

Native American
Kids 2002:
Indian Children's
Well-Being
Indicators Data
Book For
13 States

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Abstract

This report presents a literature review of 10 well-being indicators for American Indian/Alaska Native¹ children, which focuses on regional and state empirical studies. Various governmental data sets and data acquisition tools are discussed. The study utilizes the 2002 KIDS COUNT Data Book: State Profiles of Child Well-Being (Annie E. Casey Foundation, 2002) as the model and aims to reduce the gap in well-being indicators for Native American children. This report produces the American Indian/Alaska Native rates and percentages for 10 well-being indicators nationally and for 13 selected states (Alaska, Arizona, California, Michigan, Minnesota, Montana, New Mexico, North Carolina, North Dakota, Oklahoma, South Dakota, Washington, and Wisconsin). The indicators are low birthweight, teen births, infant mortality, child deaths, teen deaths by accident, homicide and suicide, teens who are high school dropouts, teens who are not attending school and not working, children in poverty, children living with mothers who

are not employed, and families with children headed by a single parent. This indicator information varies in ease of accessibility, often requiring creative solutions when data barriers are confronted. American Indian/Alaska Native information was readily available in published reports for only one indicator (infant mortality rates). In comparison, KIDS COUNT data books report readily accessible data on six indicators. At the national level, Native American children and youth are comparatively worse off in 9 of the 10 well-being indicators. Only one Native American indicator, low birthweight rate, is slightly better than the KIDS COUNT rate. The American Indian/Alaska Native rates in the 13 states demonstrate significant variability; in a few cases, these American Indian/Alaska Native rates are better than their within-state non-Native peers, but in most cases, they are significantly worse. The report concludes with empirically-based recommendations for addressing the well-being of Native American children and youth.

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Executive Summary

This report extends the efforts from the first two years of this research project (Goodluck & Willeto, 2000; Goodluck & Willeto, 2001), thus augmenting the KIDS COUNT data books published annually by the Annie E. Casey Foundation. The KIDS COUNT data books on well-being indicators include very little information on the American Indian and Alaskan Native population. The target audience includes professional, paraprofessional, governmental, private, and nonprofit organizations and agencies, and child advocates interested in the well-being of American Indian children and youth. The report provides accurate, research-based information for policymaking entities.

The first year's research project resulted in a report, *Native American Kids 2000: Indian Child Well-Being Indicators* (Goodluck & Willeto, 2000), that provided a literature review, definitions of "American Indian," the historical context of federal policies towards American Indians, and theoretical perspectives. It also discussed the complex nature of the methodological barriers encountered when conducting research into this specialized area.

The second year of research consisted of using secondary analysis research techniques to examine existing data on the 10 well-being indicators at the national level (see *Native American Kids 2001: Indian Children's Well-Being Indicators Data Book* [Goodluck & Willeto, 2001]). Current theoretical perspectives on the 10 well-being

indicators are based on the deficit model, but the authors stated the need for alternative future research that uses the strengths perspective. The KIDS COUNT data books produced by the Annie E. Casey Foundation use three national resources of data: the U.S. Bureau of the Census, the Bureau of Labor Statistics, and the National Center for Health Statistics. Data from Indian Health Services were also offered to complement these three national data sources. The major finding was that of the 10 indicators, compared to the general U.S. population, American Indians were doing well in only one: low infant birthweight. Consequently, Native American children were not doing well in 9 of 10 indicators. Furthermore, this second-year report showed the degree of difference between the United States national indicators and the indicators for Native American children and youth. It showed that indicator information can be produced for American Indians, given enough resources and effort.

The current report presents a literature review of 10 well-being indicators for American Indian and Alaska Native children, focusing on regional, state, and tribal empirical studies. Given the broad range of well-being indicators, there is a broad literature base from which to draw. For some indicators, the research tradition is long and there are many studies to cite. For other indicators, investigation has only recently begun, so there are fewer studies.

Various governmental data sets and data acquisition tools are discussed. National Center for Health Statistics (NCHS), U.S. Census Bureau, and Bureau of Labor Statistics data are used to estimate the indicators. This required using published reports and interactive Web-based data acquisition tools such as the Web-based Injury Statistics Query and Reporting System (WISQARS), the Statistical Extraction Tabulation Systems (SETS), Federal Electronic Research and Review Extraction Tool (Data FERRET), and American Fact Finder.

The study utilizes the 2002 KIDS COUNT Data Book: State Profiles of Child Well-Being (Annie E. Casey Foundation, 2002) as the model, and aims to reduce the gap in well-being indicators for Native American children. The intent is that Indian child welfare advocates will use the empirically-based data to substantiate the need for programs designed to increase the well-being of Native American children. In addition, these data may support the need for improved policies on the behalf of American Indian children and youth.

This report produces the American Indian/Alaska Native rates and percentages for 10 well-being indicators nationally and in 13 selected states. The indicators are low birthweight; teen births; infant mortality; child deaths; teen deaths by accident; homicide and suicide; teens who are high school dropouts; teens who are not attending school and not working; children in poverty;

children living with mothers who are not employed; and families with children headed by a single parent. The states are Alaska, Arizona, California, Michigan, Minnesota, Montana, New Mexico, North Carolina, North Dakota, Oklahoma, South Dakota, Washington, and Wisconsin.

The report finds that indicator information varies in ease of accessibility, often requiring creative solutions to data barriers. Of the 10 well-being indicators, only American Indian/Alaska Native infant mortality rates by state were readily available in a published report. All other indicators required estimation techniques or extra investigation efforts to locate viable alternative indicator information. In contrast, KIDS COUNT data books report data that are readily accessible on six indicators, and only four indicators require special tabulations. This is a significant barrier that continually challenges Indian child welfare advocates. Although the American Indian/Alaska Native population is often acknowledged as experiencing high rates of various social and health problems, the fact that important and necessary well-being information is not produced and is not included in various publications about this group is bewildering.

To begin with, the health indicators are fairly simple to construct. The data are available in report form, CD-ROM using SETS and WISQARS. However, the social indicators require much

greater effort to reproduce. The data are available in three basic forms from the U.S. Census Bureau and the Bureau of Labor Statistics: reports and publications, a data extraction tool called the Data FERRET, and the Web-based American Fact Finder. Although many of the social indicators are not exact replicas of the KIDS COUNT indicators, the closest appropriate approximations were made. Hence, further investigation is needed into alternative data sources for some of the social well-being indicators as a permanent solution to the challenge of working with social well-being indicators.

At the national level, Native American kids are significantly worse off than their mainstream counterparts in 9 of the 10 well-being indicators. Similar to the findings from year two (Goodluck & Willeto, 2001), only the rate of low birthweight babies is lower for American Indians than the All Races rate at the national level, although there is variability in how the 13 states compare American Indian/Alaska Native low birthweight rates to those of their within-state, non-Native counterparts. At the state level, the American

Indian/Alaska Native rates in the 13 states demonstrate significant variability in the other well-being indicators; in a few cases, they are better than those of their within-state, non-Native peers, but in most cases, they are significantly worse. The results show the great variability in 13 states across the well-being indicators for this unique population. However, readers are cautioned about the small numerators for some of the state indicator results.

The report concludes with empirically-based recommendations for addressing the well-being of Native American children and youth. It is important to note that the American Indian and Alaska Native population is skewed towards children and youth, meaning that American Indian/Alaska Natives have a disproportionately large percentage of young people. Hence, there is a particularly important need to address the well-being of this dependent segment. An important recommendation has to do with how educational success is positively associated with both the social and health dimensions of well-being in Native children and youth. This is an important area worthy of further study.

Introduction

The Native American Kids Well-Being Indicators Data Book Project is an ongoing, collaborative endeavor that commenced in 2000. This document is the third in the series of reports that addresses the question of the well-being of American Indian and Alaska Native children and youth (Goodluck & Willeto, 2000, 2001).

Need for Data Book on Native Children and Youth

Data books on assorted well-being indicators are produced by various organizations to meet their particular needs; the KIDS COUNT data books are an excellent example. The Annie E. Casey Foundation compiles and produces information on well-being indicators reported by each state over time (1990 to 2002). This annual national publication gives general statistical data on the nation's children and youth. Yet, the series provides very little information by specific race or ethnic group. Therefore, the well-being data on Native children and youth are subsumed under the "All Races" category of the general population of children. Further, information on American Indian/Alaska Native children and youth is not made explicit in the data books. Although little to no information exists on American Indian/Alaska Native children's well-being indicators, information on the population as a whole informs us that American Indians/Alaska Natives rank near or at the bottom for some social and health indicators (Kalagher, 1999; National Center for Educational

Statistics, 1993). Hence, there is an obvious need for a data book that reports well-being information specifically on this population.

A quote from the U.S. Census Bureau illustrates this point effectively:

How do data from the question
on race benefit me, my family,
and my community?

All levels of government need information on race to implement and evaluate programs or enforce laws. Examples include: the Native American Programs Act, the Equal Employment Opportunity Act, the Civil Rights Act, the Voting Rights Act, the Public Health Act, the Healthcare Improvement Act, the Job Partnership Training Act, the Equal Credit Opportunity Act, the Fair Housing Act, and the Census Redistricting Data Program.

Both public and private organizations use race information to find areas where groups may need special services and to plan and implement education, housing, health, and other programs that address these needs. For example, a school system might use this information to design cultural activities that reflect the diversity in their community. Or a business could use it to select the mix of merchandise it will sell in a new store. Census information also helps identify areas where residents might need services of particular importance to certain racial or ethnic groups, such as screening for hypertension or diabetes. (U.S. Bureau of the Census, 2002, p. 10)

Summary of Projects: 2000 and 2001

The first year of the project entailed producing a comprehensive literature review on issues associated with Native American children, including data collection challenges. The first report, *Native American Kids 2000: Indian Child Well-Being Indicators* (Goodluck & Willeto, 2000), discussed significant issues that pertain to the world of Native children: historical influences, federal policies, and concepts related to the definition of "American Indian." Research with Native populations and methodological problems were covered in detail. Existing sources of data on Native children's well-being including issues and challenges related to data collection, such as the lack of access to and inconsistency of data on American Indian children, were reviewed. The first report revealed a gap in the literature on Native children's well-being indicators and recommended continuation of the research to further explore the nature of Native children's well-being indicators.

The second year of the project (2001) involved a literature review that focused specifically on the 10 well-being indicators as examined by the Annie E. Casey Foundation through their annual KIDS COUNT publications. The 10 indicators, which are nationally recognized as important measures of children's well-being, are (1) low

birthweight babies; (2) teen birth rates; (3) infant mortality rates; (4) child death rate; (5) teen deaths by accident, homicide, and suicide; (6) teens who have dropped out of high school; (7) teens who are not attending school and not working; (8) children living with parents who do not have full-time, year-round employment; (9) children living in poverty; and (10) families with children headed by a single parent (see Table 1 in the literature review section for a listing that includes each well-being indicator and its thematic area). Also, the data sources that the KIDS COUNT data books utilize were analyzed for use in this project. Where possible, the exact well-being indicator information was produced for the American Indian and Alaska Native child and youth population. In cases where replicating the indicator was not feasible, the closest approximations of data were reported. The major finding was that American Indian/Alaska Native children were doing better than all races only for the low birthweight rate indicator. In the remaining nine indicators, Native children were significantly worse off than their non-Native counterparts. Policy and practice implications of these important results were also covered.

Purpose of This Project

The purpose of this project is to extend the reporting mechanism of the 10 well-being indicators to include 13 states with considerable

American Indian and Alaska Native populations. These states are Alaska, Arizona, California, Minnesota, Michigan, Montana, New Mexico, North Carolina, North Dakota, Oklahoma, South Dakota, Washington, and Wisconsin.

Project's Use of KIDS COUNT Data Books

The authors used the most recent volume of the KIDS COUNT data book, which included data from 1999, as the model for the first year's research report (Goodluck & Willetto, 2000). The literature review in the second year (Goodluck & Willetto, 2001) followed the lead of the 2000 KIDS COUNT Data Book. However, KIDS COUNT data books become available during the summer (usually June), when data assessment and the collection of actual estimates on well-being indicators for American Indian/Alaska Native children and youth occur. When the latest volume becomes available, it is then used as the model because it provides the most recent Web listings and other pertinent information on the 10 well-being indicators. Several editions of KIDS COUNT data books are therefore cited throughout this report. The KIDS COUNT organization makes concerted efforts to maintain continuity to facilitate year-to-year comparisons of well-being indicators while still allowing for the inclusion of improved indicators when deemed appropriate. Much credit is due to the Annie E. Casey

Foundation for their research into children's well-being indicators.

Theoretical Perspective

A brief overview of the theoretical perspectives is presented here. The significance of this theoretical perspective lies in its impact on research directions and outcomes (for more discussion on this topic, see the first report, *Native American Kids 2000: Indian Child Well-Being Indicators* [Goodluck & Willetto, 2000]). There are two major theoretical approaches to the study of children's well-being indicators: the assets perspective and the deficit perspective. Most past studies and research related to children have utilized the deficit perspective, which includes quantitative and statistical data that pertain to risk factors such as mortality, teen pregnancy, dropout rates, and homicide. The nation as a whole and its many communities, counties, cities, and states use these indicators to determine the overall well-being of children by examining the percentage or rate of various risk factors evident in their lives. The KIDS COUNT publications currently tend to use the deficit model in their approach to data collection and the discussion of well-being. These materials allow state-to-state comparisons of well-being indicators and also provide national information for child advocates to advance their causes.

The broad array of data we present each year in the KIDS COUNT data book is intended to illuminate the status of America's children and to assess trends in their well-being. By updating the assessment every year, KIDS COUNT provides ongoing benchmarks with which states can see how they have advanced or regressed since 1990. States also use KIDS COUNT to compare the status of their children with those in other states across several dimensions of child well-being. Furthermore, the annual presentation of KIDS COUNT data allows us to make incremental improvements as new data become available and methods are refined. (Annie E. Casey Foundation, 2001, p. 10)

Yet, there is growing literature on the asset-based, strengths, and resiliency models in addressing the question of well-being and social indicators (Bowers-Andrews & Ben-Arich, 1999; Saleebey, 1996). Likewise, as acknowledged by the coordinator of KIDS COUNT (Dr. William O'Hare, personal communication, June 24, 2000), interest in viewing the nature of a community's well-being from the asset-based perspective is increasing. The asset frame of reference is needed because tribes desire material that documents reasons why they have succeeded in continuing to be resilient nations in the face of a long history of colonization, and tribes are already well aware of the various problems evident in their nations.

Measures such as infant and child mortality rates, school enrollment, and percentage of children who have been immunized, while still important, nevertheless seem insufficient for measuring the well-being and quality of children's lives today. These measures deal mainly with survival and the basic needs of children, and are inadequate for measuring the state and the quality of life of children beyond survival. Aber argues that it is time to develop indicators that go beyond the basic needs of development and beyond the phenomenon of deviance (Aber & Jones, 1997). And Pittman and Irby argue for indicators and action beyond survival and prevention in order to promote youth development (Pittman & Irby, 1997).

Attention is beginning to focus on the need for positive indicators of the state of the child as much as negative ones. Measures of the absence of risk factors or negative behaviors are not the same as measures of the presence of protective factors or positive behaviors (Aber & Jones, 1997). For example, the most common measures of early childhood development pertain to deficiencies in achievements, problem behaviors, and negative circumstances. The absence of problems or failures, however, does not necessarily indicate proper growth and success. Pittman and Irby observe that the challenge for policy researchers and advocates is to press for the development of indicators that hold societies accountable for more than the safe warehousing of children and youth. Youth development

must be defined and linked securely as both a product of and a contributor to family, community, and economic development (Pittman & Irby, 1997). (Ben-Arieh et al., 2001, p. 48)

Numerous Native American philosophies are based on the concepts of balance and harmony. Hence, the approach of capturing both the deficit- and asset-based perspectives on the well-being of Native American children and youths is important, appropriate, and timely. This volume focuses on the traditional deficit-based indicators utilized by mainstream society to document the comparative well-being of this often overlooked segment of American society.

Who Is the Target Audience?

The audience targeted by this publication includes professional, paraprofessional, governmental, private, and nonprofit organizations and agencies and child advocates interested in the well-being of American Indian children and youth. The report provides accurate, research-based information for policymaking entities.

Researchers can use this current information in their reports to help build a case for future research into the specialized field of American Indian child welfare and the well-being of Native communities. Tribal and state entities can share these empirical data with one another and use them to plan for the future of American Indian

children and youth in their communities. Practice providers can use these data to improve their interventions with Native American individuals, families, groups, and communities.

Demographics of the American Indian and Alaska Native Population

The American Indian and Alaska Native population is quite diverse, with approximately 565 federally recognized tribes and about 2.5 million people who represent almost 1% of the total United States population². Although dispersed throughout the entire United States, most of the Indian population resides in the Western states, and most now dwell outside official reservation boundaries (Ogunwolfe, 2002). Current age data from the U.S. Census Bureau (2002) indicate that the American Indian and Alaska Native population is quite young; the median age of this population (28) is significantly lower than the general U.S. population's median age of 35.3. It is important to point out various issues confronting Native communities:

The indigenous peoples of the United States face a number of major challenges as they approach the turn of the century. Some challenges arise from the economic, social, and political conditions of Indian Country. Reservation Native Americans have among the highest rates of poverty, unemployment, teenage suicides, and

high school and college dropouts in the United States. Many suffer from poor health and live in substandard housing. Household incomes are painfully low and significant household wealth is typically absent. One of the most urgent and complex tasks facing Indian leadership is improving the welfare of Indian communities. (Begay, Cornell, & Kalt, 1998, p. 42)

This report includes a detailed literature review section that overviews the 10 well-being indicators for focusing on the American Indian and Alaska Native population at the state and regional levels, and it also gives a discussion on data and methodology. Then, the actual statistical well-being information on Native children for the 10 indicators is presented for the 13 selected states and is followed by a section that addresses important implications associated with the results of this study. Finally, the report concludes with empirically-based recommendations for addressing the well-being of American Indian and Alaska Native children and youth.

Literature Review of the 10 Well-Being Indicators

The 10 well-being indicators comprise two main categories of health and social indicators with five thematic areas listed (see Table 1). These areas are organized according to a social structural model, thereby emphasizing the important societal institutions that the well-being indicators reflect.

This literature review differs from that of 2000, which provided a historical overview of policies and laws, definitions of “American Indian” and “Alaska Native,” and methodological research and data issues (Goodluck & Willeto, 2000) and is

instead more similar to the second report’s (Goodluck & Willeto, 2001) efforts, as it pertains solely to the 10 well-being indicators. Unlike the 2000 and 2001 reports, the third year of the project (2002) focuses on the well-being indicator literature as it pertains to the American Indian and Alaska Native population³ at the national, regional, state, and tribal levels and thereby expands upon the literature base established in 2001. Given the broad range of well-being indicators and the associated literature, it is apparent that a substantial body of literature has developed for

TABLE 1. TEN CHILD WELL-BEING INDICATORS GROUPED INTO HEALTH AND SOCIAL CATEGORIES

THEMATIC AREA	WELL-BEING INDICATORS
Health: Derived from the National Center of Health Statistics (NCHS)	
Births	Percentage of low birthweight infants Teen birth rate (births per 1,000 females ages 15–17)
Mortality	Infant mortality (deaths per 1,000 live births) Child death (deaths per 100,000 children ages 1–14) Teen deaths by accident, homicide, and suicide (deaths per 100,000 teens ages 15–19)
Social: Derived from the Current Population Survey (CPS) and U.S. Census Bureau	
Education & Employment	Percentage of teens who are high school dropouts (ages 16–19) Percentage of teens who are not attending school and not working (ages 16–19) Percentage of children living with parents who do not have full-time, year-round employment (ages 0–7)
Poverty	Percentage of children in poverty (ages 0–17)
Family Structure	Percentage of families with children headed by a single parent (ages 0–17)

some of the indicators, whereas for others, research has only recently begun. Where substantial literature exists, the most recent studies are cited. Further, given the great number and variability of tribes, it appears that certain tribes have been the subjects of scholarly analysis more often than other tribes. Hence, the number of studies per indicator differs with differential tribal and state coverage. The extra effort of locating studies that focus on regional, state, and tribal variability benefits the project by also identifying what other professionals recommend in their policy sections in addressing the social and health problems of the Native American children and youth population.

Understanding the current health condition of American Indian and Alaska Native children, youth, and their families requires a literature review of the 10 well-being indicators in an effort to glean what professionals from the social sciences, health sciences, and medical fields have discovered about a particular indicator. To begin with, many researchers point primarily to a person's lifestyle or individual behavior as the cause of his or her current health status:

The health problems of American Indians are related primarily to behavioral risks (USDHHS, 1990; Rhoades, et al., 1987). These diseases and injuries have infectious and noninfectious causes and are both acute and chronic. The National Health Objectives for the Year 2000, as

well as the objectives of the Indian Health Services (IHS), establish priorities for reducing many of these behavioral risks (USDHHS, 1990). Although the prevalence of selected behavioral risk factors has been established for a few Indian communities, very little baseline behavioral risk information exists on American Indians nationwide, so efforts to develop program plans and establish national public health initiatives have been hampered. (Sugarman, Warren, Oge, & Helgerson, 1992, p. 2)

In comparison, other scholars argue that a person's health status is the result of individual as well as larger, macro-structural and societal issues:

Many factors, both political and personal (e.g., lifestyle), hamper efforts to improve the health status of American Indians. For one, Indian health programs continue to be severely underfunded and/or funded piecemeal. Because federal responsibility for Indian Health is not viewed as an entitlement, this piecemeal approach by Congress has a long history. (Joe, 1996, p. 141)

Joe continues:

Interactions between ethnicity, gender, and socioeconomic factors affect the morbidity, mortality, and health behaviors of individuals. Moreover, the patterns of health and disease of a population have everything to do with individual lifestyles and the extent to which they are affected by socioeconomic circumstances. (Kreiger

& Fee, 1994; as cited in Joe, 1996, p. 141)

Whatever the main cause for the current health status of American Indians and Alaska Natives, professionals are in general agreement that their health status could be significantly improved. An important component has to do with the fact that few data specifically report the relative well-being of this population. Hence, an important goal is for these data to be used in conjunction with the development of programs to address, and hopefully improve, the well-being of our Native American children and youth.

