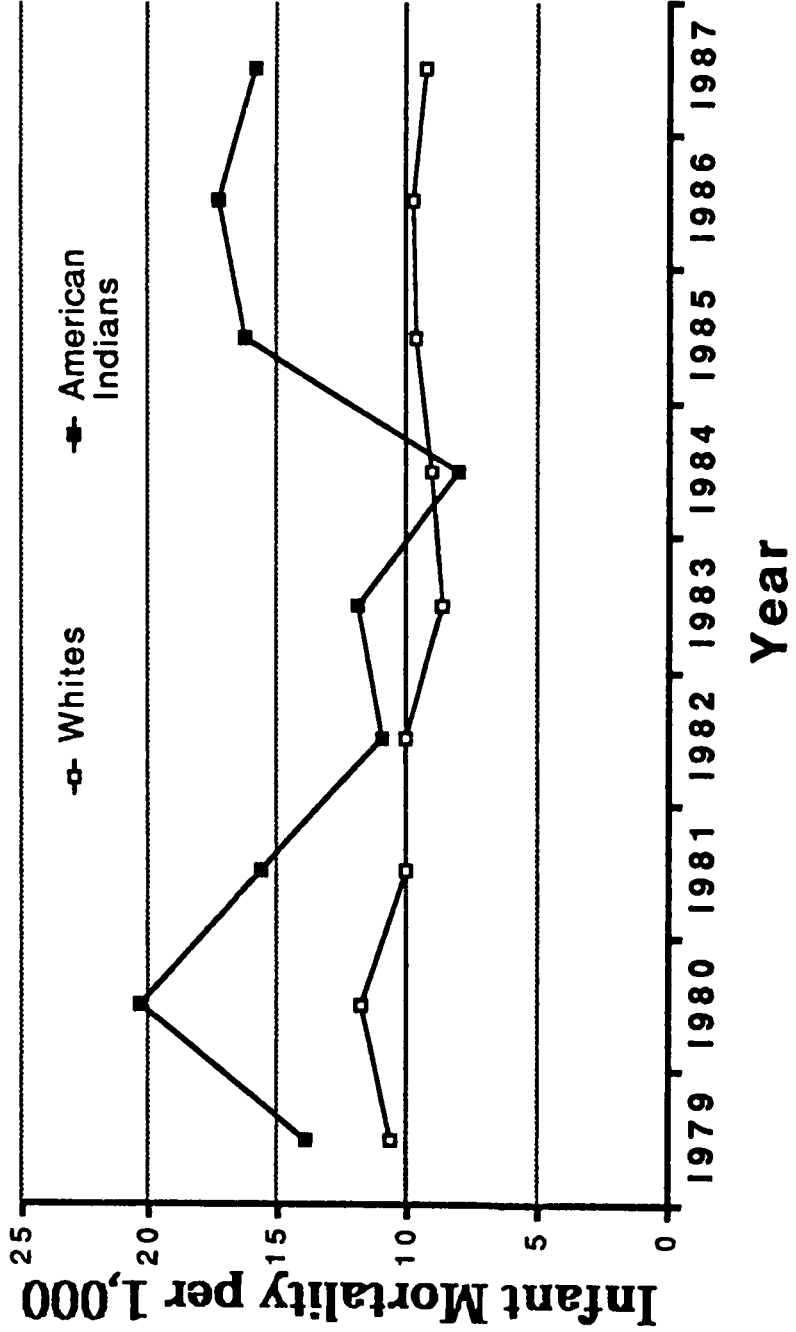


FIGURE 3: Infant Mortality Rates per 1,000, Montana Whites and American Indians, 1979-1987

leading cause of death was low birth weight/respiratory distress syndrome, supporting the conclusion drawn earlier that social disadvantage influences neonatal deaths and that this influence is much stronger than previously thought (Table 13).<sup>88</sup> Consequently, neonatal mortality rates are indicative of the mother's health status and/or the conditions under which the birth occurs.<sup>89</sup>

Examination of the neonatal mortality rates between Montana's American Indians and whites in Table 14 and Figure 4 indicates that since 1979, the neonatal mortality rates for whites have consistently improved. In contrast, the rates for American Indians exhibit a more erratic pattern. For six out of the nine years analyzed, American Indian neonatal mortality rates were higher than those of white Montanans.

There is a close relationship between the fetal death ratio and neonatal mortality. Both are affected by biological and social conditions that adversely affect fetal-infant survivorship.<sup>90</sup> This close relationship can be ascertained by the similar fluctuations exhibited between the neonatal rates and the fetal ratios in Table 15 and Figure 5.

**TABLE 13**  
**Causes of Neonatal Mortality by Percentage, Billings Area**  
**Indian Health Service and U.S. All Races, 1985-1986**

<b>Reservations</b>	<b>Billings Area Indian Health Service (1985-1986)</b>	<b>U.S. All Races</b>
Low Birth Weight/ Respiratory Distress Syndrome	72.0	40.9
Congenital Anomalies	16.0	40.9
Asphyxia	8.0	6.8
Sudden Infant Death	0.0	2.3
Maternal Conditions	0.0	9.1

Source: Billings Area Indian Health Service (Billings, MT: Indian Health Service, 1989).

**TABLE 14**  
**Neonatal Mortality Rates per 1,000, Montana**  
**Whites and American Indians, 1979-1987**

Year	Whites	American Indians
1979	7.46	4.46
1980	7.38	12.52
1981	6.47	4.26
1982	6.61	6.13
1983	4.02	6.99
1984	4.58	3.94
1985	4.56	8.11
1986	5.39	8.28
1987	4.37	6.59

Source: Department of Health and Environmental Sciences, Records and Statistics Bureau (Helena, MT: State of Montana).

**TABLE 15**  
**Fetal Death Ratio per 1,000, Montana Whites and**  
**American Indians, 1979-1987**

Year	Whites	American Indians
1979	7.86	12.30
1980	6.91	11.70
1981	5.68	8.52
1982	5.99	8.85
1983	6.19	9.09
1984	7.71	7.89
1985	6.67	11.50
1986	6.65	11.73
1987	7.89	7.91

Source: Department of Health and Environmental Sciences, Records and Statistics Bureau (Helena, MT: State of Montana).