HEALTH INDICATORS⁴

Thematic Area: Births

Low Birthweight Babies

The rates of low birthweight babies among American Indians and Whites are very similar (Paneth, 1995); indeed, other scholars have found that American Indians' rate is comparable to the United States general population (Brenneman, Vanderwagen, & Porvaznik, 1990). "The most recent data show that the percentage of American Indian/Alaska Native births with low birthweight babies (5.8%) was significantly lower than the percentage for the general population (7.1%)" (U.S. Department of Health and Human Services [USDHHS], 1997a, p. 18). However,

Guyer and colleagues (2000) reported an increase in the rate of low birthweight babies born to American Indians from 1990 to 1999.

Sullivan (1989) has suggested that the Native American low birthweight rate could be further improved with better access to health care delivery for prenatales. Tyson, Higgins, and Tyson (1999) found that American Indians who are experiencing family dysfunction are less likely to obtain prenatal care and, in turn, these families have a disproportionate share of low birthweight babies. In addition, American Indian and Alaska Native infants with very low birthweights may be underregistered⁵, thus affecting the actual rate:

One potential explanation for the surprisingly low VLBW⁶ and neonatal mortality rates among American Indian/Alaska Native is incomplete registration of birth certificates for VLBW, especially those who died shortly after birth. Though it is estimated that over 99% of all births occurring to US residents are registered (n11), there is evidence of variation in the completeness of registration between US subpopulations. (Heck, Schoendorf, & Parker, 1999, p. 1097)

Furthermore, rates of low birthweight vary by race and geographic location. A study from 1981 to 1990 that utilized data from King County, Washington, found the following:

The prevalence of low birth weight (<2500 g) was considerably higher among

urban American Indian/Alaska Natives compared with urban whites and rural American Indian/Alaska Natives, but was lower than the rate of low birth weight among urban African Americans

The prevalence of very low-birth-weight (<1500 g) births and premature deliveries shared similar patterns, although only the differences between urban American Indian/Alaska Natives and whites were significant. (Grossman, Krieger, Sugarman, & Forquera, 1994, p. 5)

Smoking is a known correlate to adverse pregnancy outcomes (Kleinman & Madans, 1985). American Indians have high rates of smoking, yet they still have comparably low birthweight rates. However, significant regional and tribal variation in smoking exists within the American Indian and Alaska Native population (USDHHS, 1998; Centers for Disease Control and Prevention, 1994; Kegler, Cleaver, & Yazzie-Valencia, 2000). Especially problematic is that among age groups, teens have the highest rates of smoking while pregnant, and among racial-ethnic groups, American Indians have some of the highest rates of smoking during pregnancy (Matthews, 2001). Compared to their peers, Native American high school seniors have the highest rates of smoking (USDHHS, 1998, as cited in Giovino, 1999). Murphy, Butler, Petersen, Heart, and Murphy (1996) have found that Alaska Natives' mean birthweights are negatively impacted by the mother's use of tobacco and alcohol.

Teen Birth Rates

American Indian teen births is a relatively understudied area (Snipp, 1996). Studies of teen births among specific tribal groups are rarer still, and there is significant geographical and tribal affiliation variation in teen births (Dalla & Gamble, 1997). Brown (1995) discovered that Native American teens under 17 who are new mothers are a proportionately larger subgroup compared to other racial and ethnic groups. Further, Snipp (1996) found that nearly half of American Indian women become new mothers as teens. Their pregnancies are unplanned, and many Native American teens (this study included Apaches and Navajos) experience barriers to obtaining prenatal care, thereby receiving inadequate or intermittent care (Liu, Slap, Kinsman, & Khalid, 1994).

Adolescents who are American Indian have substantially higher fertility rates than their mainstream counterparts (Guyer, Martin, MacDorman, Anderson, & Strobino, 1997).

It is of concern that a relatively high percentage of American Indian/Alaska Native adolescents are having children. The percentage of American Indian/Alaska Native births to women under 20 years of age (20%) is almost twice that for whites (11%). Almost 2 percent of the American Indian/Alaska Native births were to adolescent mothers less than 15 years old. (USDHHS, 1997a, p. 19)

Examples of this include the state of South Dakota where American Indian adolescents have a teen birth rate more than four times higher than that of Whites and also higher than the national American Indian rate (Wilson, 1995). For Blackfeet, “the number of children who were born among 15- to 24-year old American Indians was higher than for whites or blacks in the same age group” (Warren et al., 1990, p. 81). On the Navajo Reservation, the rate of teen parenting is higher than the national rate (USDHHS, 1991, as cited in Dalla & Gamble, 2000, p. 227). In a small study of Navajo teen mothers, Dalla and Gamble (1997) found that these young mothers are equally likely to either strongly identify with the maternal role or to distance themselves from their motherhood status. Of course, how a young mother handles her maternal status has important implications for the well-being of herself and her child(ren). For example, in a small study of Apache and Navajo adolescent mothers, almost a quarter (24%) “expressed suicidal ideation” during their pregnancies (Liu et al., 1994, p. 336).

There are other factors related to American Indian/Alaska Native teen births that are briefly covered here (for more discussion see Goodluck & Willeto, 2001). American Indians are the most likely to be married as teens, and experiencing poverty as an adolescent is the most compelling factor influencing the probability of teen pregnancy for American Indians compared to other

racial-ethnic groups (Berry, Shillington, Peak, & Hohman, 2000). Unfortunately, teens also have the highest rate of smoking during pregnancy (Matthews, 2001).

Thematic Area: Mortality

Infant Mortality

Infant mortality rates have been analyzed in a variety of ways. These include analysis over a long period of time or a shorter historical time frame. While most studies reflect analysis of the entire year after a birth, some focus on the month after birth. These variability issues are compounded when race or ethnicity is included in the analysis. The reader should keep these things in mind when reading the following.

Historically, American Indian and Alaska Native infant mortality rates have been high (Robertson, DeRoo, Gaudino, Hahn, & Rosenberg, 1999). Although infant mortality has decreased substantially in the Native American population, it still remains higher than the national rate (Nakamura, King, Kimball, Oye, & Helgerson, 1991).

Improvements in health care delivery to infants and mothers by Indian Health Services (IHS) has considerably lessened the rate of American Indian and Alaska Native infant mortality over time (Rhoades, Brenneman, Lyle, & Handler, 1992; Snipp, 1996). “From 1955 through 1982, the death rate for Indian infants dropped by

82 percent” (Rhoades, D’Angelo, & Hurlburt, 1987, p. 356). The greatest improvement has occurred primarily as a result of a declining neonatal (0–27 days) death rate for American Indian infants (USDHHS, 1986, as cited in Honigfeld & Kaplan, 1987). “When the death rate is computed for neonates (newborns under 28 days of age) the American Indian/Alaska Native rate is actually lower than that for the general population” (USDHHS, 1997a, p. 18). Indian Health Services (USDHHS, 1997b) has reported infant mortality figures that are very close to the National Center for Health Statistics described by Snipp (1996). Lowest still, Brenneman et al. (1990) pointed out that in 1985 there was convergence between the American Indian rate and the All Races rate of infant mortality.

However, 1998 data reveal that among racial-ethnic groups, only Black mothers had higher rates of infant mortality than American Indian mothers (Matthews, Curtin, & MacDorman, 2000). Heck et al. (1999) found that the under-registration of very low birthweight babies who are American Indian and Alaska Native might understate the true rate of infant mortality. Further, racial miscoding of American Indian/Alaska Native infant births and deaths may seriously impact the rate of infant mortality (Hahn, Mulinare, & Teutsch, 1992). In fact, the infant mortality rate for Oklahoma American Indians increased from 5.8 to 10.4 when adjustments

were made for misclassification of Indian deaths (Kennedy & Deapen, 1991). In an editorial statement, Smith (2001) declared that the American Indian and Alaska Native infant mortality rate is nearly double that of Whites. A study comparing birthweight and “birthweight-specific postneonatal mortality risks” found that Native American postneonatal mortality risks were more than three times as high as those of Whites for infants of greater than or equal to 2,000 grams birthweight (Vanlandingham, Buehler, Hogue, & Strauss, 1988, p. 499).

Snipp (1996) has cautioned that the American Indian and Alaska Native rate of infant mortality is not universally low among all groups. There is significant tribal group, state, and regional variation, including rural versus urban, in infant mortality rates (McCusker, Clifton, & Miller-Korth, 2000; Robertson et al., 1999). Further, an examination of one state (Minnesota) demonstrates that American Indian infant mortality rates fluctuate over time but continue to be high (American Indian Research and Policy Institute, 1994). In Washington State, a countywide study of rural and urban American Indians and Alaska Natives found that the infant mortality rate increased significantly from 1981 to 1990 among urban American Indian/Alaska Natives (Grossman et al., 1994). Another study found the following:

When adjusted for racial misclassification, infant mortality rates for American Indians

were higher than the rates for all other races in California combined. Because low likelihood matches were excluded from our analyses, the magnitude of misclassification determined by this study may still underestimate the number of American Indian children who are misclassified at death. (Epstein, Moreno, & Bacchetti, 1997, p. 3)

Yet, in the South Dakota American Indian population, a decline in infant mortality was observed (Wilson & Talley, 2002) following an earlier decrease in infant deaths due to injuries (Wilson, 1998). Similarly, Wisconsin's American Indians have experienced a decrease in infant mortality over time. However, there is significant disparity between the American Indian rate and the All Races rate of infant mortality (McCusker et al., 2000). Dramatic decreases in infant mortality rates have been observed among the Pacific Northwest American Indian and Alaska Native populations (Robertson et al., 1999).

Although overall infant mortality rates have improved over time, there are still areas warranting strong concern. American Indian and Alaska Native high infant mortality rates are noted for deaths that result from accidents and sudden infant death syndrome (USDHHS, 1997, as cited in Mahoney and Michalek, 1998). American Indian and Alaska Native infants in northern regions have significantly higher rates of sudden infant death syndrome than Southwest Indian infants (Bulterys, 1990).

Child Death Rate

For 1997, the Annie E. Casey Foundation (2000, 2001) reported that the Native American child death rate was 39 per 100,000, and in 1998, this rate was 41 per 100,000. This indicator is complex because it encompasses a variety of ways in which children die. Yet, various studies on American Indian and Alaska Native children's deaths tend to focus on specific forms of death, for example, death from drowning (Brenner, Trumble, Smith, Kessler, & Overpeck, 2001), from asthma (LeSon & Gershwin, 1995), or injury (Olson, Becker, Wiggins, Key, & Samet, 1990). Studies also typically address data and/or methodological issues such as underreporting of deaths (Epstein et al., 1997), underregistering of data (Heck et al., 1999), and concerns about the quality of death data (Rosenberg et al., 1999).

Singh and Yu (1996b) found that childhood mortality has substantially declined in the United States, yet children with the following characteristics still experience increased risk of death: American Indian, Black, Hawaiian, Puerto Rican, male, and of lower socioeconomic positions in society. Although the death rate for children and youth aged 5–14 years has historically been the lowest of all age-specific deaths in the United States, American Indian, Black, and Hawaiian boys and girls had the highest death rates for this age category (Singh & Yu, 1996a). In a similar study with a slightly older age category

(adolescents and young adults) Singh and Yu report the following:

Substantial differentials in youth mortality were found across sex, racial/ethnic, and socioeconomic groups. The male/female differential was 3:1 for total mortality, 4:1 for external-cause mortality, and 6:1 for firearm mortality. As for the racial disparity, compared with Whites, the risk was generally two and four times higher for Blacks and American Indians, respectively. Blacks and particularly American Indians were at increased risks of external-cause and firearm mortality. (1996a, p. 564)

Indeed, American Indian and Alaska Native children have the highest rates of injury mortality and morbidity at almost double the national rate (American Academy of Pediatrics, 1999).

“Accidents play a major role in the mortality of Indian children under age five. Many of the deaths are caused by automobile accidents or other trauma associated with falls, etc.” (USDHHS, 1994, as cited in Joe, 1996, p. 143). In the state of New Mexico, motor vehicle traffic crashes were extraordinarily high among American Indian children (Olson et al., 1990). The child death rates for the Gila River Indian communities (of southern Arizona) are also quite high:

The estimated survival of Pima females in each age group beyond 15 years is not only less than for the U.S. females but also less than for the U.S. males. Most

noteworthy, however, is the greatly reduced survival of Pima males; after 15 years, they have an abrupt decrease in survival probability. (Sievers, Nelson, & Bennett, 1990, p. 1236)

Another issue is how racial misclassification seriously impacts the mortality rates of Indian children. For example, in California, a study found that:

significant levels of underreporting of deaths to American Indian children in California. Race coding, as reported on state death certificates, identified one quarter to one third of deaths among American Indian children. Rates of racial misclassification were similar for all age groups of children included in our study. (Epstein et al., 1997, p. 3)

In addition, excess deaths among American Indian and Alaska Native children stem from violent causes, such as accidents, homicides, or suicides (USDHHS, 1995, 1997, as cited in Mahoney & Michalek, 1998). Finally, socioeconomic conditions affect child mortality (Mare, 1982).

The view of US childhood mortality presented here is both reassuring and worrisome. It is reassuring because mortality rates for all children, whether examined by age group, ethnicity, or SS⁷ quintile, fell substantively throughout the 25-year interval. The data are worrisome, however, because of the widening gap between the less and more advantaged. (DiLiberti, 2000, p. 8)

Teen Deaths by Accident, Homicide, and Suicide

For 1998, the Annie E. Casey Foundation (2001) reported that the rate of teen deaths by accident, homicide, and suicide among Native Americans and African Americans was substantially higher than for all other racial groups. Poverty, homicide, and suicide are strongly correlated among Native North Americans (Bagley, 1991; Young, 1990). Similarly, Bachman (1992) found that reservation communities with high economic deprivation have disproportionately high rates of homicide and suicide. Lester (1995a) found that American Indian suicide rates were higher in less urban and poorer areas (i.e., due to reservation locations), yet homicides were higher where general overall unemployment was lower.

Disproportionately greater rates of both homicides and suicides occur among young Native Americans and males in particular (Wallace, Calhoun, Powell, O'Neil, & James, 1996). "Poverty, poor education, high unemployment, unhealthy lifestyles, and voluntary and forced culture change are among the reasons for the premature mortality of Native American men" (Joe, 2001, p. 1). In a study that focused on Seneca youth, males demonstrated notably elevated mortality for all causes combined, for suicide, for deaths due to all accidents combined, and for motor vehicle accidents (Michalek, Mahoney,

Buck, & Snyder, 1993). American Indian suicides for Apache, Navajo, and Pueblo Indians also positively correlate with national unemployment rates and with the state of New Mexico's unemployment rate (Lester, 1995b). "Injury mortality among the Navajo has exceeded national levels throughout the century,⁸ and young Navajo males suffer higher rates of accidental deaths, suicides, and homicides than do Navajo women" (Kunitz, 1983, and Howard, 1993, as cited in Henderson, Kunitz, & Levy, 1999, p. 1). Another study found that behavior risk factors covary:

This analysis highlights the consistency of 3 risk behavior factors across age and sex groups for reservation-based American Indian youth, including: (1) the use of tobacco, alcohol, and marijuana, drunk driving, and riding with a drunk driver; (2) risky sexual behaviors; and (3) suicidal behaviors. It also substantiates the relationship between alcohol, tobacco, and marijuana use and other risk behaviors, as evidenced by the number of stronger correlations between this factor and others across the 3 sets of analyses. (Potthoff et al., 1998, p. 11)

From birth to age 14, American Indian males and females demonstrate relatively similar mortality rates, yet by the age category of 15–24 years, young Indian males die at a disproportionately higher rate than their female counterparts (Joe, 1996). Likewise, the emergence of gangs in Native communities affects the group most

vulnerable to premature accidental mortality:
young American Indian males.

Navajo gang members exhibit a range of risk-taking behaviors and patterns of alcohol and drug use that significantly contribute to injury-related mortality. Although gang members constitute a very small minority of Navajo youth, drinking parties, assaults, and hell-raising are more widely distributed. Gang behaviors, then, provide an extreme example of the behaviors that generally contribute to leading causes of mortality among young Navajo men. (Henderson et al., 1999, p. 9)

Contrary to what most other studies report, Hisnanick (1994) found that the age-adjusted death rates for homicide, suicide, and accident are declining among American Indians and Alaska Natives and are doing so at a faster rate than among the general U.S. population. Yet, "while the gap between age-adjusted rates [has] been narrowing, the age-adjusted rates for American Indian/Alaska Native have remained consistently above those of the U.S. general population" (ibid, p. 96).

American Indian youth accidents. In 1998, unintentional injury and adverse effects were the leading causes of death for American Indian children and youth (USDHHS, 2002). Injuries account for the vast majority of deaths (75.1%) among Native Americans aged 1–19 years (USDHHS, 2000a). "Depending on the age, American

Indian/Alaska Native youth are 3 to 7 times more likely to die in an accident than from any other cause. Among accidents, the greatest single cause is motor vehicle accidents"⁹ (USDHHS, 1997a, p. 19). Accidental deaths are more frequent among younger men in the general population than among men over 50 years old. "The significance of this problem, however, appears to be greater for young Indian men than for others" (Joe, 2000, p. 4). Motor vehicle-related deaths for Native American youth demonstrate great regional variability (USDHHS, 2000b). Further, a recent analysis of motor vehicle-related injury hospitalizations shows a decrease of 65% among American Indian and Alaskan Native children and youths (Quinlan et al., 1998).

The National Highway Traffic Safety Administration, together with Mothers Against Drunk Driving (MADD), has stated that American Indians have the greatest likelihood of being killed in alcohol-related accidents (73.2%) and those who drive have the lowest seat belt use rate (11%) in alcohol-related accidents (Kalagher, 1999, p. 1). In addition, the "Indian mortality rate from motor vehicle accidents is about 5.5 times that of other races" (Manson, Walker, & Kivlahan, 1981, as cited in LaFromboise & Graff Low, 1989, p. 116). In a study of American Indian youth located in IHS service areas, risk behaviors for injuries included never wearing seat belts (44%), drinking and driving (37.9% of driving

10th- through 12th-graders), and riding with a driver who had been drinking (21.8%) (Blum, 1992, p. 1637). Family members also influence a youth's behavior.

Perceptions of parental drinking strongly interrelated with teenagers' similar behaviors. Among teenagers who have seen their parents drink three or more drinks before driving, 49.4% (134/271) of those of driving age reported having done the same. Conversely, of the 72.5% (9132/12598) who reported never seeing their parents drink and drive, 52.3% (4764/9113) said they never ride with a driver who has been drinking, and 69.3% (2704/3900) said they would never mix alcohol and driving. (Blum, Harmon, Harris, Bergeisen, & Resnick, 1992, p. 5)

Other factors related to the high rate of accidents are as follows:

The increased fatality rate could be explained by the large proportion of American Indians who live in rural areas, with greater travel distances on rural roads, more difficult access to emergency facilities, higher rates of speed, and poor road conditions (USDHHS, 1989; Mahoney, 1991; Porvaznik & Jensen, 1988; USDHHS, 1992). (Schiff & Becker, 1996, p. 3)

Other studies corroborate the negative impact that environmental hazards, such as poor roads and older vehicles, have on the rate of deaths due to accidents among Navajos (Kunitz, 1983;

Omran & Loughlin, 1972, as cited in Henderson et al., 1999).

Frequently, cultural tolerance for using alcohol, driving on poor roads, driving in unsafe vehicles, and acceptance of laws that prohibit the sale or possession of alcohol on reservations contribute to the high rates of alcohol-related motor vehicle accidents. The prohibition on reservation lands forces those who wish to drink to drive great distances to purchase alcohol, consume it on site, and then attempt the long drive home. Drinking behaviors and drinking styles of Native American men are similar to those of young men in other cultures: they are not afraid to take risks, are willing to test or ignore traffic and drinking laws, and believe that they are immortal. (Joe, 2000, p. 4)

Within Navajo country, the single biggest cause of death is accidents, though rates vary by social factor and region (Kunitz, 1994, as cited in Henderson et al., 1999). Seneca males and females exhibited high rates of death from various types of accidents, including all accidents combined (Michalek et al., 1993).

American Indian youth homicides. In 1998, among American Indians and Alaska Natives, homicides and legal intervention¹⁰ were the sixth leading causes of death for 10–14 year olds and the third leading cause of death for 15–24 year olds (USDHHS, 2002). Homicide rates increase sharply among Native Americans by the age of 15

(Wallace et al., 1996, p. 9). LaFromboise and Graff Low (1989) have stated that the Native American homicide rate was 2.8 times that of other ethnic groups. Yet, in a careful analysis of the various types of homicides, Bachman (1992, pp. 12–13) reported that although Blacks have a higher rate of homicide (33.1/100,000), the American Indian rate of 9.6 per 100,000 is more than double the rate of Whites (4.6/100,000). Focusing on regional patterns of homicide rates for all American Indians across the nation, the Western and North Central regions have the second highest mean rate (14.89/100,000) and the Pacific region has the highest mean rate of 18.48 per 100,000 (ibid. pp. 18–19). In an analysis of IHS regions, Wallace et al. (1996) found the following:

[The] rate for Native Americans, however, has a general downward trend, from a high of 23.7 per 100,000 in 1979 to a low of 13.2 per 100,000 in 1990. During the first half of the period, homicide rates for the United States as a whole also declined. However, during the last half of the period, when the rates for Native Americans were relatively stable, overall U.S. rates increased. ... Despite these trends, the rates for Native Americans were approximately twice the U.S. rates throughout the first half of the period and continued to exceed the U.S. rates during the later years. (p. 7)

This same study also reported that firearms were the predominant weapons used in homicides.

Young and French (1997) argued that the “disruption of aboriginal family and kinship systems has created an anomic situation that is associated with the murder of Native American children” (p. 2). Hence, the majority of Native American homicide victims know their killers: “19% by family members and 47% by acquaintances. This proportion is larger than the proportion for the United States as a whole” (Wallace et al., 1996, p. 12). The percentages are even higher for American Indian/Alaska Native female homicide victims: almost a third are killed by family members and about 75% are killed by someone they know (ibid. 1996). Finally, “The homicide rates were similar between groups, [Whites and American Indians] and were associated with social instability. American Indian homicide rates were also higher where general overall unemployment was lower” (Lester, 1995a, p. 46).

American Indian youth suicides. “It is dangerous to generalize, oversimplify, or overemphasize American Indian suicide” (Johnson & Tomren, 1999, p. 1). Suicide is a complex phenomenon with multiple dimensions that need to be considered. Though there have been numerous studies on American Indian suicides, most have focused on single categories of diagnosis while concluding that “co-existing diagnoses (e.g., depression and substance abuse) require closer examination (Dinges & Duong-Tran, 1992, p. 487). Compared to all other ethnic groups in the United States,

American Indians and Alaska Natives have the highest suicide rates (Borowsky, Resnick, Ireland, & Blum, 1999). For this racial/ethnic group, suicide is the third leading cause of death for 10- to 14-year-olds and the second leading cause of death for 15- to 24-year-olds (USDHHS, 2002). "While suicide rates for youths fourteen through nineteen years old have decreased somewhat, rates for ten and fourteen year olds are approximately four times higher than that for the general U.S. population and have continued to increase steadily" (Johnson & Tomren, 1999, p. 1). A study of American Indian youth, 7th to 12th grade, located in IHS service areas, reported that 17% had attempted suicide (Blum, 1992). Especially high rates of suicide are demonstrated by "American Indian children placed in non-Indian homes for adoptive or foster care who suffer a rate of seventy suicides per 100,000, six times higher than that of other youth in the United States" (May, 1987, as cited in Johnson & Tomren, 1999, p. 1).

Numerous studies have been conducted on the subject of suicide among American Indians (DeBruyn, Hymbaugh, & Valdez, 1988; Manson, Beals, Dick, & Duclos, 1989; May, 1987; Tower, 1989). Berlin (1984) stated that the suicide rate on reservations has "increased 200 to 300 percent in the last two decades" (p. 4). It continues to be a major problem:

American Indian/Alaskan Native (American Indian/Alaska Native) adolescents are more than twice as likely to commit suicide as any other racial/ethnic group. With 52.9 deaths per 100,000, adolescent American Indian/Alaska Native males are at four times the risk for suicide than are males of any other racial/ethnic group. Suicide is the second leading cause of death for American Indian/Alaska Native males. (Wonder, 1999, as cited in National Adolescent Health Information Center, 2000, p. 3)

Moving beyond mere description of the high suicide rates among reservation-based American Indians, other research points out that suicide rates show tribal variation (Berlin, 1987). Some tribal communities in New Mexico report zero suicides, whereas other tribal communities report high suicide rates of 56.6 per 100,000 (Van Winkle & May, 1986).

American Indian suicide rates are also associated with geographic location (Wallace et al., 1999). An analysis of suicide data for American Indian children and youth (ages 0–19) for 10 IHS regions shows that the three regions with the highest suicide rates are Alaska, Aberdeen, and Tucson (19.0, 18.03, and 16.31 respectively), whereas the three regions with the lowest rates of suicide are Oklahoma City, Nashville, and the Navajo Reservation (3.1, 3.72, and 6.57 respectively). Here it is important to note that, although there is significant regional variability, all IHS

regions except Oklahoma City score higher than the United States national rate (USDHHS, 2000b). Although this is the case, a study of New Mexico children and youth (ages 5–19) found the following:

adolescent suicide death rates did not vary significantly by ethnicity. American Indian/Alaska Native adolescents experienced the highest death rate (14.0 per 100,000, $n = 23$), followed by non-Hispanic White (13.1 per 100,000, $n = 76$), and Hispanic (12.6 per 100,000, $n = 81$) adolescents. American Indian/Alaska Native suicide death rates were non-significantly higher than Hispanics (RR = 1.1; 95% CI = 0.7, 1.8) and non-Hispanic White (RR = 1.0; 95% CI = 0.7, 1.7) rates. (Werenko et al., 2000, p. 38)

Other studies show both tribal and geographic variability in suicide rates (Wissow, Walkup, Barlow, Reid, & Kane, 2001).

It is clear that American Indian suicides are now a phenomenon of the young (Bachman, 1992); however, this has not always been the case. Among some tribes, the dominant pattern of youth suicides has occurred only in the last half of the twentieth century or so (Levy & Kunitz, 1987). The rate for completed suicides is higher for young Natives than for the general population (Middlebrook, LeMaster, Beals, Novins, & Manson, 1998, as cited by the American Psychological Association, 1999). Wissow et al.

(2001) found that completed suicides are also more frequent among males, and hanging is the most common means of committing suicide. Although Wallace et al. (1996) found that firearms were the predominant method used in suicides, it appears that a shift in the preferred method of suicide is occurring: “Since 1983, however, other means, such as hanging and poisoning, combined have been used almost as often as firearms in suicides by young Native American males” (ibid. p. 19). Hanging or firearms are both highly lethal (Manson, Beals, Dick, & Duclos, 1989). The USDHHS (1996) reported that “firearms are the weapons of choice for suicides committed by both Native American men and women, hanging is the second choice for men, whereas poisoning ranks second for Native American women” (as cited in Joe, 2000, p. 4). Wallace and his colleagues (1996) further reported significant differences by gender. Native American males have the highest rate, which is considerably higher than that of their White male counterparts, while Native American females and White females demonstrate similar and relatively low rates of suicide. It should be emphasized that although Native American females have lower rates of suicide, they have higher rates of depression, a factor that is significantly associated with suicidal ideation (Dinges & Duong-Tran, 1992).

Drinking alcohol has also been shown to be associated with the increased likelihood of

attempting suicide among young Indians (Grossman, Milligan, & Deyo, 1991). In addition, substance abuse is typical of suicidal youth: "among American Indians/Alaska Natives, 74% had drugs or alcohol present" (Werenko et al., 2000, p. 36). Mental health problems, including depression, are also risk factors for suicides:

The co-occurrence of depressed mood and impulsive and delinquent behavior raises a number of diagnostic issues. It may be difficult to determine if suicide attempts in these youths are an expression of anger and frustration or manifestations of more typical depressed mood. Of interest in this regard, Sack and colleagues found that depressive symptoms followed conduct disorder symptoms in a sample of latency-age children. Therefore, it is prudent to diagnose and intervene with conduct problems as early as they present. (Pfefferbaum, Pfefferbaum, Strickland, & Brandt, 1999, p. 123)

Having family or friends with a history of suicide attempts, alienation, abuse (physical, sexual, or substance), gang involvement, and little family support also increases the risk for suicides (Blum et al., 1999; Dinges & Duong-Tran, 1992; Grossman et al., 1991; Manson et al., 1989). Moreover, "those who take their lives typically belong to tribes with loose social integration that are undergoing rapid socioeconomic change" (Manson et al., 1989, p. 2). Dinges & Duong-Tran (1992) further supported the finding that loss of

sustaining cultural and identity-conferring traditions increases Indian suicides. Young adolescent Native American mothers also frequently "expressed suicidal ideation" during their pregnancies (Liu et al., 1994, p. 336).

Who are the youths at high risk for suicide? ... Compared with those at low risk for suicide, those in the high-risk group were nearly twice as likely to have abused chemicals, had or caused a pregnancy, self-induced vomiting weekly, believed that family doesn't care, and experienced death by suicide among both friends and family. The higher-risk group was nearly three times as likely as their low-risk peers to have experienced physical and/or sexual abuse. (Blum et al., 1992, p. 6)

Novins, Beals, Roberts, and Manson (1999) have found that suicide ideation is also variable by tribe.¹¹ Hence, the many correlates cited in the literature differentially impact a particular tribe's youth suicide ideation. For example, for the Pueblo tribe, "the influence of a friend's suicidal behavior, feeling unsupported by family and friends, and depressive symptomatology were associated with critical levels of suicide ideation for youth in this tribe" (Novins et al., 1999, p. 342). Information on the Southwest tribe's youth contrasts:

youth who experienced more interpersonal stress as well as weakened household structure were more likely to think seriously about suicide ... In this culture both

antisocial behavior and suicide ideation are considered deviant, and those teenagers who exhibit externalizing behaviors were also more likely to ignore cultural prohibitions about thinking of death. (p. 342)

For the Northern Plains tribe, “youth with more negative thoughts about their own abilities and more depressive symptomatology were more likely to think seriously about suicide” (Novins et al., 1999, p. 342). This study demonstrates that factors related to suicide vary considerably from tribe to tribe. This has important implications for programs designed to reduce American Indian and Alaska Native suicides.

SOCIAL INDICATORS

Thematic Area: Employment & Education

Teens Who Are High School Dropouts

There is huge tribal diversity within the American Indian/Alaska Native racial category. This complexity is magnified when issues of state and regional variability are considered. Issues related to American Indian/Alaska Native academic attainment are embedded with even more complexity due to the variability of types of schools available to Native children. These types of schools include public, private, mission, tribal

contract, and Bureau of Indian Affairs, yet the majority of Indian students attend public schools (17th Annual Report of the National Advisory Council on Indian Education, cited in the U.S. Department of Education, 1991). The American Indian school-age population is located in vastly differing settings ranging from the smallest of reservation communities to large urban centers (Giles, 1985, as cited in LaFromboise & Graff Low, 1989).

American Indians have the lowest educational attainment (Brandt, 1992; National Center for Educational Statistics, 1993) and have performed the worst in their educational pathways compared to all other groups in the United States (Swisher, Hoisch, & Pavel, 1991). National estimates on high school dropout rates among Native Americans range from 30% to almost 50% (Brandt, 1992; Chavers, 1991; Swisher et al., 1991). Another study reports an even higher range: “As many as 35 percent, and in some places 50 to 60 percent, of American Indian/Alaska Native students drop out of school. American Indian/Alaska Native students have the highest high school dropout rate in the nation” (USDHHS, 1997a, p. 31). Across all levels of education, American Indians are the most underrepresented minority group (Fore & Chaney, 1998).

Historically, the dropout rates among American Indian youth have been the

highest of any minority group in the country ... Until the decade of the 80s the terms "at-risk" and "high-risk" were not used in the descriptors about dropouts. As the terms imply, much of the literature today seeks to identify the at-risk students or the potential dropout before he/she leaves school in an effort to provide intervention strategies. Catterall and Cota-Robies (1988) identified three types of at-risk students: (1) children who come from different cultural backgrounds or minority students, (2) children from limited English speaking families, and (3) children from poor families. Using their definition, the majority of Indian students would fall into one or more of those categories. (Bowker, 1992, p. 1)

Failure at school has been a long-standing problem, and it continues into the contemporary era (Ambler, 1999; Paisano, 1993). Riles (1995) found that where Indians are clustered, on-time high school graduation rates decrease. Not only are the dropout rates high, but Machamer and Gruber (1996) found that American Indians are "twice as likely to dislike school, and almost twice as likely to report school-related risk taking" compared to their Caucasian and African American peers (p. 137). Sandefur (1998) reports:

Black, Hispanic, and American Indian sophomores in 1980 were disadvantaged relative to White sophomores in that their parents were less educated, they were less likely to live in an intact family, and

they were more likely to live in larger families. In addition, American Indian, Black, and Hispanic sophomores were significantly less likely than White sophomores to have their school work monitored by their parents. American Indian and Hispanic sophomores talked with their parents significantly less than White sophomores, and had parents whose aspirations were lower than those of White sophomores. (p. 67)

It also appears that the ninth and tenth grades are the most likely years that American Indians will drop out of high school (Cavatta, 1982; Cavatta & Gomez, 1984; McBee, 1986, as cited in Bowker, 1992).

As noted previously, differences by state, region, and tribe are also evident in American Indian dropout rates. Analysis of 1990 U.S. Census data show that in the Southwestern states of Arizona, New Mexico, and Utah, American Indians and Hispanics share the lowest rates of high school completion (Willeto, 1999). The Annie E. Casey Foundation (2001) reported that Arizona ties with Nevada as having the highest dropout rates for All Races. Further, a study prepared by the Arizona Department of Education finds that Native Americans have the highest overall dropout rate in Arizona compared to all other racial-ethnic groups (Moreland, 2001). A Montana school district has a 60% dropout rate for Native Americans (Coladarci, 1983). The Salt

River Pima-Maricopa Indian community has a dropout rate of almost 80% for kindergarten through 12th grade students (M. Lewis, Vice President of the Salt River Pima-Maricopa Indian community, public testimony, Arizona Works Agency Procurement Board Meeting, September 18, 1997, as cited in Stromwall, Brzuzy, Sharp, & Andersen, 1998). The Navajo Nation reports a dropout rate of 31.1% (Parent & Bunderson, 1996).

By 1990, two-thirds of Navajos ages 25–34 (those born approximately between 1954 and 1965) were high school graduates. Overall, the 1990 Census reports that 51% of all Navajos over 25 had graduated high school and only 28.2% had less than a 9th grade education. (Henderson, Kunitz, Gabriel, McCright, & Levy, 1998, p. 28)

More promising is that the high school completion rates associated with rural Alaskan high school students (who are primarily Alaska Natives) exceed even the national average (Kleinfeld, 1985, as cited in St. Germaine, 2001). In the Northwest states of Alaska, Idaho, and Montana, high school graduation rates increase where Indians are a “larger fraction of student population but not more than 80 percent” (Riles, 1995, p. 8). However, Snipp (1989) cautions readers to note, when examining gains in high school achievement rates, that GEDs are extensive among American Indians.

High school completion is a critical issue for future labor force participation (Miller, 1997; Miringoff & Miringoff, 1999), especially in a changing economy (Bowker, 1992). It is also necessary for college entrance and completion (Day & Bauman, 2000). This is an important concern for American Indians given that lower rates of college education account for most of the differences in earnings between American Indian and White males (Sandefur & Scott, 1983). Further, “higher levels of education generally corresponded to lower unemployment rates” (U.S. Department of Labor, 2001a, p. 2). Completion of high school substantially reduces the risk of being counted among the working poor (those who work 27 weeks or more per year but are still below the poverty level; U.S. Department of Labor, 2001b). Vinje (1996) found that lack of educational attainment (as measured by high school completion) was the principal reason for patterns of poverty rates on 23 reservations.

Higher education has a positive impact on American Indian and Alaska Native economic well-being: “approximately one year after receiving their degrees or certificates, the overwhelming majority of Tribal College graduates, 91 percent, were either working or attending college” (Cunningham & Redd, 2000, p. 8). A study of Canadian North American Indians offers further support by finding that “postsecondary education, particularly when it includes certification, has

a major positive influence on employment, labor market activity, and income among various Aboriginal groups” (Hull, 2000, p. vii).

Another important correlate of Native American high school dropouts is the high rate of drug use:

The rates of drug use among dropouts are higher than that found in schools, and with American Indian dropout rates that average around 50%, the levels of drug use in the age cohort represent a highly serious and significant community problem. (Beauvais, 1996, p. 1597)

Use of alcoholic beverages also appears to be related to the excessive rate of high school dropouts (Clawson, 1990; Coladarci, 1983; Lin, 1985; Trimble, Padilla, & Bell, 1987, as cited in Bowker, 1992, p. 4). A study of members of the Navajo Nation found that “among younger people failure to complete high school is associated with an increased risk of alcohol dependence,” and the authors reported that this is consistent with findings from the general population (Henderson et al., 1998, p. 43). Mansfield, Wilson, Kobrinski, and Mitchell (1999) reported the important observation that race and education are strong predictors of premature mortality.

Formal schooling is typically deemed a central component in resolving the social, health, economic, and political problems facing American Indians (Tippeconnic, 1991). The effects of dropping out of high school are long-term. In a study

that included American Indians and Alaska Natives, Choy (2001) found significant differences in rates of postsecondary enrollment by parents’ level of education. Parents who had failed to complete high school had the lowest rate of children enrolling in college.

Teens Not Attending School and Not Working

The Annie E. Casey Foundation (2001) has argued that youth who are not engaged in either of the core activities of this age group—participation in the educational system or employment in the labor market—are marginalized and vulnerable. The previous section gave an overview of the relevant literature on American Indian and Alaska Native high school dropouts; this section emphasizes the issues surrounding labor force participation among youth.

Currie and Skolnick (1984) reported that in New Mexico, 32% of American Indians (ages 16–19) were not working and not attending school. In addition, they were the only racial-ethnic group whose median educational level was below high school completion. In the general U.S. population, the vast majority of youth (ages 16–24) who are not attending school are instead employed in the labor force. Though rates of employment vary by race, among youth not enrolled in school, Whites have the highest labor force participation rate with 84.6%, Hispanics are at 77.0%, and

Blacks have the lowest rate of 73.2% (U.S. Department of Labor, 2001a). Unfortunately, information for American Indian and Alaska Native youth was not reported. The Bureau of Labor Statistics (BLS) stated it has no data on American Indians and Alaska Natives (Roger Comer, personal communication, February 12, 2002). However, the BLS did find that for the mainstream, "those with less than a high school diploma experienced the highest unemployment rates" (U.S. Department of Labor, 2001a, p. 2).

In general, from 1980 to 1990, labor force participation deteriorated on a majority of reservations, and unemployment worsened from 1970 to 1990 (Troster, 1996). Based on data from 23 reservations, the "decrease in job prospects also lead [sic] to a decline in the rate of labor participation with the (1990) rate dropping to 52.9 percent of the working age population compared to the 66.8 percent rate achieved in 1980" (Vinje, 1996, pp. 431–432). On a more hopeful note, in a study that included American Indian males, Sakamoto, Wu, and Tzeng (2000) found that labor market racial discrimination has declined over time.

At the most extreme level of disconnection, Native American youth are also more vulnerable to gang membership. Blum et al. (1992) reported that one in six American Indian youth associate with gang members. Donnemeyer, Edwards,

Chavez, and Beauvais (1996) reported similar rates (about 16% for males and 11% for females) of gang association among Native American youth, yet they noted that most of this involvement centers around "hanging out with a gang" (p. 169) rather than actual gang membership. American Indian youth who are marginal to both their own Native culture and mainstream culture sometimes turn to gangs for group cohesion and identity:

Conditions of poverty, discrimination, lack of cultural identity and cultural anomie provide the conditions for Indian youth to view gangs as attractive. The relative isolation of many American Indian communities might provide some protection from the diffusion of gang culture if it were not for the fact that many Indian youth, particularly those who have encountered difficulties in their home communities, may move among households of relatives, and back and forth between the reservations and urban areas where gang activity flourishes. (ibid., p. 1972)

Unfortunately, the characteristics typical for gang membership are also those associated with high rates of mortality (Henderson et al., 1999). Other related factors include "poverty and lack of economic opportunities; discrimination; difficulties of acculturation into the majority culture; a weakening of identity with one's own culture; the social disorganization and breakdown of community life; and family disorganization" (Goldstein &

Soriano, 1994; Jankowski, 1991; Moore, 1985; Oetting & Beauvais, 1987; Spergel, 1990; Vigil & Long, 1990, as cited in Donnermeyer et al., 1996, p. 168).

Children Living with Parents Who Do Not Have Full-Time, Year-Round Employment

Although Native Americans have highly divergent wage labor experiences (Knack & Littlefield, 1996), they also have high unemployment rates (Snipp, 1992; Szasz, 1991).

The average unemployment rate on most Indian reservations is 45%, although in some communities the rate can be as high as 90% (Russell, 1995). Of even greater concern is that the unemployment problem has been long term. In many communities, the unemployment rates have changed little over the last five decades" (Joe, 1996, p. 143).

From 1970 to 1990 unemployment worsened on the majority of reservations (Trosper, 1996). Fifty percent of the American Indian and Alaska Native workforce was unemployed, and 30% of those who were employed were living below the poverty level (U.S. Department of the Interior, 1997).

The problems typical of underemployment affected them as well (Baer & Bennett, 1987).

The lower earnings of Indians obviously translate into lower family incomes and higher poverty rates. This problem is compounded by the fact that, among all U.S.

racial and ethnic groups, American Indian men and women were those least likely to be employed the full year throughout the 1959-to-1979 period. Although the gap between Indians and whites narrowed, in 1979 only 59 percent of Indian men as compared to 79 percent of white men worked the full year; 35 percent of Indian women as compared to 42 percent of white women did so. (Sandefur, 1991, p. 210)

The unemployment rates in 28 states were consistently higher for American Indians than for the White population (Full Employment Action Council, 1985). Labor force participation rates declined on 23 reservations from 1980 to 1990 (Vinje, 1996). "In 1995, nine tribes in Arizona experienced jobless rates between 50 and 90% (U.S. Department of the Interior, Bureau of Indian Affairs, 1995). This represents almost half of all reservations in Arizona" (Stromwall et al., 1998, p. 3). In the state of South Dakota, Indians are employed in the lower-paying sectors of the economy (Baer & Bennett, 1987). White Mountain Apache youths "do very poorly after leaving school as they attempt to find employment," so that 69% were unemployed (Ramasamy, 1996, p. 5).

McIntosh (1986) has suggested that American Indians' cultural differences, such as quietness, averting eyes when communicating, and lack of time constraint, account for many of the difficulties experienced by American Indians in obtaining

employment. In contrast, Snipp (1976) pointed to structural factors, for example migrational shifts, lack of economic viability, and difficulties in matching skill levels between employers and employees as reasons for high unemployment in Wisconsin's American Indian population. Reynolds, Fisher, Estrada, and Trotter (1999) argued that education is one of the most important factors influencing employment success (ability to obtain and hold employment); they also point to the findings of other studies:

Other factors found to determine success in employment include marital status and the number of dependents (Sandefur & Sakamoto, 1988), health status (Luft, 1974), mental health status (Ruhm, 1992), regional location and factors related to regional employment cycles (Reynolds, Fisher, Cagle, & Johnson, 2000; Snipp & Sandefur, 1988), job characteristics (Mensch & Kandel, 1988), age (Kaestner, 1991; Mare, Winship, & Kubitschek, 1984), and gender (Cagle, Fenaughty, Paschane, & Fisher, 1996; Snipp & Aytac, 1990). (ibid., 1999, p. 19)

For Indians who reside on reservations, the types of jobs available are mostly governmental, either tribal or federal, with few private enterprise employment opportunities (Sandefur, 1991). Former President Clinton stated that the unemployment rate on the Pine Ridge Reservation was 75% (as cited in Cunningham & Redd, 2000). Furthermore, Ward (1998) reported unemployment

rates for three reservations in Montana: 20% for Flathead, 50% for Northern Cheyenne, and 66% for Rocky Boy. In a study that compared unemployment rates for on-reservation versus off-reservation Indians, Sherblom (1990) found that unemployment is higher for reservation communities than for Indians who reside elsewhere. Another study reported that workers who reside in rural areas earn lower wages than workers who reside in non-rural areas, and that both Whites and American Indians in rural areas receive exceptionally small wage returns for education (Kimmel, 1994). Much has been written about the migration of American Indians from reservations or rural communities to metropolitan areas, but Sandefur (1986) found that endogamous¹² American Indian couples were the least likely to change states of residence for labor market participation, compared to exogamous¹³ American Indian couples. However, American Indians in urban areas also experience high unemployment (Full Employment Action Council, 1985).

Gender is also a factor. Indian females are systematically paid less than their Indian male counterparts in comparable conditions (Snipp, 1990; Snipp & Aytac, 1990) in rural as well as urban areas (Kimmel, 1994).

Poverty combined with chronic unemployment tends to have a transcendental effect of QOL.¹⁴ A critical factor in the equation is a sense of hope, purpose, or probability of changing conditions.