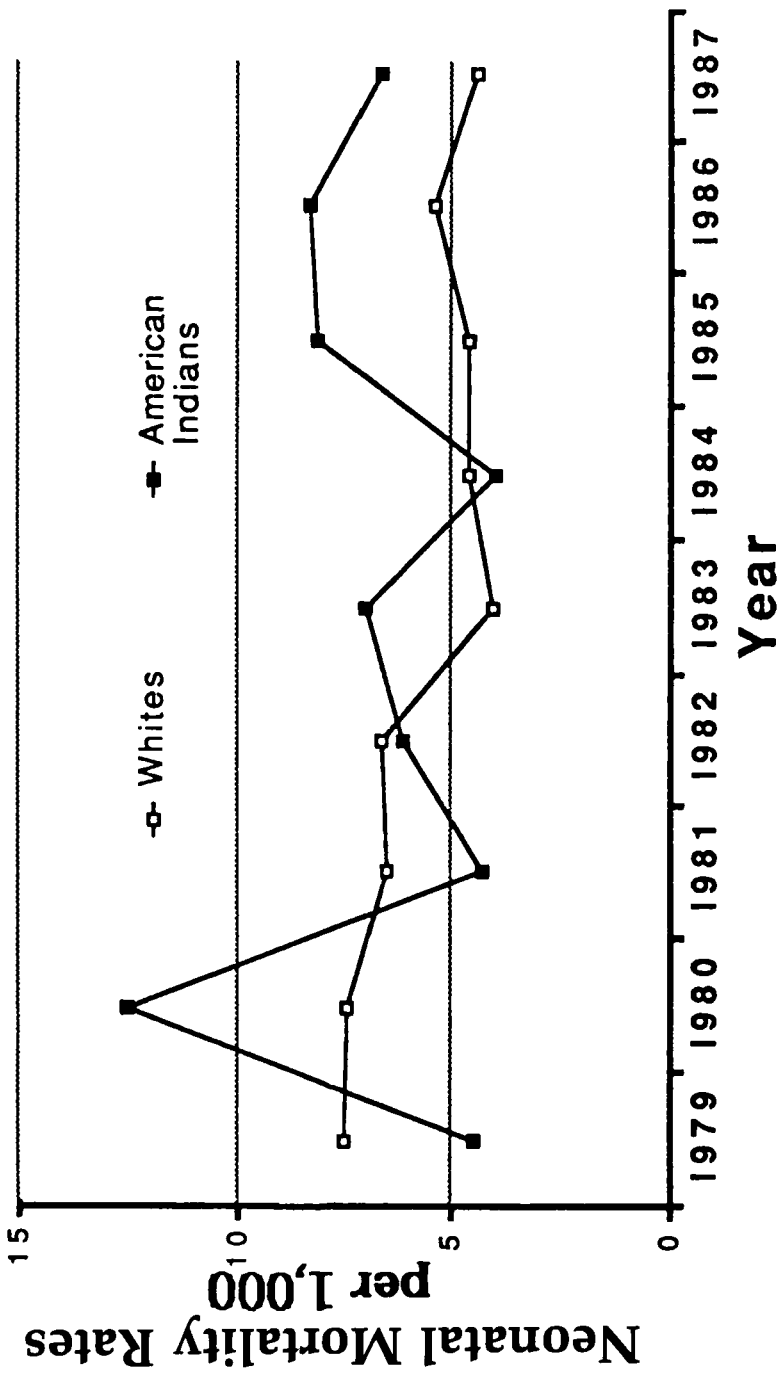


FIGURE 4: Neonatal Mortality Rates per 1,000, Whites and American Indians, 1979-1987