Individuals with few resources (i.e., are poor) but who have a job may have a sense of self-worth; or a person may choose to have few material resources for the sake of a valuable end (e.g., education, religious orientation, war against an invader). In such circumstances, the effects of poverty are often benign. On the other hand, if poverty is experienced in the context of unemployment, with little hope for improved conditions, or is involuntarily (as opposed to a chosen sacrifice for a cherished goal), the effect on QOL is often pernicious. (USDHHS, 1997a, p. 37)

In fact, Bowker (1992) has noted how studies frequently point out that White females earn substantially less than their White male counterparts (59 cents to the dollar). However, the wages of Native American females are rarely mentioned in this comparison—they make 17 cents for every dollar earned by White males.

Given the high rates of unemployment, underemployment, and high school dropouts among American Indians and Alaska Natives, Native people's job-seeking behaviors are an important area of inquiry:

It has been noted in the literature on unemployment and job-seeking behavior that there is a lack of research on individuals who have low educational attainment, including those with little or no training beyond high school and those with less than a high school education (Schmidt, Amel, & Ryan, 1993). The few studies that have used a minimally educated sample

have found that these individuals differ from educated job seekers in respect to both attitudes and strategies (Schwab, Rynes, & Aldag, 1987). Further research is necessary, especially with the current climate of welfare reform, to determine the types of activities engaged in by the minimally educated to find employment. (Reynolds et al., 1999, p. 28)

Thematic Area: Poverty

Children Living in Poverty

In the United States, children comprise the largest proportion of people living in poverty (Goodluck & Willetto, 2001). For American Indian and Alaska Native children, the rate of poverty is higher still:

According to the 1990 census, the percent of American Indian/Alaska Natives living below the poverty level (32%) is almost three times that of the general population (13%). An even higher percentage of American Indian/Alaska Native children live below the poverty level—43 percent of American Indian/Alaska Native children below the age of 5 live below the poverty level. (USDHHS, 1997a, p. 37)

Poverty is widespread on large reservations, such as in Minnesota where by the year 1989, "American Indian children were over five times more likely than white children to be living below the poverty line" (American Indian Research and Policy Institute, 1994, p. 2). Native American

families demonstrate significant regional and tribal differences in poverty rates (Trosper, 1996), with the Hidatsas and Teton Lakotas (Plains) and the Southwest geographical regions demonstrating the highest rates (Bonvillain, 2001). Although poverty rates are especially high in some American Indian communities, this does not diminish the fact that the overall national rates of American Indian poverty are still high. In a study that covered 23 reservations, “the median number of families below the poverty level had increased to 48.8 percent by 1990 compared to a figure of 44.1 percent as of 1980” (Vinje, 1996, p. 431). The Inter-Tribal Council of Arizona reports a poverty rate of 53.7% on Arizona reservations (written communication, November, 1997, as cited in Stromwall et al., 1998, p. 2). Ward (1998) states that the Northern Cheyenne Reservation in Montana has 44% of American Indian families in poverty, this being the highest percentage for all reservations in Montana:

The poverty rate increased for American Indians, especially among families. By 1989, the gap between white and Indian families had grown: among white families in poverty, the percentage having minor children fell by almost 25 percent, from 90 percent in 1979 to 65 percent in 1989, while among Indian families in poverty, the percentage with minor children increased from 86 percent to 100 percent. (ibid., p. 457)

Sandefur (1991) attributed a significant proportion of low family incomes and high poverty rates

to low earnings among Native families. Trosper (1996) suggested that reductions in federal expenditures on Indian programs contributed to the sharp increase in American Indian poverty in the 1980s. Yet other scholars have found that poverty among Native American families has decreased over time, although it remains higher than for White families (Jensen & Tienda, 1989).

Thematic Area: Family Structure

Families with Children Headed by a Single Parent

“American Indian children are less likely to reside with two parents than are children in the total U.S. population” (Sanderfur & Liebler, 1996, p. 196). In a study that explored intergenerational patterns and beliefs about teen mothering on the Navajo Reservation, the frequent absence of the Navajo male from the grandmother’s and teen mother’s homes emerged as a central theme (Dalla & Gamble, 2001). According to 1980 U.S. Census data, most American single-parent Indian households are headed by a female (about 18%), and male single household heads comprise about 4% of American Indian households; hence, about 22% of American Indian households are headed by single parents (Yellowbird & Snipp, 1998, pp. 230–231). United States 1990 Census data reflect the growing trend of single-parent American Indian and Alaska Native households,

with 26% headed by females and 9% headed by males (U.S. Bureau of the Census, 2000). Most of these households include children under the age of 20. Furthermore, Native American females are more likely to be divorced and are less likely to have ever been married than U.S. women in general (Sandefur & Liebler, 1996).

As with other well-being indicators, variation by state and tribal reservations are evident. A study by the American Indian Research and Policy Institute (1994) found that nearly half (49%) of Native American children in the state of Minnesota reside with a single parent. In 1990 for the total U.S. population, 70.2% of children reside with two parents; the corresponding figure for the total U.S. Indian population was 54.4%, whereas the reservation estimate was 48.8% (Sandefur & Liebler, 1996, p. 203). Sandefur and Liebler's (1996) analysis showed that the Pine Ridge Reservation had the lowest percentage of children living with two parents, whereas Oklahoma Tribal Jurisdiction Statistical Areas had the highest percentage (65.8). From an analysis of Rosebud County in Montana, Ward (1998) reported the following:

the poverty rate of white, female-headed families with minor children declined from 6.1 percent in 1979 to 5.7 percent [in] 1989, while the poverty rate of Indian female-headed families rose from 42 percent in 1979 to 44 percent in 1989. Thus, the Indian population in this rural county

saw their economic conditions worsen over the decade from 1979 to 1989, while the economic changes for whites were considerably more positive. (p. 457)

What is troubling about this growing trend is that Native American single householders have very poor labor force participation (Yellowbird & Snipp, 1998). Those located on reservations fare much worse "with the highest unemployment rate of any Indian group (25.6), only 45.1% of American Indian women on reservations bother to join the workforce. All of this is exacerbated by the overwhelmingly high poverty rates on reservations" (Sandefur & Liebler, 1996, p. 214). American Indians are considered the most disadvantaged racial group due to the comparative swell in the proportion of single-parent families who also have the lowest household income (Supple, Snipp, & Eschbach, 1995). Furthermore, female-headed households are an important indicator of "aggregate life span in a population. The associations are compelling. Premature mortality correlated with and is well predicted by community structure. Proportion of female-headed households could be a summary indicator of that pathology" (Mansfield et al., 1999, p. 5).

This literature review sets the stage for the actual gathering of secondary data by alerting the investigator to the potential findings. In this case, it appears that the relative well-being of American Indian and Alaska Native children and youth is

probably lower than that of their mainstream counterparts, with the possible exception of the rates of low birthweight babies. However, past studies have differentially analyzed different states' scores on the well-being indicators. Hence, how states differ will be an interesting avenue for exploration. The next section overviews the sources of data used for the study, and how the data were accessed.

Data and Methodology

Research Methodology

This study involves conducting a secondary analysis of data holdings from existing nationally recognized organizations and agencies. This includes reconstructing the efforts of KIDS COUNT by attempting to locate and report existing data on well-being indicators for American Indian and Alaska Native children and youth. The well-being indicator information is produced for the states of Alaska, Arizona, California, Michigan, Minnesota, Montana, New Mexico, North Carolina, North Dakota, Oklahoma, South Dakota, Washington, and Wisconsin. These states have comparatively high proportions and/or numbers of Native Americans, which increases the likelihood of robust measures that can be reported. However, readers should note that the American Indian/Alaska Native population is comparatively small. Where possible, every attempt was made to produce reliable indicator information. In spite of these efforts, in some cases indicator information was based on small sample sizes. When this is the case, the reader is cautioned about the data.

This section focuses on how the data for the 10 well-being indicators for 13 states were obtained for this study. For a more thorough discussion and critical analysis of the particular indicators as they pertain to the American Indian and Alaska Native population, see Goodluck and Willetto

(2001). Of the 10 well-being indicators, only American Indian/Alaska Native infant mortality rates by state were available in a published report; all other indicators required estimation techniques. In contrast, the KIDS COUNT data books report data that are readily accessible on six indicators, so only four indicators require special tabulations. This is a significant barrier that continually challenges Indian child welfare advocates. Although the American Indian/Alaska Native population is often acknowledged as experiencing high rates of various social and health problems, the fact that important and necessary well-being information is not produced and included in various publications about this group is astounding.

Data Resources

The data resources that were used support the reporting of statistical information in the KIDS COUNT data books. The data sources were reviewed and examined for availability of statistical information specifically on Native American children and youth for the 13 states mentioned above. The 10 well-being indicators are low birth-weight; teen births; infant mortality; child deaths; teen deaths by accident, homicide, and suicide; teens who are high school dropouts; teens who are not attending school and not working; children in poverty; children living with mothers who are not employed; and families with children

headed by a single parent. These are described as health indicators or social indicators.

Health Indicators

National Center for Health Statistics

In 1960, the National Health Survey and the National Office of Vital Statistics merged to form the National Center for Health Statistics (NCHS). The NCHS (which is part of the Centers for Disease Control and Prevention in the U.S. Department of Health and Human Services [USDHHS]) is the federal government's principal agency for vital and health statistics. One of NCHS's primary objectives is to supply data that monitor the nation's health. This government agency and its parent organization provided information for the health indicators in the following formats.

Statistical Extraction and Tabulation System: (SETS 2.0). Because of the overall size of the United States, accessing health data is challenging. To address this challenge and to make health data as accessible as possible, NCHS has developed SETS:

SETS 2.0 provides the tools to release very large data files and documentation on CD-ROM with an easy to use interface. Users can manipulate data according to their analytic needs without additional

software. They may examine individual records and files, create data subsets, browse, search, display, tabulate, chart, print, extract and export data in a variety of formats. (USDHHS, 2002, p. 1)

Dr. Willetto received the CD-ROMs and training on SETS from Ms. Avay Dolberry of the NCHS Help Center in Research Triangle Park, North Carolina. SETS CD-ROMs were used to estimate the American Indian/Alaska Native teen birth and low birthweight rates for the 13 states.

Reports. NCHS produces many reports on an annual basis and periodically produces special reports. One can request to be placed on a mailing list to receive paper copies of the reports or they can be accessed through the website at www.cdc.gov/nchs. The American Indian/Alaska Native infant mortality rate for the 13 states was obtained through the National Vital Statistics Report, 50 (4), January 30, 2002.

Web-based Injury Statistics Query and Reporting System (WISQARS). This is "an interactive database system that provides customized reports of injury-related data" (retrieved October 23, 2001, from <http://www.cdc.gov/ncipc/wisqars/default.htm>). WISQARS was used to estimate the American Indian/Alaska Native rate of child deaths (ages 1–14) and teen deaths (ages 15–19) from accident, homicide, and suicide for 13 states.

Social Indicators

U.S. Bureau of the Census and the Bureau of Labor Statistics

The Bureau of Labor Statistics contracts with the U.S. Census Bureau to produce the Current Population Survey (CPS). They telephone survey about 60,000 households monthly on a variety of topics, including demographics, education, and employment status.

Data FERRET. The Federal Electronic Research and Review Extraction Tool (FERRET) is a data extraction tool that can be utilized to access a variety of data, including CPS Basic data. Dr. Willetto received training on FERRET from Ms. Marianne Thrift (Demographics Survey Division) at the Hyattsville, Maryland office of the U.S. Census Bureau. FERRET was used to estimate the percentage of American Indian/Alaska Native high school dropouts and the percentage of American Indian/Alaska Native teens who are not attending school and not working in the 13 states.

U.S. Bureau of the Census

The U.S. Census Bureau is a large government entity that collects information about the U.S. population and economy:

The sole purpose of the censuses and surveys is to secure general statistical information. Replies are obtained from individuals and establishments only to

enable the compilation of such general statistics. The confidentiality of these replies is very important. By law, no one—neither the census taker nor any other Census Bureau employee—is permitted to reveal identifiable information about any person, household, or business. (U.S. Bureau of the Census, 1999, p. 1)

To do all of this data gathering requires a large staff distributed over 12 regional offices; the main office is in Hyattsville, Maryland. Besides data collection efforts, the U.S. Census Bureau attempts to make data available to interested users by producing reports, maintaining a website, and developing and utilizing various data acquisition tools. Data for this report were obtained from the U.S. Census Bureau in the following ways.

Time series population estimates. The 1999 data on age for American Indian/Alaska Native children and youth were obtained in semi-structured form from the “time series population estimates” via the U.S. Census Bureau website at www.census.gov. The U.S. Census Bureau provides data over a decade, for example the 1990–1999 annual time series of state population estimates by age, sex, race, and Hispanic origin. To decipher the data, four additional documents are downloaded. These documents are named: file layout, documentation, FIPS lookup file, and explanation of race and Hispanic origin categories.

American Fact Finder. This is the new interactive database engine for the U.S. Census Bureau. A variety of databases can be accessed using American Fact Finder, including the 1997 U.S. Economic Census, the American Community Survey, and U.S. Census 2000. American Fact Finder was used to produce the percentage of children living in American Indian and Alaska Native (alone)¹⁵ female-headed families by employment status (used to substitute for the KIDS COUNT percentage of children living with parents who do not have full-time, year-round employment indicator) and child poverty indicators. The data sources used by KIDS COUNT 2002 were not used to produce these two indicators for the following reasons.

Replicating the exact percentage of children living with parents who do not have full-time, year-round employment indicator was not possible and will most likely always be difficult if not impossible for the American Indian/Alaska Native population in the future, because KIDS COUNT uses the CPS's March Supplement dataset to estimate this indicator. It is complicated to try to link children back to their families using CPS data, and it is even more problematic for American Indian/Alaska Natives that the data are collected only once a year. This means that the American Indian/Alaska Native subsample of data is too small to produce reliable estimates at the national level, and this problem is substantial-

ly compounded by attempts at further division by state. For future research, it is important to identify alternative indicators to become a permanent replacement for the percentage of children living with parents who do not have full-time, year-round employment.

As for the percentage of children living in poverty indicator, KIDS COUNT utilizes the following:

Small Area Income and Poverty Estimates (SAIPE) series of the U.S. Census Bureau, which provides annual state-level estimates of income and poverty (including child poverty). This series was developed to help the U.S. Department of Education distribute roughly \$8 billion each year in Title I funds. In addition, it is now used in connection with the federal welfare reform legislation passed in 1996.

The SAIPE program uses a model-based estimation technique to create annual state- and county-level income and poverty estimates, as well as income and poverty estimates for school districts in odd-numbered years. (Annie E. Casey Foundation, 2002, p. 187)

Unfortunately, SAIPE estimates are not provided for racial-ethnic groups, and this will most likely not change. Again, an alternative poverty indicator that is available on a yearly basis needs to be either developed or identified and made available in secondary data form.

Reports and publications. Replicating the exact percentage of American Indian/Alaska Native

families with children headed by a single-parent indicator was not possible; thus, it was necessary to search for alternative data. Using the U.S. Census Bureau as a starting point, it became evident that summary data (Summary File 1-100% data) on single-parent households are available, but they are not divided into racial-ethnic groups. The U.S. Census Bureau informed the researcher that this would require the use of the Summary 4 file; however, the Summary 4 file was not yet available. The Summary 1 file data were therefore used in lieu of the unavailable information.

Ms. Karma Shore (Bureau of Business and Economic Research, University of New Mexico) directed the researcher towards a website that highlights New Mexico tribal reservation data. It was then possible to locate the publication titled *Profiles of General Demographic Characteristics: 2000 Census of Population and Housing, United States: 2000* (U.S. Bureau of the Census, 2001), which lists all data for many reservation communities. Because state data on American Indians and Alaska Natives was not available, the largest tribal reservation community was chosen for each of the 13 states. This decision was guided by the 1990 Census of Population, General Population Characteristics: American Indian and Alaska Native Areas (U.S. Bureau of the Census, 1992). Please note that some selected reservation communities cross state boundaries;

however, the majority of each reservation community is located in the selected state. For example, the Navajo Reservation is located within the states of Arizona, New Mexico, and Utah, with most of the Navajo Nation's population in Arizona. Hence, the Navajo reservation was selected to represent Arizona. Also note that information on Tribal Jurisdiction Statistical Areas, Alaska Native Village Statistical Areas, and Alaska Native Regional Corporations was not available in this publication, and, therefore, was not available to report on single-parent family estimates. As a result, two states (Alaska and Oklahoma) had only one reservation (Osage and Annette Island, respectively) to choose from. Fortunately, these reservations also happen to be fairly large.

Data Book Summary: National and State Levels

This section presents American Indian and Alaska Native children and youth data on the 10 well-being indicators at the state level for Alaska, Arizona, California, Michigan, Minnesota, Montana, New Mexico, North Carolina, North Dakota, Oklahoma, South Dakota, Washington, and Wisconsin. Where possible, national-level indicator data are also included for American Indians and Alaska Natives. For the sake of comparability with the 2002 KIDS COUNT Data Book, the most recent well-being indicator data are utilized. For example, in the case of the National Center for Health Statistics (NCHS), this happens to be the year 1999. More recent Current Population Survey (CPS) data are available on some of the “social” indicators, but to maintain as much consistency as possible, the 1999 CPS Basic Survey data are used in this report. However, in cases where 1999 data are not available on the various well-being indicators, the most recent available and applicable data are reported.

The objective of this report is to delineate information specifically on American Indian and

Alaska Native children and youth for the 13 states listed above. It is beyond the scope of this project to present well-being indicator information for other racial-ethnic groups. However, readers who are particularly interested in such information can refer to the national data resources cited throughout this report. Finally, to assist readers in targeting states with the more extreme rankings on the various indicators, discussion focuses primarily on the states with the three highest and three lowest rates.

Age

Table 2 is intended to give the audience a sense of the size of the American Indian/Alaska Native child and youth population for the selected 13 states. Numerically, Arizona has the largest American Indian/Alaska Native child and youth population, followed by Oklahoma, California and New Mexico. Of the 13 states, North Dakota has the smallest American Indian/Alaska Native child and youth population, and Wisconsin has the next smallest.

TABLE 2. POPULATION ESTIMATES FOR SELECTED STATES FOR AMERICAN INDIANS/ALASKA NATIVES AND HISPANIC ORIGIN AMERICAN INDIANS/ALASKA NATIVES, BY SEX AND AGES 0–19 YEARS (JULY 1, 1999)

	AMERICAN INDIAN/ALASKA NATIVE		HISPANIC ORIGIN AMERICAN INDIAN/ALASKA NATIVE		TOTALS
	MALE	FEMALE	MALE	FEMALE	
Alaska	25,281	24,504	437	413	50,635
Arizona	50,087	50,342	8,138	7,988	116,555
California	25,533	24,823	22,706	20,971	94,033
Michigan	9,362	8,564	1,278	1,201	20,405
Minnesota	12,821	12,133	904	907	26,765
Montana	12,857	12,599	528	516	26,500
New Mexico	32,208	32,444	3,070	3,163	70,885
North Carolina	17,929	17,305	764	680	36,678
North Dakota	7,491	7,232	176	174	15,073
Oklahoma	48,304	47,163	2,843	2,798	101,108
South Dakota	15,733	15,334	306	323	31,696
Washington	16,465	16,806	3,117	3,418	39,806
Wisconsin	9,033	8,720	887	861	19,501
Totals	283,104	277,969	45,154	43,413	646,640

Source: Population Estimates Program, Population Division, U.S. Census Bureau, Washington, DC 20233. Retrieved May 30, 2002, from <http://eire.census.gov/popest/archives/state/sasrh/sasrh99.txt>.

Health Indicators

Low Birthweight

North Carolina has by far the highest rate of low birthweight Native American babies with 11.2% (see Table 3). This rate is higher than the national American Indian/Alaska Native rate of 7.1%.

Michigan has the second highest rate with 7.4%, although this state has only a slightly higher rate than the national American Indian/Alaska Native rate. South Dakota has the lowest rate of low birthweight Native American babies with 5.2%, and is followed closely by the state of Washington with 5.4%.

TABLE 3. PERCENTAGE LOW BIRTHWEIGHT FOR AMERICAN INDIANS/ALASKA NATIVES IN 13 SELECTED STATES IN 1999

STATE	%
United States AI/AN	7.1
Alaska	5.9
Arizona	7.2
California	6.6
Michigan	7.4
Minnesota	7.2
Montana	6.9
New Mexico	7.1
North Carolina	11.2
North Dakota	6.0
Oklahoma	5.9
South Dakota	5.2
Washington	5.4
Wisconsin	5.9

Source: National Center for Health Statistics, Perinatal 1999, 1999 U.S. births CD-ROM Series 20, Number 20, issued April 2002. Utilized SETS 2.0, Rev. 805 for accessing percentage of teen births with information supplied by Angela A. A. Willetto, PhD

Teen Birth Rate

Michigan has the lowest rate of teen births with 19.21 per 1,000 females, followed by California with 29.61 (see Table 4). Three states are clustered at the high range of teen births: South Dakota has the highest rate of teen births with 61.65, followed closely by Minnesota with 61.62,

and Wisconsin with 58.39. The Southwestern region has comparatively low rates. Yet, the states in the Great Lakes region have great variability; Michigan has the lowest teen birth rate, and Minnesota and Wisconsin have among the highest. Only 2 of the selected 13 states have lower rates of teen births than the American

TABLE 4. BIRTH RATES¹ FOR AMERICAN INDIANS/ALASKA NATIVES (AGES 15–17) IN 13 SELECTED STATES² IN 1999

	NUMBER OF BIRTHS	RATE
United States AI/AN	2,986	41.40
Alaska	173	48.72
Arizona	396	46.76
California	241	29.61
Michigan	35	19.12
Minnesota	123	61.62
Montana	109	52.18
New Mexico	231	43.11
North Carolina	151	53.55
North Dakota	55	49.82
Oklahoma	390	46.08
South Dakota	145	61.65
Washington	146	45.17
Wisconsin	94	58.39

¹ Births per 1,000 females.

² American Indian/Alaska Native birth rate information is available for all 50 states.

Source: National Center for Health Statistics, Perinatal 1999, 1999 U.S. births CD-ROM Series 20, Number 20, issued April 2002. Utilized SETS 2.0, Rev. 805 for accessing teen birth rate information and WISQARS for accessing American Indian/Alaska Native state population data for 15-17 year olds, both with information supplied by Angela A. A. Willetto, PhD

Indian/Alaska Native national rate of 41.40 per 1,000 females.

Infant Mortality

New Mexico has the lowest rate of American Indian/Alaska Native infant mortality, followed by Oklahoma and Arizona (see Table 5). In contrast,

South Dakota has the highest rate of American Indian/Alaska Native infant mortality, followed by North Dakota and North Carolina. Along with Michigan, all of the states in the Southwestern region have lower rates of American Indian/Alaska Native infant mortality than the United States American Indian/Alaska Native

TABLE 5. INFANT MORTALITY RATES BY AMERICAN INDIAN/ALASKA NATIVE ORIGIN OF MOTHER: UNITED STATES AND SELECTED STATES¹ IN 1997–99 (LINKED FILES)

	TOTAL ²	AMERICAN INDIAN ³
United States ⁴	7.1	9.1
Alaska	6.5	9.1
Arizona	7.1	8.6
California	5.7	8.9
Michigan	8.1	8.8
Minnesota	6.0	10.9
Montana	7.0	12.0
New Mexico	6.7	7.7
North Carolina	9.2	13.7
North Dakota	7.3	13.8
Oklahoma	8.2	8.0
South Dakota	8.5	15.2
Washington	5.4	9.6
Wisconsin	6.8	9.2

¹ American Indian/Alaska Native infant mortality data are also available for Florida and Texas.

² Includes non-Hispanic births of other races and births with origins not stated; not shown separately

³ Includes Aleuts and Eskimos

⁴ Excludes data for Puerto Rico, Virgin Islands, and Guam

Source: National Vital Statistics Reports, Volume 50, No. 4, January 30, 2002, p. 10, Table 1.

national rate of 9.1 per 1,000 births. The Upper Central Plains states and the state of North Carolina have the highest rates of American Indian/Alaska Native infant mortality. Yet, all of the states are worse off in comparison to the United States All Races total rate of 7.1.

Child Death

Only Arizona, New Mexico, and Oklahoma have estimates that are considered reliable, because the numerators are in excess of 20. American Indian/Alaska Native child death rates vary con-

TABLE 6. AMERICAN INDIAN/ALASKA NATIVE CHILD DEATH RATES (AGES 1–14 YEARS) IN THE UNITED STATES AND SELECTED STATES¹ IN 1999

	NUMBER OF DEATHS	POPULATION	CRUDE RATE ²
United States AI/AN	187	627,542	29.79
Alaska	17	36,739	46.27 ³
Arizona	43	83,994	51.19
California	7	61,855	11.31 ³
Michigan	0	14,082	0.00 ³
Minnesota	11	19,109	57.56 ³
Montana	8	18,559	43.10 ³
New Mexico	20	50,647	39.48 ³
North Carolina	13	26,002	49.99 ³
North Dakota	5	10,906	45.84 ³
Oklahoma	20	69,051	28.96
South Dakota	6	22,737	26.38 ³
Washington	3	27,393	10.95 ³
Wisconsin	7	13,628	51.36 ³

¹ American Indian/Alaska Native child death rates are available for all 50 states.

² Per 100,000 deaths.

³ Rates based on 20 or fewer deaths may be unstable. Use with caution.

Produced by Angela A. A. Willetto, PhD, using WISQARS: the Office of Statistics and Programming, National Center for Injury Prevention and Control [CDC]. Data Source: NCHS Vital Statistics System for number of deaths. U.S. Bureau of Census for population estimates.

siderably (see Table 6). In 1999, no American Indian/Alaska Native child was reported to have died in Michigan. Washington and California have very low American Indian/Alaska Native child death rates, whereas Minnesota demonstrates the highest child death rate for Native American children with 57.56 child deaths per 100,000. Wisconsin and Arizona also demonstrate American Indian/Alaska Native child death rates that are above 50 per 100,000.

Teen Deaths by Accident, Homicide, and Suicide

Only Alaska, Arizona, and New Mexico have numerators in excess of 20; hence, data for these states are considered more reliable estimates. Therefore, data for all the other states must be used with caution. California, Oklahoma, and Minnesota have the lowest rates of teen deaths by accident, homicide, and suicide (see

TABLE 7. AMERICAN INDIAN/ALASKA NATIVE TEEN (AGES 15–19) DEATHS BY ACCIDENT, HOMICIDE, AND SUICIDE IN THE UNITED STATES AND SELECTED STATES¹ IN 1999

	NUMBER OF DEATHS	POPULATION	CRUDE RATE ²
United States AI/AN	209	234,657	89.07
Alaska	23	11,395	201.84
Arizona	30	26,747	112.16
California	7	28,492	24.57 ³
Michigan	8	6,042	132.41 ³
Minnesota	6	6,405	93.68 ³
Montana	10	6,533	153.07 ³
New Mexico	30	16,819	178.37
North Carolina	9	8,900	101.12 ³
North Dakota	7	3,358	208.46 ³
Oklahoma	14	27,153	51.56 ³
South Dakota	11	7,300	150.68 ³
Washington	15	10,301	145.62 ³
Wisconsin	6	5,063	118.51 ³

¹ Teen death rates by accident, homicide, and suicide are available for all 50 states.

² Per 100,000 deaths

³ Rates based on 20 or fewer deaths may be unstable. Use with caution.

Produced by Angela A. A. Willetto, PhD, using WISQARS: the Office of Statistics and Programming, National Center for Injury Prevention and Control, CDC. Data Source: NCHS Vital Statistics System for number of deaths. U.S. Bureau of Census for population estimates.

Table 7). Yet, there are significant differences in these lowest rates: California = 24.57, Oklahoma = 51.56, and Minnesota = 93.68. Further, only California and Oklahoma have teen death rates (by accident, homicide, and suicide) lower than the national American Indian/Alaska Native rate of 89.07. North Dakota has the highest rate, followed by Alaska and New Mexico. The Southwestern region has the greatest variability, containing two of the lowest rates (California and Oklahoma) and one of the highest (New Mexico).

Social Indicators

Teens Who Are High School Dropouts

Oklahoma, California, and New Mexico have the lowest rates of American Indian/Alaska Native high school dropouts (see Table 8). However, the rates for Oklahoma and California have problematic data. For Oklahoma, the numerator for the year 2000 was zero. It is highly unlikely that there were no Oklahoma American Indian/Alaska Native teens who were not attending school and were not high school graduates in 2000. Hence, two percentages are estimated: one is based on three-year averages (5.99%) and one is based on two-year averages (8.42%). California data demonstrated a similar but not as extreme problem. In the researcher's opinion, the two-year estimates are likely to be more accurate and they are therefore used in the discussion and implications section. In any case, these states still demonstrate relatively low rates of high school dropouts. The highest rate of high school dropouts belongs to Arizona American Indian/Alaska Natives with 40.51%. Minnesota (35.53%) and South Dakota (24.72%) round out the highest rates of American Indian/Alaska Native high school dropouts. Arizona American Indian/Alaska Natives have almost four times the number of high school dropouts as New Mexico American Indian/Alaska Natives.

TABLE 8. PERCENTAGE OF AMERICAN INDIANS/ALASKA NATIVES (AGES 16–19) WHO WERE HIGH SCHOOL DROPOUTS FOR SELECTED STATES¹ IN 1999

HIGH SCHOOL DROPOUTS	
United States AI/AN	15.85%
Alaska	12.59%
Arizona	40.51%
California	8.03% (10.93%) ²
Michigan	23.64%
Minnesota	23.56% (35.53%) ²
Montana	19.35%
New Mexico	10.23%
North Carolina	24.06%
North Dakota	17.78%
Oklahoma	5.99% (8.42%) ²
South Dakota	24.72%
Washington	15.62%
Wisconsin	11.86% (15.64%) ²

¹ American Indian/Alaska Native data are available for all 50 states.

² Percentage in parentheses are reported when the numerator and or denominator were zero or exceptionally low for a given year. Hence, percentage in parentheses reflect two-year averages rather than three-year averages.

Source: Produced by Angela A. A. Willeto, PhD, using Data FERRET, CPS Basic datasets for January, February, March, April, May, September, October, November, and December, and the years 1998, 1999, and 2000. Current Population Survey, Bureau of Labor Statistics, U.S. Census Bureau.

Teens Who Are Not Attending School and Not Working

Michigan, Wisconsin, and Oklahoma have the lowest rates of American Indian/Alaska Native

teens who are not attending school and not working (see Table 9). However, Michigan's and Wisconsin's rates are based on especially problematic data. For both states, the numerators for

TABLE 9. PERCENTAGE OF AMERICAN INDIANS/ALASKA NATIVES (AGES 16–19) WHO WERE NOT ATTENDING SCHOOL AND NOT WORKING FOR SELECTED STATES¹ IN 1999

NOT WORKING AND NOT ATTENDING SCHOOL	
United States AI/AN	14.60%
Alaska	16.98%
Arizona	31.11%
California	10.87%
Michigan	7.53% (14.36%) ²
Minnesota	28.35% (42.29%) ³
Montana	20.98%
New Mexico	13.39%
North Carolina	8.86% (11.11%) ³
North Dakota	20.34%
Oklahoma	8.71%
South Dakota	18.00%
Washington	24.07%
Wisconsin	8.37% (17.94%) ²

¹ American Indian/Alaska Native data are available for all 50 states.

² Percentage in parentheses is reported when the numerators were zero for a given year. Hence, percentage in parentheses reflects one-year averages rather than three-year averages.

³ Percentage in parentheses is reported when the numerators were zero for a given year. Hence, percentage in parentheses reflects two-year averages rather than three-year averages.

Source: Produced by Angela A. A. Willeto, PhD, using Data FERRET, Current Population Survey Basic datasets for January, February, March, April, May, September, October, November, and December, and years 1998, 1999, and 2000. Bureau of Labor Statistics, U.S. Census Bureau.

two years are zero. This has the effect of inflating the denominator and reduces the percentage of teens who are not attending school and not working. It is very unlikely that there were no American Indian/Alaska Native teens who were not working and not attending school in the years of 1998 and 2000 for Michigan and in 1998 and 1999 for Wisconsin. It is the researcher's opinion that the zero data should be discounted and the estimates should be based on data with both numerator and denominator information. Hence, Oklahoma, California, and North Carolina have the lowest rates of American Indian/Alaska Native teens who are not attending school and not working. At the other end of the continuum, Minnesota, Arizona, and Washington have the highest rates of such American Indian/Alaska Native teens. Minnesota's rate is almost five times higher than Oklahoma's.

Children Living in Families Where No Female Parent Has Full-Time, Year-Round Employment¹⁶

The percentage of children living in an American Indian/Alaska Native female-headed family where the parent is unemployed and not in the labor force ranges from a low of 32.24% in Wisconsin to a high of 49.55% in Arizona (see Table 10). It appears that although this indicator demonstrates some variability, it is not as extensive as in other indicators. However, this still means that from about a third to almost half of American Indian/Alaska Native children are in female-headed families without stable employment.

TABLE 10. PERCENTAGE OF CHILDREN LIVING IN AMERICAN INDIAN/ALASKA NATIVE (ALONE)¹
FEMALE-HEADED FAMILIES, BY EMPLOYMENT STATUS, IN 2000

	UNEMPLOYED AND NOT IN LABOR FORCE		EMPLOYED OR IN ARMED FORCES		TOTALS	
	NUMBER	%	NUMBER	%	NUMBER	%
U.S. AI/AN	139,887	42.53	188,990	57.47	328,412	100.00
Alaska	5,583	40.73	8,124	59.27	13,707	100.00
Arizona	17,119	49.55	17,433	50.45	34,552	100.00
California	19,158	46.73	21,841	53.27	40,999	100.00
Michigan	2,764	34.46	5,258	65.54	8,022	100.00
Minnesota	2,632	37.79	4,333	62.21	6,965	100.00
Montana	3,230	40.94	4,659	59.06	7,889	100.00
New Mexico	11,423	47.60	12,577	52.40	24,000	100.00
N. Carolina	5,542	39.30	8,558	60.70	14,100	100.00
N. Dakota	1,948	43.20	2,561	56.80	4,509	100.00
Oklahoma	13,650	37.85	22,417	62.15	36,067	100.00
S. Dakota	3,752	46.87	4,253	53.13	8,005	100.00
Washington	4,902	39.70	7,446	60.30	12,348	100.00
Wisconsin	2,209	32.24	4,642	67.76	6,851	100.00

¹ Data used are for American Indian/Alaska Native (alone) rather than American Indian/Alaska Native (in combination with other racial categories).

Source: U.S. Census 2000 Summary File 3 (SF 3) - Sample Data. Produced by Angela A. A. Willetto, PhD, utilizing American Fact Finder.

Children in Poverty¹⁷

Michigan has the lowest percentage of American Indian/Alaska Native child poverty, followed by Alaska and North Carolina (see Table 11). South Dakota has the highest percentage of American Indian/Alaska Native children in poverty, followed by North Dakota and Montana. The states with

the highest percentages of Native American children in poverty are all located in the Northern Plains region, although the states with the lowest Native American child poverty are dispersed throughout the entire nation. All of the selected states have higher rates than the national child poverty rate of 19%, although Michigan is only slightly higher with 19.8%.

TABLE 11. AMERICAN INDIAN/ALASKA NATIVE CHILD POVERTY STATUS BY SELECTED STATES IN 1999

	BELOW	NUMBER ABOVE	TOTAL	BELOW	PERCENT ABOVE	TOTAL
United States AI/AN	249,561	539,948	789,509	31.6	68.4	100.0
Alaska	8,164	27,851	36,015	22.7	77.3	100.0
Arizona	40,929	54,939	95,868	42.7	57.3	100.0
California	26,131	66,910	93,041	28.1	71.9	100.0
Michigan	3,642	14,752	18,394	19.8	80.2	100.0
Minnesota	6,631	12,331	18,962	35.0	65.0	100.0
Montana	9,327	11,517	20,844	44.7	55.3	100.0
New Mexico	26,003	37,363	63,366	41.0	59.0	100.0
North Carolina	7,564	22,221	29,785	25.4	74.6	100.0
North Dakota	5,699	6,738	12,437	45.8	54.2	100.0
Oklahoma	24,763	68,434	93,197	26.6	73.4	100.0
South Dakota	13,939	11,744	25,683	54.3	45.7	100.0
Washington	8,219	20,768	28,987	28.4	71.6	100.0
Wisconsin	4,655	12,634	17,299	27.0	73.0	100.0

Source: U.S. Census 2000 Summary File 3 (SF 3) - Sample Data. Produced by Angela A. A. Willetto, PhD, utilizing American Fact Finder.

Families with Children Headed by a Single Parent¹⁸

The overall average percentage of children in American Indian/Alaska Native families headed by a single parent (37.22%) is based on the subtotal of the selected 13 states' reservation communities. In three states' reservation com-

munities, more than half of families with children are headed by single parents (see Table 12).

These include the Hoopa Valley Reservation, California (57.31%); Menominee Reservation and Off-Reservation Trust Land, Wisconsin (59.11%); and the highest overall, Red Lake Reservation, Minnesota (73.06%). In contrast, the Isabella

TABLE 12. SELECTED AMERICAN INDIAN/ALASKA NATIVE RESERVATION COMMUNITY FAMILIES WITH CHILDREN HEADED BY A SINGLE PARENT, WITHIN SELECTED STATES, IN 2000

	NUMBER	%
Subtotal of 13 state reservations	15,196	37.22
Alaska: Annette Island Reserve	64	32.99
Arizona: Navajo Nation Reservation ¹	8,375	36.43
California: Hoopa Valley Reservation	196	57.31
Michigan: Isabella Reservation ¹	910	28.72
Minnesota: Red Lake Reservation	518	73.06
Montana: Blackfeet Reservation ¹	495	34.93
New Mexico: Zuni Reservation ¹	290	34.77
North Carolina: Eastern Cherokee Reservation	503	44.12
North Dakota: Turtle Mountain Reservation ¹	702	54.38
Oklahoma: Osage Reservation	1,383	25.10
South Dakota: Pine Ridge Reservation ¹	989	54.55
Washington: Colville Reservation ¹	478	49.23
Wisconsin: Menominee Reservation ¹	266	59.11

¹ Includes off-reservation trust land.

Source: Produced by Angela A. A. Willeto, PhD, using estimates in U.S. Bureau of the Census (2001), Profiles of General Demographic Characteristics: 2000 Census of Population and Housing, United States: 2000.

Retrieved on September 29, 2002, from <http://www.census.gov/prod/cen2000/dpi/2khus.pdf>.

Reservation and Off-Reservation Trust Land, Michigan (28.72%) and the Osage Reservation, Oklahoma (25.1%) have the lowest percentage of families with children headed by a single parent.

Summary of Findings

When comparing the overall findings for the American Indian/Alaska Native populations in the 13 states on the well-being indicators, the following patterns emerge. The American Indian/Alaska Native populations in the states of Oklahoma, Michigan, and California emerge as doing comparatively better. However, the American Indian/Alaska Native populations in the states of Minnesota, South Dakota, and Arizona are faring comparatively worse. Other states, like Washington and Alaska, are distributed towards the better range, yet North Carolina falls mainly on the worse end of the continuum. Montana falls towards the middle of the distribution on all of the indicators. If we use a continuum as a

frame of reference and focus on where the states rank on the best three and worst three for each indicator (see Table 13) and then tally the results, we get a sense of the distribution of the 13 states (see Figure 1).

According to the current literature review, there are serious racial misclassification issues for American Indians. In particular, studies on infant and child mortality for Oklahoma and California Native Americans have shown that adjustments on the indicator are required to make accurate approximations of the true mortality rates. Hence, the relatively positive findings associated with Oklahoma and California American Indian and Alaska Native children and youth mortality rates must be viewed within this context of likely racial classification error. Further, it is pertinent to remind the reader that the data are based on state and federal holdings and do not include tribal data holdings.

TABLE 13. THREE WORST AND BEST AMERICAN INDIAN/ALASKA NATIVE STATE RANKINGS ON 10 WELL-BEING INDICATORS

INDICATOR	WORST	BEST
Low birthweight	NC, ¹ MI, AZ & ² MN	SD, WA, AK & OK & WI
Teen births	SD, MN, WI	MI, CA, NM
Infant mortality	SD, ND, NC	NM, OK, AZ
Child deaths	MN, WI, AZ	MI, WA, CA
Teen deaths	ND, AK, NM	CA, OK, MN
High school dropouts	AZ, MN, SD	OK, CA, NM
Teens who are not attending school and not working	MN, AZ, WA	OK, CA, NC
Children living with female parent who does not have full-time, year-round employment	AZ, NM, SD	WI, MI, OK
Child poverty	SD, ND, MT	MI, AK, NC
Single parents	MN, WI, CA	OK, MI, AK

¹ Bolded states have the highest and lowest rankings.

² Ties are indicated by an ampersand.

FIGURE 1. APPROXIMATE CONTINUUM OF 13 STATE RANKINGS ON AMERICAN INDIAN/ALASKA NATIVE WELL-BEING INDICATOR DATA

WORSE								BETTER
MN, SD, AZ	ND	NC	WI	MT	NM	WA	AK	CA, MI, OK

Discussion and Implications

There are a variety of ways to interpret the findings. It is important to acknowledge the great variability in indicator rates and percentages across states. This comparison becomes even greater when introducing the complexity of the racial-ethnic group of American Indians/Alaska Natives to the tables. This section will discuss the indicator results in the following ways. First, the United States All Races rate (usually represented by KIDS COUNT information, unless otherwise noted) will be compared with the United States American Indian/Alaska Native rate. Second, the United States All Races rate will be contrasted with the 13 states' American Indian/Alaska Native rate on the various indicators. Finally, each of the 13 states' All Races rate will be compared with the same state's American Indian/Alaska Native rate. The United States All Races rate is the same as the KIDS COUNT national rate. To assist with understanding the findings, a table and figure were constructed for each well-being indicator. In the figures, the phrasing of "worse" to "better" reflects the terminology utilized by KIDS COUNT (Annie E. Casey Foundation, 2002).

Health Indicators

Low Birthweight

Native American infants have a lower rate (6.58%), of low birthweight than the KIDS COUNT All Races rate. This national American Indian/Alaska Native rate is also lower than the KIDS COUNT All Races rates for four states: Oklahoma, New Mexico, Michigan, and North Carolina. Only North Carolina (11.2%) has a higher rate of low birthweight babies than the national KIDS COUNT rate of 7.6 (see Figure 2). Seven states have Native American Kids rates that are better than their non-Native, within-state counterparts, ranging from a low of 3.22% for North Dakota to a high of 20.27% for Oklahoma (see Table 14). On the other hand, six states fare comparatively worse than their within-state, non-Native counterparts, with North Carolina demonstrating the greatest difference of 25.85% worse.

FIGURE 2. DISTRIBUTION OF AMERICAN INDIAN/ALASKA NATIVE LOW BIRTHWEIGHT COMPARED TO U.S. ALL RACES RATE, WORSE TO BETTER

WORSE								BETTER		
NC	US	MI	AZ, MN	NM	MT	CA	ND	AK, OK, WI	WA	SD
11.2	7.6	7.4	7.2	7.1	6.9	6.6	6.0	5.9	5.4	5.2

TABLE 14. PERCENTAGE LOW BIRTHWEIGHT IN 1999: KIDS COUNT (2002) AND NATIVE AMERICAN KIDS (2002) AND THE DIFFERENCE IN PERCENTAGE (BETTER OR WORSE)

	KIDS COUNT	NAK	DIFFERENCE
United States	7.6	7.1	6.58% better
Alaska	5.8	5.9	1.72% worse
Arizona	6.9	7.2	4.35% worse
California	6.1	6.6	8.20% worse
Michigan	8.0	7.4	7.50% better
Minnesota	6.1	7.2	18.03% worse
Montana	6.8	6.9	1.47% worse
New Mexico	7.7	7.1	7.79% better
North Carolina	8.9	11.2	25.85% worse
North Dakota	6.2	6.0	3.22% better
Oklahoma	7.4	5.9	20.27% better
South Dakota	5.9	5.2	11.86% better
Washington	5.8	5.4	6.90% better
Wisconsin	6.7	5.9	11.94% better

Teen Birth Rate

The Native American Kids rate of teen births (41.40 births per 1,000 females) is much higher than the KIDS COUNT rate (29 births per 1,000 females). Only in Michigan do Native American

kids have the distinction of having fewer teen births than the national KIDS COUNT rate (see Figure 3). Although there is great variability in the rate of teen births across states, the figures tend toward the higher end of the continuum for American Indians and Alaska Natives (see

FIGURE 3. DISTRIBUTION OF AMERICAN INDIAN/ALASKA NATIVE TEEN BIRTH RATES COMPARED TO U.S. ALL RACES RATE, WORSE TO BETTER

WORSE											BETTER	
MN	NC	WI	MT	ND	AK	AZ	OK	WA	NM	CA	US	MI
61.62	53.55	58.39	52.18	49.82	48.72	46.76	46.08	45.17	43.11	29.61	29	19.12

TABLE 15. TEEN BIRTH RATES IN 1999: KIDS COUNT (2002) AND NATIVE AMERICAN KIDS (2002) AND THE DIFFERENCE IN PERCENTAGE (BETTER OR WORSE)

	KIDS COUNT	NAK	DIFFERENCE
United States	29	41.40	42.76% worse
Alaska	25	48.72	94.88% worse
Arizona	42	46.76	11.33% worse
California	31	29.61	4.48% better
Michigan	22	19.12	13.09% better
Minnesota	16	61.62	285.13% worse
Montana	18	52.18	189.89% worse
New Mexico	43	43.11	0.26% worse
North Carolina	35	53.55	53.00% worse
North Dakota	13	49.82	283.23% worse
Oklahoma	33	46.08	39.64% worse
South Dakota	19	61.65	224.47% worse
Washington	22	45.17	105.32% worse
Wisconsin	20	58.39	191.95% worse

Table 15). The Michigan Native American Kids rate is 13.09% lower than that of their within-state, non-Native counterparts. Likewise, the California Native American Kids rate is 4.48% lower than that of their within-state, non-Native peers. New Mexico’s Native American Kids and KIDS COUNT rates are almost the same but are significantly higher than the national KIDS COUNT rate. Minnesota’s, Montana’s, and South Dakota’s Native American Kids teen birth rates are much higher than their respective KIDS COUNT rates; it appears that these differences are due to the very low KIDS COUNT rates for these states, even in comparison to the national KIDS COUNT rate.