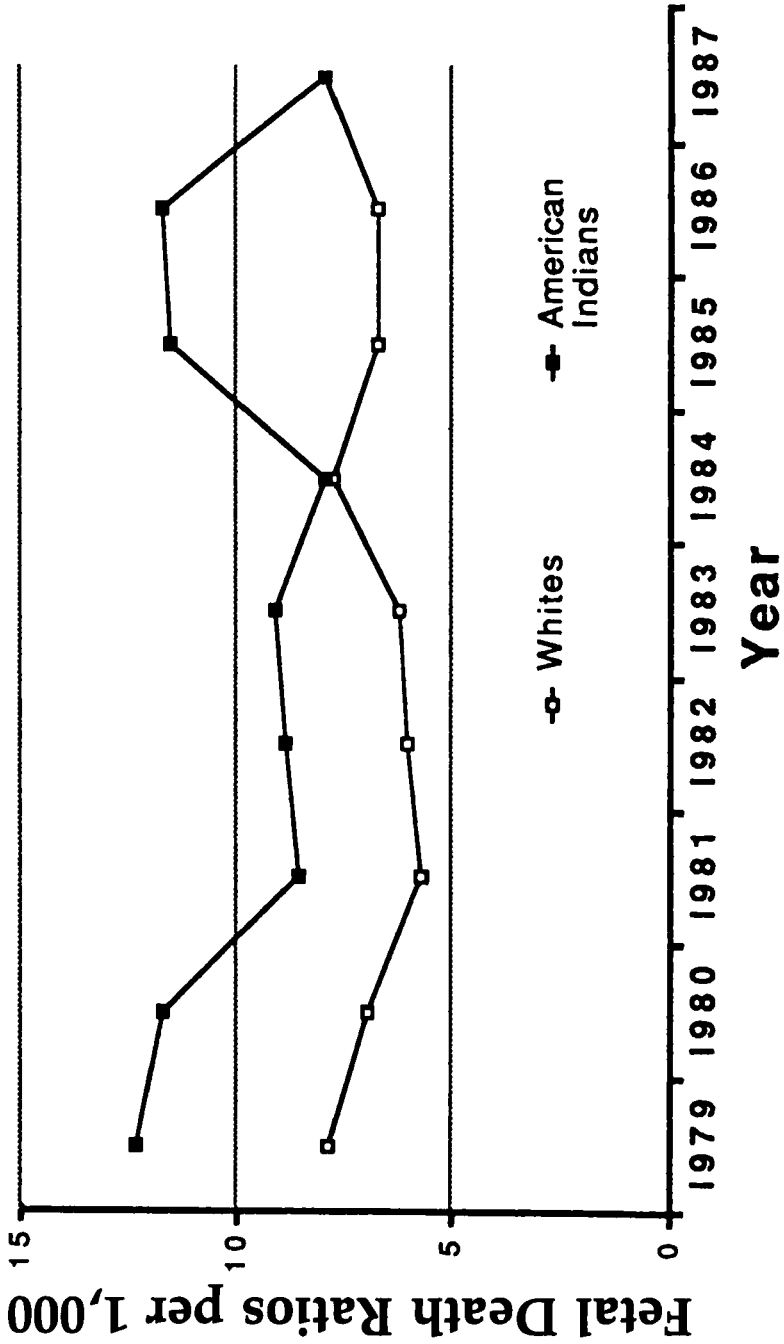


FIGURE 5: Fetal Death Ratios per 1,000, Montana Whites and American Indians, 1979-1987

Throughout the period under consideration, the fetal death ratios for American Indians were significantly above those for whites. Obviously, American Indian women experience fetal death with much greater frequency than do white women. This may also explain the fluctuations in the American Indian neonatal rates, in that more fetuses are dying in utero.

High postneonatal mortality rates are an index of poverty, poor nutrition, inadequate shelter, sanitary problems, and lack of basic health care.<sup>91</sup> These conditions are reflected in the five leading causes of postneonatal mortality (Table 16). It is not surprising that American Indian postneonatal rates have remained consistently high in comparison to whites (Table 17; Figure 6). Although many Montana American Indian infants die during the neonatal period, the majority of American Indian infant deaths occur during the postneonatal period. Figure 7 denotes graphically the most salient factors that interact with and perpetuate infant mortality among American Indians in Montana.

Recent statistics attest to the severity of the problem. Of 121 infant deaths in 1987, one-fifth were American Indian infants.<sup>92</sup> A

**TABLE 16**  
**Causes of Postneonatal Mortality by Percentage,**  
**Billings Area Indian Health Service, U.S. American Indians**  
**and U.S. All Races**

<b>Causes of Death</b>	<b>Billings Area Indian Health Service (1985-1986)</b>	<b>U.S. American Indians (1982-1984)</b>	<b>U.S. All Races</b>
Sudden Infant Death	43.8	57.1	52.2
Congenital Anomalies	18.8	17.1	25.0
Pneumonia	12.5	8.3	8.3
Motor Vehicle and Other Accidents	9.4	11.4	8.3
Meningitis	6.3	5.7	4.2

Source: Billings Area Indian Health Service (Billings, MT: Indian Health Service, 1989).

**TABLE 17**  
**Postneonatal Mortality Rates per 1,000, Montana**  
**Whites and American Indians, 1979-1987**

Year	Whites	American Indians
1979	3.09	9.28
1980	4.39	7.83
1981	3.55	11.37
1982	3.42	4.76
1983	4.58	4.89
1984	4.34	3.95
1985	4.98	8.11
1986	3.32	8.97
1987	4.85	9.22

Source: Department of Health and Environmental Sciences, Records and Statistics Bureau (Helena, MT: State of Montana).

pediatric consultant employed by the Billings office of the Indian Health Service correctly pointed out the political and economic nature of infant mortality. He cited low socioeconomic status, unemployment, overcrowding, smoking in the home, teenage pregnancy, and pregnancy over 35 years of age as prominent risk factors on Indian reservations. "I think the tragedy is," he continued, "the socioeconomic conditions that many of the reservation Indians experience."<sup>93</sup>

### THE POLITICAL NATURE OF PUBLIC HEALTH

Since 1955, Montana's American Indian infant mortality rate has improved dramatically. This improvement was brought about largely through the infusion of medical and public health measures. Despite these advancements, Montana's American Indian infant mortality rates remain higher than those of non-Indians. American Indian infants are at higher risk for fetal death, neonatal death, and postneonatal death. Given the social and economic climate within the state, it is likely that these health differentials will continue or perhaps widen in the near future.