Infant Mortality

First of all, at the national level, the Native American Kids infant mortality rate is 28% worse than the All Races rate reported by KIDS COUNT. All of the 13 states have higher rates of American Indian/Alaska Native infant mortality than the national KIDS COUNT rate of 7.1 (see Figure 4). Only in one state are Native American infants demonstrating a lower rate of infant

mortality than their non-Native counterparts (see Table 16). Oklahoma’s American Indian/Alaska Native rate of infant mortality is 6% lower than the Oklahoma KIDS COUNT rate, although it is still higher than the national KIDS COUNT rate of 7.1. Hence, although it appears that Oklahoma Native American kids are comparatively better off than Oklahoma’s KIDS COUNT rate, part of this “advantage” stems from the fact that the Oklahoma KIDS COUNT rate is substantially lower than the national KIDS COUNT rate. The other 12 states all have higher rates of infant mortality than their within state non-Native counterparts, although Michigan’s American Indian/Alaska Native rate is only 9% worse than the Michigan KIDS COUNT rate. South Dakota (71% higher), Minnesota (76% higher), Montana (79% higher), Washington (92% higher), and North Dakota (103% higher) all have substantially higher rates of infant mortality than their non-Native state counterparts. These five states are all located in the northern region of the United States, yet Michigan is also located in the more northern area of the country.

FIGURE 4. DISTRIBUTION OF AMERICAN INDIAN/ALASKA NATIVE INFANT MORTALITY COMPARED TO U.S. ALL RACES RATE, WORSE TO BETTER

WORSE							BETTER						
SD	ND	NC	MT	MN	WA	WI	AK	CA	MI	AZ	OK	NM	US
15.2	13.8	13.7	12.0	10.9	9.6	9.2	9.1	8.9	8.8	8.6	8.0	7.7	7.1

TABLE 16. INFANT MORTALITY INDICATOR IN 1999: KIDS COUNT (2002) AND NATIVE AMERICAN KIDS (2002) AND THE DIFFERENCE IN PERCENTAGE (BETTER OR WORSE)

	KIDS COUNT	NAK	DIFFERENCE
United States	7.1	9.1	28.17% worse
Alaska	5.7	9.1	59.65% worse
Arizona	6.8	8.6	26.47% worse
California	5.4	8.9	64.81% worse
Michigan	8.1	8.8	8.64% worse
Minnesota	6.2	10.9	75.81% worse
Montana	6.7	12.0	79.10% worse
New Mexico	6.9	7.7	11.59% worse
North Carolina	9.1	13.7	50.55% worse
North Dakota	6.8	13.8	102.94% worse
Oklahoma	8.5	8.0	5.88% better
South Dakota	8.9	15.2	70.79% worse
Washington	5.0	9.6	92.00% worse
Wisconsin	6.7	9.2	37.31% worse

Child Death Rates

Child death rates demonstrate significant variability, ranging from 100% better to 174.41% worse than the KIDS COUNT rate. The national Native American child death rate is 24.13% higher than the national KIDS COUNT rate. The states of California, Michigan, and Washington all have American Indian/Alaska Native child death rates lower than the national KIDS COUNT rate (see Figure 5). The American Indian/Alaska Native child death rates in many states, including

California, Michigan, Oklahoma, South Dakota, and Washington, are lower than those of their non-Native state counterparts (see Table 17). In the state of Michigan, no American Indian/Alaska Native child was reported to have died in 1999. Eight states have worse American Indian/Alaska Native child death rates than the KIDS COUNT state rates. Four of these states have differences of over 100%: Minnesota (174.41%), Arizona (122.57%), Wisconsin (105.44%), and Alaska (101.17%).

FIGURE 5. DISTRIBUTION OF AMERICAN INDIAN/ALASKA NATIVE CHILD DEATHS COMPARED TO U.S. ALL RACES RATE, WORSE TO BETTER

WORSE											BETTER		
MN	WI	AZ	NC	AK	ND	MT	NM	OK	SD	US	CA	WA	MI
57.56	51.36	51.19	49.99	46.27	45.84	43.10	39.48	28.96	26.38	24	11.31	10.95	0

TABLE 17. CHILD DEATH RATES (AGES 1–14) IN 1999: KIDS COUNT (2002) AND NATIVE AMERICAN KIDS (2002) AND THE DIFFERENCE IN PERCENTAGE (BETTER OR WORSE)

	KIDS COUNT	NAK	DIFFERENCE
United States	24	29.79	24.13% worse
Alaska	23	46.27*	101.17% worse
Arizona	23	51.19	122.57% worse
California	20	11.31*	43.45% better
Michigan	23	0.00*	100.00% better
Minnesota	21	57.56*	174.10% worse
Montana	28	43.10*	53.93% worse
New Mexico	27	39.48	46.22% worse
North Carolina	25	49.99*	99.96% worse
North Dakota	24	45.84*	91.00% worse
Oklahoma	31	28.96	6.58% better
South Dakota	27	26.38*	2.30% better
Washington	20	10.95*	45.25% better
Wisconsin	25	51.36*	105.44% worse

* Based on numerators of less than 20. Use with caution.

Teen Deaths by Accident, Homicide, and Suicide

The Native American Kids rate is 68% worse than the KIDS COUNT rate. Eleven states have higher American Indian/Alaska Native rates than the national KIDS COUNT rate (see Figure 6). There is considerable variation among the 13 states (see Table 18). American Indian/Alaska Native youths in two states demonstrate significantly lower rates of teen deaths by accident, homicide, and suicide: California by 40% and Oklahoma by 25%. These two state American

Indian/Alaska Native rates are also lower than the national KIDS COUNT rate of 53. Unfortunately, seven states have American Indian/Alaska Native rates more than double those of their non-Native counterparts. The rates of teen deaths by accident, homicide, and suicide in New Mexico (105%), Minnesota (113%), Wisconsin (147%), Alaska (193%), Michigan (194%), Washington (203%), and North Dakota (272%) are all substantially higher than the respective All Races state rates. Again, most of these states, with the exception of New Mexico, are in the northern region of the United States.

FIGURE 6. DISTRIBUTION OF AMERICAN INDIAN/ALASKA NATIVE TEEN DEATHS (ROUNDED UP TO NEAREST WHOLE NUMBER) COMPARED TO U.S ALL RACES RATE, WORSE TO BETTER

WORSE											BETTER		
ND	AK	NM	MT	SD	WA	MI	WI	AZ	NC	MN	US	OK	CA
208	202	178	153	151	146	132	119	112	101	94	53	52	25

TABLE 18. TEEN DEATHS BY ACCIDENT, HOMICIDE, AND SUICIDE INDICATOR IN 1999: KIDS COUNT (2002) AND NATIVE AMERICAN KIDS (2002) AND THE DIFFERENCE IN PERCENTAGE (BETTER OR WORSE)

	KIDS COUNT	NAK	DIFFERENCE
United States	53	89.07	68.06% worse
Alaska	69	201.83	192.51% worse
Arizona	61	112.15	83.85% worse
California	41	24.54*	40.15% better
Michigan	45	132.40*	194.22% worse
Minnesota	44	93.66*	112.86% worse
Montana	81	153.06*	88.96% worse
New Mexico	87	178.36	105.01% worse
North Carolina	59	101.12*	71.39% worse
North Dakota	56	208.44*	272.21% worse
Oklahoma	69	51.55*	25.29% better
South Dakota	79	150.67*	90.72% worse
Washington	48	145.60*	203.33% worse
Wisconsin	48	118.50*	146.88% worse

* Based on numerators of less than 20. Use with caution.

Social Indicators

High School Dropouts

Overall, the Native American Kids rate (15.85%) is 58.50% higher than the KIDS COUNT national rate (10%), but there is significant variation in the distribution of high school dropouts by state.

Only the state of Oklahoma has a lower rate of American Indian/Alaska Native dropouts than the national KIDS COUNT rate (see Figure 7).

Interestingly, in contrast to many other state indicator results, the Oklahoma KIDS COUNT rate is actually lower than the national KIDS COUNT rate (see Table 19). Hence, both the All Races and American Indian/Alaska Natives of Oklahoma are doing comparatively well on this indicator.

New Mexico's American Indian/Alaska Native rate of high school dropouts is only slightly higher than the national KIDS COUNT rate, although

New Mexico's KIDS COUNT rate is slightly higher than the national KIDS COUNT rate. Native American Kids rates in all of the other states are worse in comparison to both the national KIDS COUNT rates and within-state, non-Native rates. States with very low KIDS COUNT rates and higher Native American Kids rates have the greatest percentage differences; this includes North Dakota (492.67%) and South Dakota (209%). In contrast, Arizona's KIDS COUNT and Native American Kids rates are both high, which obscures the fact that Arizona has the overall highest percentage of high school dropouts (40.51%). Yet, Minnesota's American Indian/Alaska Native high school dropout rate of 35.53% is very high, and their within-state, non-Native counterparts have a very low dropout rate of only 5%, which results in the highest percentage difference of 610.60%.

FIGURE 7. DISTRIBUTION OF AMERICAN INDIAN/ALASKA NATIVE HIGH SCHOOL DROPOUTS COMPARED TO THE U.S. ALL RACES RATE, WORSE TO BETTER

WORSE												BETTER	
AZ	MN	SD	NC	MI	MT	ND	WI	WA	AK	CA	NM	US	OK
40.51	35.53	24.72	24.06	23.64	19.35	17.78	15.64	15.62	12.59	10.93	10.23	10	8.42

TABLE 19. PERCENTAGE OF HIGH SCHOOL DROPOUTS IN 1999: KIDS COUNT (2002) AND NATIVE AMERICAN KIDS (2002) AND THE DIFFERENCE IN PERCENTAGE (BETTER OR WORSE)

	KIDS COUNT	NAK	DIFFERENCE
United States	10	15.85	58.50% worse
Alaska	8	12.59	57.38% worse
Arizona	17	40.51	138.29% worse
California	9	10.93	21.44% worse
Michigan	9	23.64	162.67% worse
Minnesota	5	35.53	610.60% worse
Montana	8	19.35	141.88% worse
New Mexico	11	10.23	7.00% better
North Carolina	11	24.06	118.73% worse
North Dakota	3	17.78	492.67% worse
Oklahoma	9	8.42	6.44% better
South Dakota	8	24.72	209.00% worse
Washington	9	15.62	73.56% worse
Wisconsin	6	15.64	160.67% worse

Teens Who Are Not Attending School and Not Working

The U.S. Native American Kids rate is 82.5% higher than the national All Races rate. None of the selected 13 states have lower American Indian/Alaska Native rates than the national KIDS COUNT rate (see Figure 8). Only the state of Oklahoma has a slightly lower Native American Kids rate (8.71%) than that of their within-state, non-Native counterparts (9%) (see Table 20). The states of Minnesota (957.25%), North Dakota

(306.80%), and Wisconsin (258.80%) have Native American Kids rates that are substantially higher than their respective KIDS COUNT rates. It is important to note that these three states have exceptionally low KIDS COUNT rates, and this explains the high percentage differences between the American Indian/Alaska Natives and All Races rates. Even in the states of Arizona, New Mexico, and Alaska, which demonstrate high KIDS COUNT rates, the Native American Kids rates of teens who are not attending school and not working are higher still.

FIGURE 8. DISTRIBUTION OF AMERICAN INDIAN/ALASKA NATIVE TEENS WHO ARE NOT ATTENDING SCHOOL AND NOT WORKING COMPARED TO THE U.S. ALL RACES RATE, WORSE TO BETTER

WORSE											BETTER		
MN	AZ	WA	MT	ND	SD	WI	AK	MI	NM	NC	CA	OK	US
42.29	31.11	24.07	20.98	20.34	18.00	17.94	16.98	14.36	13.39	11.11	10.87	8.71	8

TABLE 20. TEENS WHO WERE NOT ATTENDING SCHOOL AND NOT WORKING IN 1999: KIDS COUNT (2002) AND NATIVE AMERICAN KIDS (2002) AND THE DIFFERENCE IN PERCENTAGE (BETTER OR WORSE)

	KIDS COUNT	NAK	DIFFERENCE
United States	8	14.60	82.50% worse
Alaska	10	16.98	69.80% worse
Arizona	12	31.11	159.25% worse
California	9	10.87	20.78% worse
Michigan	7	14.36	105.14% worse
Minnesota	4	42.29	957.25% worse
Montana	7	20.98	199.71% worse
New Mexico	11	13.39	21.73% worse
North Carolina	8	11.11	38.88% worse
North Dakota	5	20.34	306.80% worse
Oklahoma	9	8.71	3.22% better
South Dakota	7	18.00	157.14% worse
Washington	7	24.07	243.86% worse
Wisconsin	5	17.94	258.80% worse

Children Living in Families Where Female Parent Does Not Have Employment

Given that it was not possible to exactly replicate the KIDS COUNT “children living in families where no parent has full-time, year-round employment” data, a direct comparison with Native American Kids information would not be very accurate. Instead, the same data sources were used to estimate comparable information for the All Races category for the United States and the selected states. This would allow more appropriate direct comparisons between the American Indian/Alaska Native and All Races populations within each state.

The national Native American Kids rate is 22.95% higher than the national All Races rate. The states of Michigan and Wisconsin are the only two states that have lower American Indian/Alaska Native rates than the national All Races rate (see Figure 9). For this indicator, there

are no states where American Indian/Alaska Native rates are lower than those of their within-state, non-Native counterparts (see Table 21). Hence, all of the selected states have more American Indian/Alaska Native families with children where the mother does not have employment than non-Native families in that category. However, this percentage difference ranges from a low of 7.15% worse (Michigan) to a high of 123.08% worse (South Dakota). The All Races mother’s unemployment rates in North Dakota and South Dakota are especially low, whereas the American Indian/Alaska Native rate is high, and this explains why there is such a huge percentage difference. Arizona American Indian/Alaska Natives have the highest rate of mother’s unemployment, yet the All Races rate within that state is also high. This is similar to the state of California, where the All Races rate of 42.04% is the highest for that racial grouping, and the American Indian/Alaska Native rate is a high 46.73%.

FIGURE 9. DISTRIBUTION OF AMERICAN INDIAN/ALASKA NATIVE CHILDREN LIVING WITH FEMALE PARENT WHO DOES NOT HAVE EMPLOYMENT COMPARED TO THE U.S. ALL RACES RATE, WORSE TO BETTER (DATA BASED ON U.S. CENSUS 2000 SUMMARY FILE 1)

WORSE											BETTER		
AZ	NM	SD	CA	ND	MT	AK	WA	OK	MN	NC	US	MI	WI
49.55	47.60	46.87	46.73	43.20	40.94	40.73	39.70	37.85	37.79	39.30	34.59	34.46	32.24

TABLE 21. MOTHER'S EMPLOYMENT INDICATOR IN 1999: U.S. CENSUS (2000) AND NATIVE AMERICAN KIDS (2002) AND THE DIFFERENCE IN PERCENTAGE (BETTER OR WORSE).

MOTHER'S EMPLOYMENT	CENSUS 2000	NAK	DIFFERENCE
United States	34.59	42.53	22.95% worse
Alaska	33.06	40.73	23.20% worse
Arizona	39.19	49.55	26.44% worse
California	42.04	46.73	11.16% worse
Michigan	32.16	34.46	7.15% worse
Minnesota	22.82	37.79	65.60% worse
Montana	27.17	40.94	50.68% worse
New Mexico	39.19	47.60	21.46% worse
North Carolina	32.21	39.30	22.01% worse
North Dakota	21.16	43.20	104.16% worse
Oklahoma	34.61	37.85	9.36% worse
South Dakota	21.01	46.87	123.08% worse
Washington	34.26	39.70	15.88% worse
Wisconsin	23.91	32.24	34.84% worse

Child Poverty

The national Native American Kids rate of child poverty is 66.3% worse than the national KIDS COUNT rate. All of the selected states have higher rates of child poverty than the national rate (see Figure 10), and in all of these states, American Indian/Alaska Native children have higher percentages of poverty than their respective non-Native, state counterparts (see Table 22). The differences range from a low of 15.7% (Oklahoma) to a high of 201.7% (South Dakota). Including South Dakota, four states have American Indian/Alaska Native percentages that are more than double those of their state's non-Native peers; the other three are Montana

(103.2%), Minnesota (169.2%), and North Dakota (169.4%). Michigan has a relatively low difference between All Races and American Indian/Alaska Native child poverty (16.5%); even more impressive is the fact that Michigan has a lower rate of child poverty than the United States rate. Two of the three states with the lowest difference in rates (Oklahoma [15.7%] and California [22.2%]) experience much higher overall rates of child poverty than the national rate of 19%. The low percentage difference between these states' respective All Races and American Indian/Alaska Native rates somewhat camouflages significant differences in child poverty experienced by all children in Oklahoma and California compared to the national rate.

FIGURE 10. DISTRIBUTION OF AMERICAN INDIAN/ALASKA NATIVE CHILD POVERTY COMPARED TO U.S. ALL RACES RATE, WORSE TO BETTER

WORSE										BETTER			
SD	ND	MT	AZ	NM	MN	WA	CA	WI	OK	NC	AK	MI	US
54.4	45.8	44.7	42.7	41.0	35.0	28.4	28.1	27.09	26.6	25.4	22.7	19.8	19

TABLE 22. CHILD POVERTY INDICATOR IN 1999: KIDS COUNT (2002) AND NATIVE AMERICAN KIDS (2002) AND THE DIFFERENCE IN PERCENTAGE (BETTER OR WORSE)

CHILD POVERTY	KIDS COUNT	NAK	DIFFERENCE
United States	19	31.6	66.32% worse
Alaska	15	22.7	51.33% worse
Arizona	23	42.7	85.65% worse
California	23	28.1	22.17% worse
Michigan	17	19.8	16.47% worse
Minnesota	13	35.0	169.23% worse
Montana	22	44.7	103.18% worse
New Mexico	27	41.0	51.85% worse
North Carolina	19	25.4	33.68% worse
North Dakota	17	45.8	169.41% worse
Oklahoma	23	26.6	15.65% worse
South Dakota	18	54.3	201.67% worse
Washington	14	28.4	102.86% worse
Wisconsin	14	27.0	92.86% worse

Single-Parent Families

The national Native American Kids rate is 37.82% worse than the KIDS COUNT national rate for single-parent families. As with all of the other well-being indicators, there is significant variability in the state rates. Only the state of Oklahoma has an American Indian/Alaska Native rate lower than the national KIDS COUNT rate (see Figure 11); this rate is also lower than that of

their within-state, non-Native counterparts (see Table 23). All of the other states have reservation communities with higher rates of single-parent families than their KIDS COUNT state peers. Reservation communities in five states have exceptionally high differences, all being over 100%: California (120.42%), North Dakota (126.58%), South Dakota (127.29%), Wisconsin (127.35%), and Minnesota (247.90%).

FIGURE 11. DISTRIBUTION OF AMERICAN INDIAN/ALASKA NATIVE SINGLE PARENTS COMPARED TO U.S. ALL RACES RATE, WORSE TO BETTER

WORSE												BETTER	
MN	WI	CA	SD	ND	WA	NC	AZ	MT	NM	AK	MI	US	OK
73.06	59.11	57.31	54.55	54.38	49.23	44.12	36.43	34.93	34.77	32.99	28.72	27	25.10

TABLE 23. SINGLE-PARENT FAMILIES INDICATOR IN 1999 AND 2000: KIDS COUNT (2002) AND NATIVE AMERICAN KIDS (2002) AND THE DIFFERENCE IN PERCENTAGE (BETTER OR WORSE)

SINGLE-PARENT FAMILIES	KIDS COUNT	NAK*	DIFFERENCE
United States	27	37.22	37.85% worse
Alaska	28	32.99	17.82% worse
Arizona	29	36.43	25.62% worse
California	26	57.31	120.42% worse
Michigan	28	28.72	2.57% worse
Minnesota	21	73.06	247.90% worse
Montana	28	34.93	24.75% worse
New Mexico	31	34.77	12.16% worse
North Carolina	28	44.12	57.57% worse
North Dakota	24	54.38	126.58% worse
Oklahoma	26	25.10	3.46% better
South Dakota	24	54.55	127.29% worse
Washington	28	49.23	75.82% worse
Wisconsin	26	59.11	127.35% worse

Source: NAK data are based on 2000 Summary File 1 (100%) U.S. Census data for selected large reservations within the selected states.

Summary

In general, lower rates on indicators reflect better rankings. In only one indicator are Native American kids faring comparatively better than their non-Native counterparts—the rate of low birthweight. This positive finding is offset by the high rate of gestational diabetes that Native American mothers experience, which contributes to a higher rate of high birthweight babies. In terms of low birthweight rates, many state American Indian/Alaska Native rates are lower than those of their within-state non-Native counterparts.