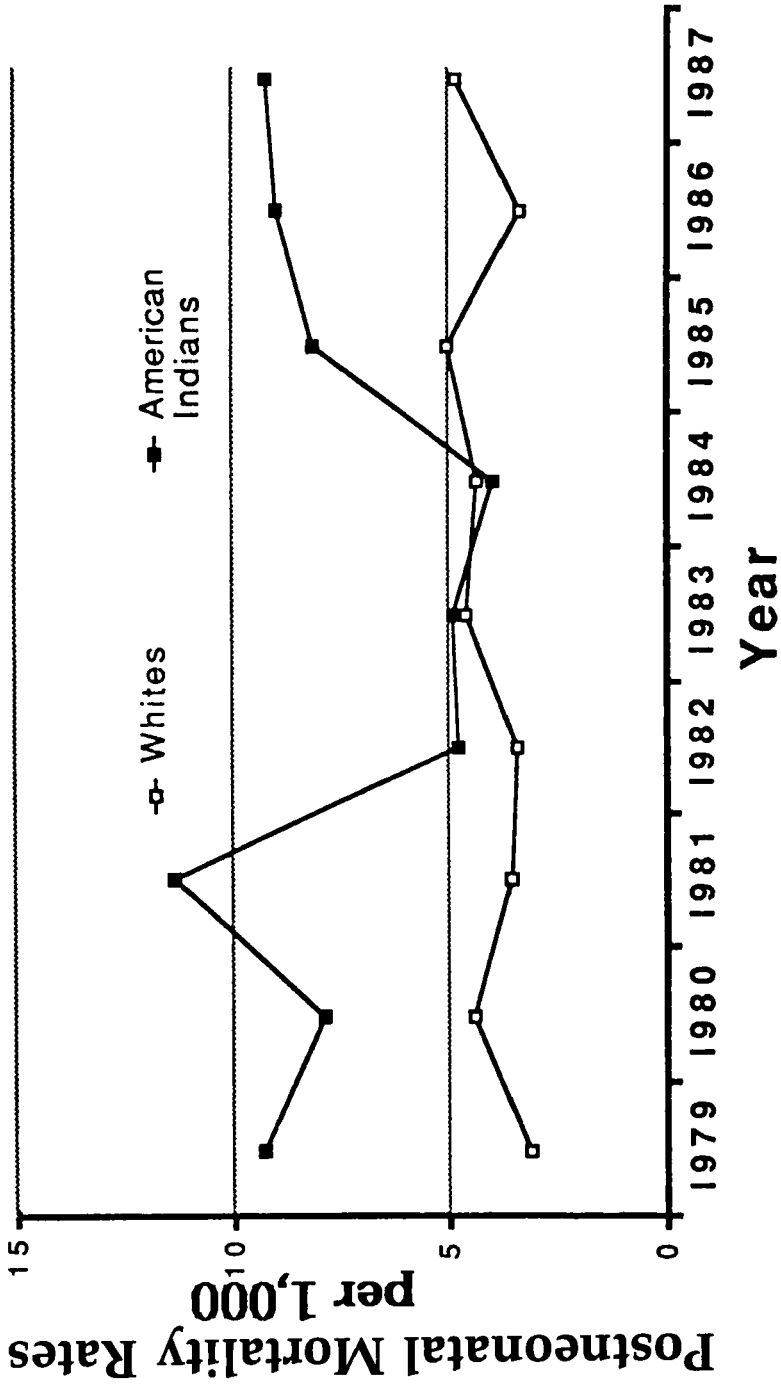


FIGURE 6: Postneonatal Mortality Rates per 1,000, Montana Whites and American Indians, 1979-1987