However, in all other indicators, Native American kids are doing comparatively worse at the national level, while comparisons at the state level show great variability on the well-being indicators. Some states have lower rates for American Indians/Alaska Native than for their non-Native counterparts on a particular indicator. When that particular state's All Races rate is lower than the national rate, then this is an especially positive finding for the American Indian/Alaska Natives in

that state. For example, California American Indian/Alaska Natives have a much lower rate of child deaths (11.31 per 100,000 deaths) than both the national KIDS COUNT rate of 24 per 100,000 deaths and the California KIDS COUNT rate of 20 per 100,000 deaths. However, as in many cases, when the state's All Races rate is higher than the national All Races rate, that does not mean particularly good news for Native Americans. It may just be that American Indian/Alaska Natives are doing comparatively well within their state but may or may not compare well at the national level. For example, Oklahoma American Indian/Alaska Natives have a lower rate of child deaths (28.96 per 100,000 deaths) than the Oklahoma's KIDS COUNT rate of 31 per 100,000 deaths, but both Oklahoma's All Races rate and its American Indian/Alaska Native rate are much higher than the national KIDS COUNT rate of 24 per 100,000 deaths.

These data are intriguing and worthy of further analysis. It would be particularly helpful to break down each state's data into separate tables and analyze those results. However, that is beyond the scope of this project.

Recommendations

This section highlights recommendations from numerous studies pertinent to each particular well-being indicator and supports what needs to occur to improve the well-being of American Indian/Alaska Native children, youth, and families. Recommendations are on policy, practice, and research issues and utilize studies on American Indians and Alaska Natives when available. In other cases where little research exists, recommendations from studies of the general population are provided.

The increased or higher rates on various well-being indicators for American Indians/Alaska Natives are not due to inherent biological differences. Therefore, interventions should focus on social changes to increase the well-being of Native American children and youth. Creative thinking is required to design culturally relevant programs for Native Americans at the community level to increase economic opportunities in both reservation communities and urban centers. Increased communication across states and reservation communities is necessary to get tribal people talking to each other about which programs work and which don't.

American Indian/Alaska Native Child and Youth Population

The significance of these statistics is that the Indian population has more children and youth and, therefore, a more dependent population. It has a greater need for all types of community services for children and youth—hospitals, health centers, clinics, schools, school health services, recreation programs, preschool programs such as day care, Head Start, and special health programs for youth, etc. Also, this population will be having a proportionately higher number of girls entering the child-bearing age and needing maternal health services in this present decade. (Wallace, 1973, p. 449)

The Wallace study of 1973 may seem outdated, but the recommendations concerning the disproportionately young American Indian/Alaska Native population are still accurate. Furthermore, a national study of American Indian adolescents located in Indian Health Service (IHS) areas indicates that success in school is an important protective factor against both negative social and negative health problems:

What was consistently evident is that self-reported poor school performance is strongly associated with almost every negative health and social outcome studied. In other words, there was a strong relationship between academic risk and multiple physical, social, and psychological risk

indicators. Specially [sic], compared with those who reported doing above average in their school work, those who reported below-average school performance were more than twice as likely to smoke cigarettes, drink alcohol, and use marijuana daily or weekly. Poor school achievers were one third as likely to have previously attempted suicide, and they were almost twice as likely to indicate that school officials do not care about them and that their family does not understand them. (Blum et al., 1992, p. 4)

Brave Heart and DeBruyn (1998) have argued that many social and health problems plaguing Native Americans stem from unresolved historical grief. In the following, their recommendations are included:

We strongly advocate the development of similar groups for American Indian survivors and clinicians working with American Indians. The group process involves heightening awareness of historical trauma and stimulates the experience of associated grief through the use of audiovisual materials depicting traumas such as the Wounded Knee massacre and early boarding school ordeals. The emotional expression of pain is encouraged through small and large group processing and cathartic exercises. In one exercise, participants diagram a lifeline of their traumatic experiences and share these with partners and in small groups. Facilitators trained in historical trauma work with the small groups. The entire four day process

involves wasiglaki istamniyanpi wicak-cepakintapi—wiping the tears of the mourners (B. Kills Straight, personal communication, February 13, 1995)—a traditional Lakota grief resolution ceremony. Through this ceremony participants become, in essence, part of an extended family to facilitate continued contact and support. Further, our model stimulates a re-attachment to traditional Native values. The effectiveness of this model, demonstrated in the Black Hills in September 1992, resulted in the development of the Takini Network: Lakota Holocaust Survivor's Association; this group provides training on historical trauma among American Indians (Brave Heart-Jordan, 1995). (ibid., 1998, p. 71)

Health Indicators

Low Birthweight

Joe (1996) has advocated for more research on American Indian women who manage to keep their own lives and families healthy in spite of living in poverty conditions. We know little about these women. Therefore, what is known about the behaviors of other women of color may assist in prevention efforts for American Indian/Alaska Native women.

The low rates of smoking during pregnancy for Japanese, Cuban, Filipino, Mexican, Central and South American, and particularly Chinese women (all less than 5 percent) provide an excellent point of

reference for women whose rates are much higher (Puerto Rican, Hawaiian, non-Hispanic white, and American Indian—all greater than 10 percent). The reversal in smoking rates during pregnancy for teen mothers in the second half of the 1990s and continued high overall rates for American Indian mothers indicate the need for additional education directed toward these populations. (Matthews, 2001, p. 5)

Given that Grossman et al. (1994) found that urban American Indian/Alaska Natives have higher rates of low birthweight babies, they ask the following question:

Should urban American Indian/Alaska Natives receive attention as a population with special health needs? More than half of American Indian/Alaska Natives now live in urban areas, but only a few of these areas, such as Albuquerque, NM, Phoenix, AZ, and Anchorage, AK, offer direct IHS services. Title V of the Indian Care Improvement Act of 1976 was the first federal government recognition of the health needs of urban American Indian/Alaska Natives. Despite this recognition, few resources have been allocated to address these needs. (Grossman et al., 1994, p. 8)

Although American Indian/Alaska Natives have comparatively low rates of low birthweight babies, these rates could be further decreased by discouraging smoking during pregnancy.

Teen Births

This report shows that American Indian/Alaska Natives have high rates of teen births. If the goal is to reduce teen pregnancy, then Bayne-Smith and McBarnette (1996) point out some factors related to delaying sexual activity among teens:

Teenagers who believe that they have a sense of worth, self-respect, purpose, direction, a religious base, plans for the future, and goals to work toward tend to practice contraception if sexually active and are more likely to abstain much longer before becoming sexually active. Health policymakers, elected officials, and their king makers, from liberals to the religious right, would need to make bold steps by first dispensing with their moral and political posturing, racism, sexism, and hypocrisy. They need only consult the numerous scientific studies and other documentation that already exist, covering diverse topics from research studies on the cause of high teen birth rates in the United States to abortion rates, all of which refute any hypocritical posturing and moralizing about teen sexuality. Given the preceding discussions and all that is known about the lifelong negative effects of teen pregnancy, and given the state-of-the-art technology and distinctly American penchant for ingenuity, policymakers have the ability to develop not only socioeconomic but also psychological and emotional profiles of those children most likely to experience teen pregnancy. Anything short of active program planning,

development, and implementation targeted toward these youngsters for the purpose of pregnancy prevention is tantamount to criminal activity on the part of government. (ibid., 1996, pp. 185–186)

It is often argued that the Native American's strong value of family partially explains the result of high rates of teen births, but Dalla and Gamble (2001) have reported contrary findings. Specifically, although Navajos highly value their community's mothers and children, "most reported that teenage parenting was not acceptable; youth were expected to complete high school and gain employment prior to beginning families" (ibid., p. 8).

Community contexts discouraging teenage parenting likely result in strong motivation among youth to pursue other roles reinforced within the community, such as academic success. Yet some communities, like that examined here, discourage teenage parenting but have little to offer their youth in terms of alternative roles. The tools and instruments that facilitate the building and strengthening of community assets lay, as noted by many, in providing accessible educational opportunities and youth programs. Community assets and unique programs aimed at assisting youth in obtaining their high school and college degrees would buffer many challenges associated with teenage parenting. (Dalla and Gamble, 2000, p. 9)

Additionally, given that about half of Navajo teen

mothers are conflicted about their motherhood status, Dalla and Gamble (1997) have advocated for these mothers and note that they are in great need of formal assistance in order not to compromise the health and well-being of their children. Moreover, developing an instrument that can identify mothers at greatest risk of neglectful parenting would assist in determining the necessity of intervention (Dalla & Gamble, 2000).

In addition to focusing on the prevention of teen births, Dalla and Gamble (2001) identified challenges faced by Navajo teen mothers.

One frequently mentioned problem was that day care services were not available for young parents attending school. The need for child care far surpassed the supply. Lacking child care, teens often missed school. The need to provide day care to parenting students was recognized, yet funding shortages limited services the school could provide. It was further reported that financial limitations severely restricted the educational opportunities of many students, not only teenage parents. To challenge and motivate youth to pursue educational goals, two needs were described: (1) role models and mentors working in career fields of interest; and (2) corporate funding to offset costs associated with secondary education. (Dalla & Gamble, 2001, p. 9)

Another tricky area is the nature of the young mother's partner and the complexities involved in this relationship.

Young mothers in each investigation reported the significance of their partners in their lives. However, given the tenuousness of those relationships, many expected that they would not continue. Many provided information suggesting that the stress and responsibility of fatherhood, and inability to continuously fulfill the “provider” role, were keys to understanding the culmination of those relationships following their children’s births.

Programmatic support addressing the fathers’ needs, in terms of, for instance, father involvement beginning in the pregnancy and continuing throughout the infant’s first year, the acquisition of employment/work-related skills, training in anger/stress management techniques, and alcohol/drug treatment, may significantly improve the quality and resiliency of teenage parenting families. (Dalla & Gamble, 1997, p. 119)

Thus, many resources are required to assist young parents as they address their child(ren)’s well-being. “Furthermore, the American Indian adolescents themselves endorsed provision of transportation, clinics closer to the school, and school-based clinics as ways to improve prenatal care” (Liu et al., 1994, p. 340).

Infant Mortality

Sullivan (1989) has noted that the infant mortality rate for American Indians could be additionally lowered with increased access to prenatal care. Bulterys, Morgenstern, Welty, and Kraus (1990)

stated that introducing smoking cessation programs for pregnant women would have an expected (positive) impact on the American Indian infant mortality rate, particularly in the Plains regions, given their especially high rates of smoking (Sugarman et al., 1992). In addition, improving the levels of prenatal care among pregnant American Indians was identified as possibly decreasing infant mortality (McCusker et al., 2000). Citing the findings from Grossman and colleagues’ (1994) study, Kauffman and Joseph-Fox (1996) pointed out that, given their lowered likelihood of receiving prenatal care in the first trimester of pregnancy, urban Indians should be targeted when attempting to improve prenatal care.

When considering other factors that may lower infant mortality, a serious approach should include examination of structural socioeconomic variables. Bird and Bauman (1998) found that structural variables explained two-thirds of the variance in infant mortality rates. Similarly, American Indians’ high rate of sudden infant death syndrome (SIDS), the leading cause of infant mortality, is more related to low socioeconomic status than to the genetic predisposition of Native American women (Irwin, Mannino, & Daling, 1992).

Native American infants leave the hospital healthy but go to unsafe environments, which decrease their chances of survival

past 1 year. In particular, the poorer socioeconomic conditions that native American families experience and the related problems of alcohol, unemployment, and family disorganization contribute to the high rate of postneonatal mortality ... The roots of the problem of native American postneonatal mortality lie in the socioeconomic conditions of many Indian communities and cannot be addressed without recognition of these factors combined with the health care delivery system to diminish life expectancy for native American infants. (Honigfeld & Kaplan, 1987, p. 575)

Wilson (2000) presented some culturally specific reasons for the higher rate of infant mortality among American Indians and Alaska Natives:

Prenatal care is seldom utilized because of cultural beliefs that planning ahead constitutes bad luck during birth or results in deformed infants ... Swaddling infants in very warm houses and smoking during pregnancy could contribute to a high SIDS incidence. (Wilson, 2000, p. 133)

For Native American infants less than one year old, sudden infant death syndrome is the second highest cause of death (USDHHS, 2002). Addressing the planning-ahead belief is problematic, but families could be encouraged to decrease the heat in their homes if they desire to swaddle the baby.

Federally recognized tribal members are entitled to free health care services, which would seem to be a partial explanation for low American Indian/Alaska Native infant mortality. Yet, not all adolescent mothers take advantage of these services:

Native Americans are guaranteed health care through IHS and are subsequently free from economic barriers to care. Nevertheless, forty-five percent of adolescents surveyed did perceive barriers, most citing transportation, missing school, and family problems. The school-based clinics and the mobile van unit were specifically designed to overcome such barriers as distance and school absenteeism; however, they were apparently unsuccessful given the high drop-out rate and the lack of familiarity with services. In addition, four out of nine adolescents who had school-based clinics available cited embarrassment as the primary reason for not utilizing them. This is consistent with a recent study of high school students, of whom 51% felt school-based clinics were the least private place to go compared to a physician's office, adolescent clinic, or emergency department (Cheng, Savageau, Sattler, & DeWitt, 1993). (Liu et al., 1994, p. 340)

Here, the young voice of experience assists in making programmatic recommendations to address issues confronting adolescent mothers.

Child Death Rate

Several studies and reports give recommendations that address prevention of children's mortality. Child proofing the home appears to be an area that can be targeted for improvement:

To assess injury prevention awareness in urban Native American families, we administered 39 age-appropriate questions from the Framingham Safety Survey to 50 Native American families and 100 other families and developed an answer scoring system to analyze and compare survey responses. Survey responses revealed that Native American families are less likely to keep small objects, household products, and medicines out of the reach of their children and to possess and understand the use of ipecac. Although urban Native-American families appear to be less aware of ingestion prevention practices than other urban families, these and other deficiencies in injury prevention awareness are more likely the result of factors related to their low-income status than to culturally based practices. (Hsu & Williams, 1991, p. 1466)

Teen Deaths by Accident, Homicide, and Suicide

An important issue that warrants concern about teen deaths is intimate partner violence (IPV). Considering that teens are beginning to form romantic attachments, it is important for them to

know about and to practice healthy relationships. However, there are protective factors if intimate partner violence occurs: "Traditional family structures, social and religious practices, greater balance of power between men and women, and the role of women central to family organization in pre-reservation American Indian/Alaska Native societies likely served as protective factors for IPV in American Indian/Alaska Native communities" (National Center for Injury Prevention & Control, 2002, p. 2).

American Indian youth have a high rate of accidental death. Many of these fatalities are preventable. Simple compliance with seat belt laws could save lives:

Although 49 of 50 States currently have mandatory seat-belt laws, the proportion of Indian tribes that have comparable tribal laws in effect is far lower ... 59 of 153 responding tribes reported that they did not have either a tribal seat-belt law or adopt the State law; only 14 percent had adopted a tribal law regarding the mandatory use of seat belts. Success with tribal seat-belt laws in reducing motor-vehicle injuries on Indian reservations has been demonstrated elsewhere (Indian Health Services, 1994; Centers for Disease Control and Prevention, 1992). (Grossman, Sugarman, Fox, & Moran, 1997, p. 317)

American Indian/Alaska Native suicide deaths have long been identified as problematic.

Numerous studies have been conducted on this topic, and many recommendations have been put forth. Efforts to reduce teen deaths by suicide highlight both individual efforts and community and society-wide initiatives. Some studies make numerous recommendations (e.g., Werenko et al., 2000). Kettl and Bixler (1991, as cited in Werenko, 2000, p. 41) argued that limiting alcohol availability was effective in suicide prevention within one Alaska Native community. In a similar way, but not to the same extent, Werenko et al. (2000) also pointed out the effectiveness of reducing alcohol availability:

Limiting access to alcohol has also been associated with a dramatic decrease in suicide death rates. However, it is not practical to suggest prohibition for New Mexico, instead, we recommend that the alcohol industry contribute to the solution by providing funding to further examine the role of alcohol in intentional injury death. (p. 42)

Werenko et al. (2000) also pointed to the physician-patient relationship as an ideal opportunity to intervene on the behalf of patients at risk for suicide:

Training physicians to identify signs of depression has been shown to be successful in reducing suicide death rates (see Rutz, et al., 1989). The unique patient-physician relationship allows this opportunity for intervention. Funding continuing edu-

cation in this area may provide a valuable resource to the community. (p. 42)

Restricting handgun access, mandating safety devices on firearms, and strict penalties for failing to report lost or stolen firearms that are subsequently used in a crime are also among recommendations made by Werenko et al. (2000, p. 40).

Many studies have endeavored to understand the many risk factors associated with suicides. However, other studies have also identified protective factors against suicide attempts. These include connectedness to family and discussing problems with family or friends (Borowsky et al., 1999; Cummins et al., 1999).

The estimated probability of attempting suicide increased dramatically as the number of risk factors to which an adolescent was exposed increased; however, increasing protective factors was more effective at reducing the probability of a suicide attempt than was decreasing risk factors. (Borowsky et al., 1999, p. 573)

Scholars, various agencies, and American Indian communities are attempting to understand and hopefully prevent suicide through research efforts and by implementing various intervention programs (Levy & Kunitz, 1987; LaFromboise, 1995; Middlebrook, LeMaster, Beals, Novins, & Manson, 1998; Pharris et al., 1997; Serna, May, Sitaker, IHS, & CDC; 1998; Tower, 1989; Wissow et al., 2001). In a contracted survey with IHS, which had identified 194 programs as of May 9,

1988, the following question was asked:

Given the fact that American Indian adolescents are at special risk for suicide, what programs or interventions have or are being developed to help these students? This survey identified 194 programs carrying out significant prevention activity as of May 9, 1988.

The majority of programs are located in human service and community settings. Approximately one-quarter are based in schools. Nearly one-half of the 194 programs are sponsored by local tribes or Native organizations; one-third are managed by private nonprofit groups; one-quarter are administered by the IHS. Two-thirds of the interventions involve counseling and psychotherapy; one-half provide specialized training or case consultation. Roughly one-third emphasize recreational and cultural activities. (Manson et al., 1989, p. 5)

Further research is necessary to analyze community outreach efforts and to intervene with individuals who are at high risk of committing suicide (Mock, Grossman, Mulder, Stewart, & Koepsell, 1996). Schinke, Tepavac, and Cole (2000) recommended that existing intervention programs be refined and suggested that conceptual work that develops and tests new prevention approaches is necessary. Also, the development of the Suicidal Ideation Questionnaire (Junior High Version) for use with American Indian populations "proved to be an excellent predictor of

future suicide attempts when compared to other measures of distress: anxiety, depression, and alcohol use" (Keane, Dick, Bechtold, & Manson, 1996, p. 1). In addition, it is also important to note that suicide rates were highest among young adults beyond school age, an age group that tends to be overlooked in many suicide prevention programs (National Center for Injury Prevention and Control, 1992, as cited in Wallace et al., 1996).

Psychological autopsy may be useful, although it would be wise to approach the surviving family members with as much care and cultural sensitivity as possible.

The psychological autopsy retraces life events immediately prior to the suicide event, aiming to reveal a deceased person's state of mind prior to his or her death. The procedure consists of interviews with survivors, including both the immediate and extended family members, and an examination of public and private documents that reveal the personality of the deceased party. Such documents include those related to medical, hospital, adoptive, and foster home placement histories, as well as those revealing violations of tribal, state and federal laws. (Johnson & Tomren, 1999, p. 4)

For many Native American youth, depression is positively associated with suicidal behavior. Hence, it is imperative that the mental health of Native youths be addressed:

The theoretical literature identifies the existence or role of protective factors that may ameliorate the detrimental effects of risk factors in the lives of American Indian and Alaska Native adolescents. This study confirms that amelioration. Consistent with Rutter's (1990) definition of protective factors, the protective factors of caring and connectedness appears [sic] to have a unique mechanism that counteracts the way in which risk factor mechanisms from adolescent depression produce poor health outcomes. Feeling cared for and connected to others is a fundamental human need that is likely to be influential throughout an individual's life (Slater 1970). In fact, it is reasonable to believe that the effects of feeling cared for and connected

to others will, as consistent with Rutter's (1985) protective factor definition, positively influence the individual's life trajectory.

The results of this quantitative study indicate that tribal elders, tribal administrators, teachers, and social service program staff serving American Indian and Alaska Native adolescents, as well as parents of adolescents, need to know that adolescent depression has a great effect on the way that adolescents view their own health and well-being. Those elders and teachers should also know that, despite the potential detrimental effects of risk factors on depression, it is possible through caring and connectedness to minimize the negative outcomes that result in adolescent depression. (Barney, 2001, p. 147)

TABLE 24. RECOMMENDED FACTORS FOR PLANNING PRIMARY PREVENTION FOR AMERICAN INDIAN/ALASKA NATIVE SUICIDES

FACTORS ASSOCIATED WITH INCREASED LIKELIHOOD OF AMERICAN INDIAN/ALASKA NATIVE SUICIDES	SUICIDES CONTROL	
	SUICIDES	CONTROL
More than one significant caretaker or parent figure before age 15	70%	15.0%
Primary caretakers or parent figures have had five or more arrests	40%	7.5%
Experienced two or more parental losses by divorce or desertion	50%	10.0%
Had one or more arrests in the preceding 12 months	80%	25.5%
Has been arrested by age 15	70%	20.0%
Attended boarding school before ninth grade	60%	27.5%

Source: May, 1987; Dizmang, 1967; Shore, 1981; Berlin, 1987, as cited in Johnson and Tomren (1999, pp. 3–4).

Mortality in General

The state of Arizona has an established team that reviews child fatalities. Its latest findings are released in its annual report, Arizona Child Fatality Review Program, Eighth Annual Report (Arizona Department of Health Services, 2001). This report includes many recommendations to prevent unnecessary child and youth fatalities; also included are three county programs targeted at reducing the number of child and youth deaths in the state of Arizona. Although the amount of quoted material is quite lengthy, the relevance of the report bears repeating.

* * * * *

Once again, motor vehicle crashes unnecessarily claimed the lives of many Arizona children. Nearly 94 percent (118 of 126) of the deaths were determined to be preventable. Because deaths related to motor vehicle crashes are highly preventable, the recommendations included in the body of the report are repeated here.

For elected officials and other public administrators

1. Expand and enforce laws that require appropriate automobile restraints for all passengers and drivers.
2. Provide equipment and training on the installation and use of child passenger safety seats to those who transport young children.

3. Expand and publicize the availability of child passenger safety seat "check-ups."
4. Support parenting skills education that includes information on child passenger safety.
5. Enact laws that protect children from injuries related to falling out of the back of a pick-up truck.
6. Strictly enforce driving under the influence laws and other traffic safety rules.
7. Enact laws that require use of helmets on motorized and nonmotorized vehicles, including bicycles and skateboards.