Infant Mortality Process and Outcome

Promoting and Sustaining Forces

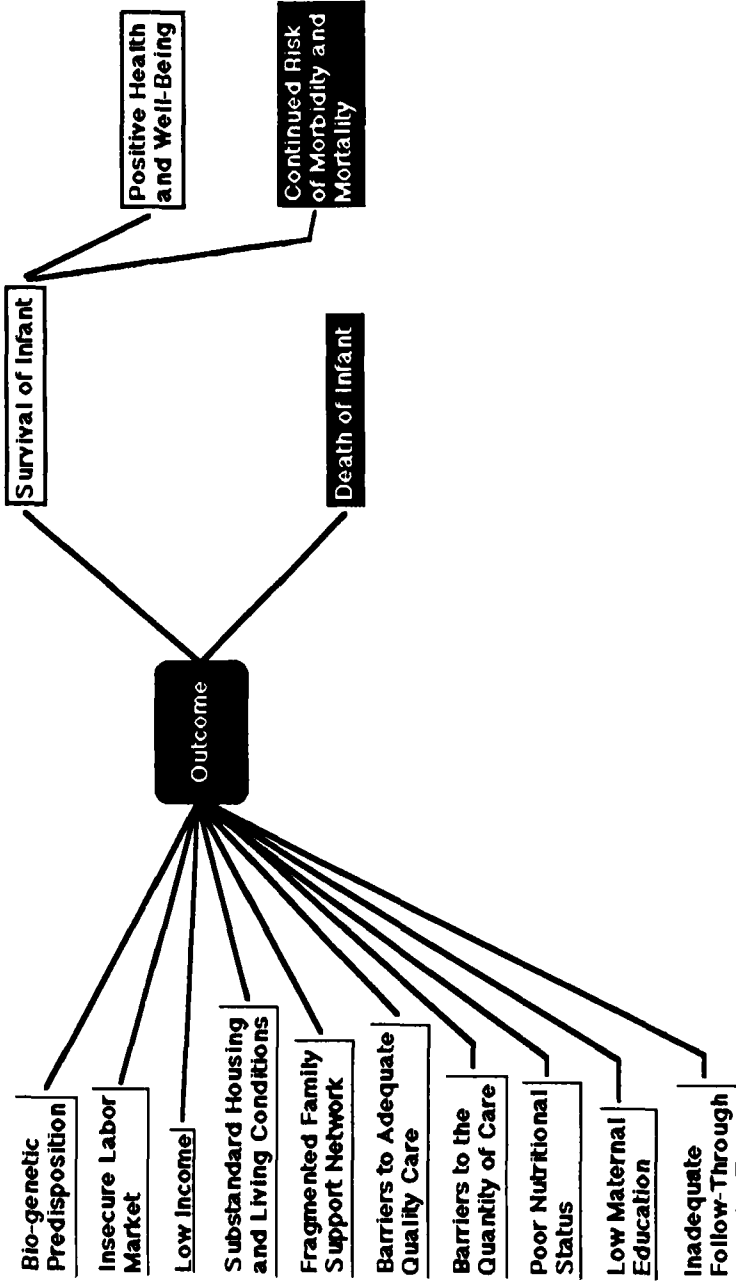


FIGURE 7: Promoting and Sustaining Forces of American Indian Infant Mortality

There are limits to which medical technology and public health measures can control mortality, without improvements in the level of living.<sup>94</sup> Such health problems essentially transcend the boundaries of medical intervention.<sup>95</sup> Health standards of American Indians in Montana as well as in the nation are determined by governmental policies which determine the limited range of health services available to American Indian people.

Therefore, infant mortality is best understood within a political, epidemiological framework. The roots of present-day Indian health problems, including those in Montana, are embedded in the dependent relationship Indian people have with the federal government. Any critical discussion of health and health policy must be understood in relation to political economy. Within this context, health is socially defined, not biomechanically defined. Health status is rooted in the proposition that individuals as members of a society or, in this case, a tribal community are bound within "concrete historical and social conditions."<sup>96</sup> It is these sociohistorical conditions that determine health patterns and the institutional arrangements to solve them.

Hence, to fully comprehend health patterns in any society, a critical examination of the contending forces in and out of the health arena becomes essential. Such a perspective demands a different notion of disease causality and direction for health policy formation. Ill health, including infant mortality,

is not the straightforward outcome of an infectious agent or a pathophysiologic disturbance. Instead, a variety of problems—including malnutrition, economic insecurity, occupational risks, bad housing, and lack of political power—create an underlying predisposition to disease and death.<sup>97</sup>

Ultimately, the origin of these health risks is not exclusively environmental or biological but social, namely the existence of inherently oppressive social relationships.<sup>98</sup>

For American Indians, the core health problem is lack of power and control over economic, political, and social institutions. We must begin to think of public health in terms of redistributing economic and political power, rather than from the prevailing biomechanical paradigm which predominates in our medical system. Public health problems are political problems, and their solutions are political in nature.<sup>99</sup>

In sum, "the very word public health," as Navarro has argued, "shows those who were and still are of the opinion that medicine has nothing to do with politics the magnitude of their error."<sup>100</sup> Until health professionals, administrators, and social scientists begin to formulate American Indian health policy and practice in these terms, health care delivery will continue to be symptomatic and reactionary. The consequences for all American Indians will be the persistence of ill health into the next decade.

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