For the Arizona public

8. Properly secure children in appropriately sized and positioned child passenger safety seats or seat belts at all times.
9. Never allow a child to ride in the back of a pick-up truck.
10. Properly install child passenger safety seats in the vehicle; have installation checked.
11. Teach children how to be traffic-safe.
12. Promote safe driving, especially for adolescents.
13. Prohibit people who are under the influence of alcohol or other drugs from getting into the driver's seat.
14. Promote child safety activities in your community.

15. Support school and community based programs aimed at eliminating the use of alcohol and other drugs by drivers.
16. Properly supervise children in and around traffic, including in the driveway of the home. Be alert that toddlers can quickly get behind a vehicle that is backing up and they cannot be seen easily.

The State Team is especially concerned about the number of preventable deaths among older teens, ages 15–17. Of the 110 deaths, it was determined that 70 (63.6 percent) could have been prevented. The leading categories of death in this age group were motor vehicle crashes, suicide, and homicide. Because deaths in this age group are highly preventable, the recommendations included in the body of this report related to homicide and suicide are repeated here. Recommendations related to motor vehicle crashes are listed above.

For elected officials and other public administrators

1. Fund adequate, appropriate, and timely services for children and families in need of behavioral health services.
2. Enact laws requiring all guns sold in Arizona to have a locking device.
3. Enforce the current state law prohibiting persons under age 18 from possessing a firearm.
4. Support gang prevention initiatives and conflict resolution training for youth.

For the Arizona public

5. Know the warning signs for depression and suicide and see that children who are at risk are provided the behavioral health services they need as quickly as possible.
6. Keep children away from guns and guns away from children. Consider removing guns from the home. If you keep a gun in your home, secure it. The Arizona Firearm Safety Coalition lists the following as examples of safe storage methods: padlock behind the trigger, trigger lock, locking gun box, and home vault.
7. Store ammunition separately from guns and keep it under lock and key, just as you would a firearm.
8. If children are at risk for suicide, remove guns and ammunition from the home.
9. Promote and get involved in gang prevention activities. Work with the youth in your neighborhood. Be a mentor. (Arizona Department of Health Services, 2001, pp. 2–3)

The Arizona Governor's Council on Spinal and Health Injuries funded three county child injury prevention projects that were singled out for recognition at the annual child injury prevention conference in January 2001. All three child injury prevention projects target pertinent areas of concern for American Indian/Alaska Native children and youth.

Cochise County: Buckle Up Cochise County. The goal of this project was to improve passenger safety through

increased use of passenger restraints. The primary strategies adopted by the project were alternative sentencing for drivers who were cited for not wearing a seat belt, presentations targeted to third graders, and a resource directory to improve the linkages among law enforcement, courts, schools, and injury prevention programs in Cochise County. The National Highway Traffic Safety Administration (NHTSA) featured Buckle Up Cochise County as a model program in the Summer 2000 edition of Traffic Safety Digest, a quarterly NHTSA publication.

Pinal County: Underage Drinking Prevention Project. The goal of this project was to prevent injury and death due to youth consumption of alcohol by building community support to: 1) change the norms about teenage drinking; 2) educate the community that underage drinking is illegal and harmful to youth, their families, and the community; and 3) promote alcohol-free activities for teens such as special, supervised prom and graduation celebrations. The foundation upon which the project was built were the activities put in place in prior years by Casa Grande's Governor's Alliance Against Drugs. The primary strategy adopted for the prevention project funded by the Council was diversion classes in Casa Grande, Coolidge, and Eloy for underage youth cited for alcohol consumption and possession. Based on child fatality review team data, there have been no fatal motor vehicle crashes in the past two years since the project has been in operation resulting

from youth consumption of alcohol. There have been no alcohol-related crashes on the two most dangerous nights—prom and graduation.

Yavapai County: We Are the Stories We Tell—The Yavapai County Youth Violence Writing Workshop. The goal of this project was to use writings as a tool to help youth resolve personal issues by tapping into the power of their own voices and becoming proud of what they have to say. Beginning with an original concept of a weekly writer's workshop where participants wrote and performed a violence prevention play, the project evolved into two ongoing, regularly-scheduled classes, one at a charter school (coordinated with the probation department to include adjudicated youth) and one at the county detention center. An additional component was added during the planning phase of the project at the request of the Yavapai Prescott Indian Tribe to focus on the prevention of Shaken Baby Syndrome through an expressive writing workshop using the Tribe's newly purchased Baby Think It Over dolls. The project has received both local and national attention. The National Network of Violence Prevention Practitioners are publishing participant writings on their website and also published excerpts from an essay written about the project in their national newsletter, Member Update. This essay later won a New Millennium Award from New Millennium Writings, a prestigious national literary magazine. (Arizona Department of Health Services, 2001, pp. 21–22)

* * * * *

Additionally, the Office of Justice Programs (U.S. Department of Justice, 2000) has prepared a report that covers strategies and promising practices to reduce American Indian/Alaska Native substance and alcohol abuse. Included in the report are programs in the tribal communities of Cheyenne River Sioux, Navajo, Northern Cheyenne, Poarch Creek, Southeastern Alaska, Southern Ute, Turtle Mountain, and Zuni. Efforts at the Montana State Prison are also incorporated into the report.

There are numerous solutions to the problems of alcohol and substance abuse that range from economic restrictions to legal sanctions to health interventions and public awareness campaigns. Each can be effective in its own way, but one solution will not address all the issues. A great deal of the harm associated with substance abuse is preventable with increased public awareness of the problems and concerted public action. One step in this direction is development of effective tribal prevention programs throughout the country with support from all levels of the community. Prevention interventions, regardless of whether they come from health, law enforcement or other entities, must reflect tribal culture and beliefs. The most successful intervention and prevention programs build upon local tribal values and traditions. (U.S. Department of Justice, 2000, p. ix)

Social Indicators

High School Dropouts

Blum (1992) has stated that the low rates of high school completion must be impacted by the exceedingly high rates of poverty found among American Indian families. In addition, he stated the following:

We did find that Native American teens are pretty comparable with other teenagers in the seventh and eighth grades. But you begin to see a split ... at the ninth grade. That says to us that there's a window of opportunity during which major health promotion interventions can be accomplished during the sixth, seventh, and eighth grades ... It's our sense that what protects kids is success in school and connection with adult role models, and we could be doing a lot more in these areas. (Blum, 1992, p. 9)

The importance of increasing educational attainment among American Indians and Alaska Natives cannot be overstated:

The role of education in helping reservation leaders meet a commitment to their populations basic needs would not seem to pose significant policy conflicts. As stated above, education has a double impact on this goal through its ability to directly increase living standards via increased health and nutrition and indirectly through its ability to increase the individual's employment potential. (Vinje, 1996, p. 438)

The significance of role models is recognized as an important explanation for educational failure among minority students: "The paper suggests that the extremely low percentage of minority teachers in public schools has led to a high dropout rate among minority students" (Salinas, 2002, p. 21).

The Indian Nations At Risk Task Force identifies numerous areas that require improvement in order to raise American Indian/Alaska Native educational attainment:

Other testimony described dropout prevention programs and strategies that are working: community action to influence the local school system; college-school cooperation that focuses on identifying candidates for teaching among Native high school students and encouraging them to stay in school; early intervention and counseling for at-risk students; cultural sensitivity training for teachers and other school staff; Title V programs providing remediation and alternative instruction; attention to student attendance; hiring an Indian liaison to work with parents, students, and the school; teen parenting programs, community and business partnerships; employability strategies; increasing parent participation; and adult education programs for overage students. (National Advisory Council on Indian Education, 1990, p. 1)

Reyhner (1991) has suggested that creating partnerships with businesses and improving voca-

tional programs would aid in increasing American Indian/Alaska Native academic success. He has noted numerous other ways to increase American Indian/Alaska Native retention in educational programs:

Recommendations cover: teacher training in appropriate teaching methods; integrated culture-based curriculum; limiting school size; elimination of tracking; increasing science and mathematics classes; exploring alternatives to retention, suspension, and expulsion; providing a Native teacher certification program acceptable in all Bureau of Indian Affairs schools; more funding for research in Native education; developing tribal curriculum and textbooks; and a national initiative to deglamorize alcohol and tobacco use. (ibid., p. 1)

Teens Who Are Not Attending School and Not Working

Teens with plenty of idle time may be more prone to delinquency. The rise of gangs in American Indian communities is also of great concern to tribal people. Hence, there are numerous recommendations associated with addressing the problem of gangs:

Research on gang membership and associated behaviors among American Indian youth needs to proceed at several levels. First, basic descriptive data on the demographic, family and socio-economic status of Indian gang members should be com-

piled. Variations in prevalence of gang membership and variations in characteristics of American Indian gangs should be examined relative to differences among American Indian communities, both reservation and non-reservation. Second, does gang membership facilitate involvement in drug use and other serious behaviors among Indian youth to the same extent as it does among youth of other cultures (Thornberry et al. 1993)? Results presented in this article suggest that this may be true Finally, and perhaps most important of all, research devoted to the development of gang prevention strategies for American Indian youth should be initiated. Experiences from other prevention efforts clearly indicate that even subtle variations in the demographic, socio-economic and cultural make-up of individual communities can influence the relative effectiveness of programs (Hawkins, Catalano, and Associates 1992; Oetting, Donnermeyer, Plested, Edwards, Kelly, Beauvais 1995). Traditional approaches to preventing gang involvement may or may not work with Indian youth susceptible to or currently involved with gangs, both on and off reservations. Aspects of American Indian culture may serve as protective factors that, when combined with active prevention efforts, may reduce the detrimental effects of what appears to be the growing cultural phenomenon of gang activity in American Indian communities. (Donnermeyer et al., 1996, pp. 172–173)

Implicit in American Indian/Alaska Native gang prevention efforts has been incorporating the concept of traditional Native culture. Pfefferbaum et al. (1999) called for a two-pronged approach to deal with the increasing gang problem in American Indian/Alaska Native communities:

A full decade ago, after years of living and working among Indians, Hammerschlag recognized the power and importance of culturally endorsed ritual in healing. Significant progress in reducing Indian delinquency will ultimately require psychiatric practice that is culture-oriented. That said, the pursuit of etiology, diagnosis, and treatment within the indigenous culture should not preclude examination of factors common to the majority culture for there are likely to be intrinsic factors that cross cultures. Just as Native American youth have had to live and function to varying degrees in two cultures, so too their problems have been born of, and have developed in, two cultures. (Pfefferbaum et al., 1999, p. 124–125)

Single-Parent Families

Given that most single-parent families are headed by females, Bayne-Smith and McBarnette (1996) have drawn attention to the shifting labor force patterns among women of color. They have gone on to discuss the areas of greatest job growth that are potential employment opportunities:

The Department of Labor provides projections to the year 2005 of the overall labor

force participation of women, which is expected to reach 47%, up from the 1990 level of 45%. The fastest growth among women from various ethnic groups entering the labor force is expected to occur among Hispanic, Asian and Pacific Islander, and American Indian and Alaska Native women. It is estimated that an 80% growth in the numbers of women from these ethnic groups in the labor force will occur by the year 2005. The growth rate for black women already in the labor force in large numbers, however, is projected to reach 34%, exceeding the rates for all other women. The Department of Labor's projections also indicate that most of the job growth is expected to be in the service-producing sector, where despite the rhetoric from Democrats and Republicans alike on "less government," governments at the federal, state, and local levels will be the major employers.

Although fewer skills are required for service jobs, earnings are also less. Earnings are usually highest in the top three occupational categories, which also require the highest educational investment: (a) executive, administrative, and managerial; (b) professional specialties; and (c) technicians and related support. Of the three categories, employment will grow fastest for technicians and related support occupations, such as paralegals, data processing equipment repairers, surgical technologists, respiratory therapists, registered nurses, and computer programmers. Many of these jobs do not require a

college degree, but they do require some additional training after high school. (ibid., p. 188–189)

Although employment in information technology fields is still desirable, the recent shifts in the economy indicate good reasons to strongly consider all available employment options.

Furthermore, Oman (2000) argued that "education alone will not equalize access to high-technology employment. Rather, public and private policy strategies are called for that coordinate educational policy with related issues of social efficacy, structural inequality, access to technology in the home, and business information initiatives" (p. 1).

Children in Families Where No Parent Has Full-Time, Year-Round Employment and Child Poverty

The recommendations for children who are in poverty and in families where no parent has full-time, year-round employment are discussed together because of the interrelatedness of the issues surrounding poverty and employment.

Parents who are unable to secure stable employment are often left with no choice but to live on welfare benefits, which ensures their placement, and their children's placement, in poverty. Exiting welfare is a complicated process and women show differential patterns:

When one considers these findings along with previous work using different models, different data, and/or different definitions of exits from welfare (e.g. Harris 1993; Hoynes 1996; Pavetti 1993), work, marriage, and childbearing emerge as important factors in explaining who is able to exit welfare. Women without a high school diploma, with few job-related skills, and with little employment experience are far less likely to leave welfare permanently. Women who have never married and those with two or more children are also less likely to exit welfare permanently.

The critics of AFDC were correct to consider work, marriage, childbearing, and the length of receipt in their efforts to improve the welfare system. Yet the federally imposed time limits and the more restrictive time limits of some states pay little attention to the differences in the likely economic situations of different women with different family characteristics and work-related qualifications. Efforts to remove very disadvantaged women from the welfare rolls will reduce the number of participants in the new TANF program compared to the old AFDC program, but these efforts are likely to be ineffective in improving the lives of many of these women and their children. For example, the options available to a never married high school dropout with two children living in an area with high unemployment for supporting herself without cash assistance are very limited. Although the federal legislation permits states to grant hardship exceptions to

some recipients, it does not require states to grant exceptions, and it limits the number of exceptions that can be requested. (Sandefur & Cook, 1998, p. 7)

The interrelatedness of the social and health dimensions of well-being is becoming more and more evident to the medical professions:

The American Academy of Pediatrics acknowledges that race/ethnicity, gender, and socioeconomic status can influence child health through social mechanisms The Academy concurs with the conclusions of a recent workshop sponsored by the Centers for Disease Control and Prevention/Agency of Toxic Substances and Disease Registry. Considering the use of race and ethnicity in public health surveillance, the workshop participants concluded that absent careful definitions and analysis, investigators and policymakers may draw erroneous conclusions about race/ethnicity as biologic contributors to illness. Similar errors may result from the failure to consider the social dimensions of gender.

The American Academy of Pediatrics believes that race/ethnicity, gender, and socioeconomic status are likely to emerge as important mediators of childhood health, as well as predictors of adult health status. The Academy recommends that pediatric investigators, in collaboration with social scientists, should develop and apply research methodologies in pediatric research that will result in careful definitions of, analysis of interactions among,

and ultimately, documentation of the effects of these variables on child health. Only then can effective preventive intervention strategies be developed and implemented during childhood to improve the health of our children and the adults into which they will grow. (American Academy of Pediatrics, 2000, pp. 1350–1351)

Cheadle and colleagues (1994) believe that a “community-based approach including educational efforts to change beliefs and norms is likely to be a more effective method of health promotion on AI reservations” (Cheadle et al., 1994, p. 7).

Strengths, Limitations, and Future Recommendations

The main strength of this study is that hidden data about American Indian and Alaska Native children and youth have been made explicit to the readers. Information on 10 well-being indicators at both the national and selected state levels has been made available for interested parties. It has not been an easy task to replicate the 10 KIDS COUNT well-being indicators model for

Native Americans, but it can be done with enough support, resources, and effort. This project extends the work from the previous two years by providing information for states with relatively large American Indian and Alaska Native populations.

The key limitation is that not all of the indicators are estimated from the exact same data sources as the KIDS COUNT model. Of course, there are valid reasons for this. It was only in the cases where the author was constrained that data from other sources were produced. However, in the future it would be important, for the sake of comparability, to select permanent alternative indicators and data sources that are available on an annual basis. Also, given the findings associated with American Indian/Alaska Native low birth-weight rates, it is important to incorporate discussion concerning the higher rates of gestational diabetes among American Indian/Alaska Native mothers that result in higher rates of high birth-weight. Hence, it is recommended that rates of high birthweight (if available) be included in future reports.

Conclusions

This report is the third in a series on making explicit well-being indicators for American Indian and Alaska Native children and youth. The well-being indicators are discussed individually, and professional literature is provided for each indicator that focuses on regional, state, and tribal studies. Methodological research issues include the data barriers to exact replication of KIDS COUNT well-being indicators. This study provides the next logical step by extending the reporting mechanism to include data at both the national and selected states level on the well-being of Native American children and youth. An important finding is that for only one indicator (infant mortality rate) were American Indian/Alaska Native data readily accessible in report form. In comparison, six indicators for All Races were readily accessible for reporting in KIDS COUNT data books.

As in last year's study, the major finding is that of the 10 indicators, Native American children are faring comparatively better than their mainstream counterparts in only one—the low birthweight indicator. Given the vast quantity of data, the findings are described in terms of their relative ranking on the well-being indicators. Moreover, the percentage differences between the national level All Races rate and the American Indian/Alaska Native rate are presented, as are the differences between the American

Indian/Alaska Native population and the All Races population within each selected state. Comparisons at the state level show that in a few states, American Indian/Alaska Native rates are lower than their All Races rates, but in most cases, American Indian/Alaska Natives are significantly worse off. It is important that in most cases, in states where American Indian/Alaska Native children and youth fare comparatively better than their non-Native, state counterparts, the percentage differences are small. Furthermore, comparisons of the selected state American Indian/Alaska Native well-being indicator rankings to the national ranking show that some, but not all, of the advantage in percentage differences among American Indian/Alaska Natives disappears. The report consolidates the information into one report, gives recommendations, discusses the strengths and limitations of the study, and offers ideas for future research in this specialized area.

This year's report makes an important step in beginning to equalize access to well-being information for a large segment of the Native American population. To extend coverage of the American Indian/Alaska Native child and youth population, it is important to add more states to the original 13. It is also vital that this work continue on a yearly basis; establishing annual benchmarks allows Indian child welfare advo-

cates to gauge progress and draw attention to any regression that occurs among the well-being indicators.

An important future possibility for both race-specific and tribal-specific data on health indicators is the change being instigated by the National Center for Health Statistics (NCHS). This involves the shift toward collecting race information that meets the U.S. Office of Management and Budget (OMB) guidelines. This would make data from the U.S. Census Bureau and the NCHS compatible, and would likely provide tribal-specific data. The deadline for states to make their data collection systems compatible is January 1, 2003. However, it is assumed that most states will not meet this deadline. Instead, it is suggested that states reach conformity by 2010.

An additional, but quite complicated and costly step, would be to extend the analysis to tribes. For this effort to be successful, tribes would have to be consulted from the beginning to gauge their interest and assistance levels in producing tribal-specific well-being indicator data books.

Tribes are in varying positions concerning the importance of producing data on themselves. On the one hand, deficit-based data (depending on the results) can reinforce negative Indian stereotypes. On the other hand, these same data can be used to substantiate the need for programs designed to improve the well-being of American Indian/Alaska Native children. Whatever position tribes or tribal members take, it is critical to reinforce their sovereign status by working in a collaborative manner.

Another important issue is that of potentially adding resiliency and/or strength-based indicators to the report. Though some child welfare advocates may consider this controversial, it would be reflective of the Native American worldview that encompasses a holistic perspective. Harmony and balance are central to most Native American belief systems. Hence, deficit and asset-based indicators would chronicle a more complete story about the Native American child's life and well-being.

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NOTES

¹ The terms American Indian and Alaska Native, American Indian/Alaska Native, American Indian, Native, Native American, Indian, and First Nations are used interchangeably throughout the document to refer to the indigenous people of the United States.

² This figure refers to individuals who identify solely as American Indian/Alaska Native. An additional 1.6 million identify as American Indian/Alaska Native and some other race. Hence, 4.1 million identify as American Indian/Alaska Native alone or in some combination with one or more other races.

³ To systematically extend the literature review to other racial-ethnic and gender groups is beyond the scope of this project.

⁴ This year's report formatting has changed to better reflect the data sources and conceptual areas of investigation.

⁵ Registering a birth or infant death means that official forms have been filed with one's state. "Underregistered" means that the forms have not been filed or have been filed but contain incomplete information.

⁶ Very low birthweight

⁷ Social stratification

⁸ Twentieth century

⁹ The only exception is neonatal deaths, which are most often caused by sudden infant death syndrome and congenital abnormalities.

¹⁰ Homicide: injuries inflicted by another person with intent to injure or kill, by any means. Excludes injuries due to legal intervention and operations of war. Justifiable homicide is not identified in WISQARS. Legal Intervention: injuries inflicted by the police or other law-enforcing agents, including military on duty, in the course of arresting or attempting to arrest lawbreakers, suppressing disturbances, maintaining order, and other legal actions. Excludes injuries caused by civil insurrections. (<http://www.cdc.gov/ncipc/wisqars/fatal/help/definitions.htm>, August 12, 2002).

¹¹ This study analyzed three tribal groups: a Pueblo tribe, a Southwest tribe, and a Northern Plains tribe.

¹² Marrying within one's group, in this case, racial group

¹³ Marrying outside one's racial group

¹⁴ Quality of life

¹⁵ Due to new racial categorization guidelines, U.S. Census 2000 data are typically reported in the following ways: American Indian/Alaska Native (alone) to refer to American Indian/Alaska Native individuals with only one racial ancestry; American Indian/Alaska Native (in combination) to refer to American Indian/Alaska Native individuals with additional racial ancestry; and American Indian/Alaska Native (alone or in combination) to refer to a category that combines the previous two groups.

¹⁶ Due to challenges with CPS March Supplement data configurations, 2000 Census Summary File 3 - Sample Data are utilized for this indicator. Hence, readers must be cautioned about the differing racial categorization utilized by the NCHS and the 2000 U.S. Census. See www.census.gov for further discussion.

¹⁷ SAIPE data are not available by race. Hence, 2000 U.S. Census Summary File 3 - Sample Data are utilized for this indicator. Hence, readers must be cautioned about the differing racial categorization utilized by the NCHS and the 2000 U.S. Census. See www.census.gov for further discussion.

¹⁸ Due to challenges with CPS Basic data, 2000 U.S. Census Summary File 1 data are utilized for this indicator. Hence, readers must be cautioned about the differing racial categorization utilized by the NCHS and the 2000 U.S. Census. See www.census.gov for further discussion.

¹⁹ See www.cdc.gov/ncipc/factsheets/nstamer.htm for contact information on more American Indian/Alaska Native IPV prevention programs and curricula.