



# health, balance & harmony

A GUIDE TO PUBLIC HEALTH



Humankind has not woven the web of life.  
We are but one thread within it.  
Whatever we do to the web, we do to ourselves.  
All things are bound together.  
All things connect.

Chief Seattle, Chief of the Suquamis (1860)





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preface



When we show our respect  
for other living things, they  
respond with respect for us.

Arapaho Proverb



The Oklahoma City Inter-Tribal Health Board (OCAITHB) provides a unified voice for one cause — strong Indian people making healthy choices throughout their circle of life. The OCAITHB mission is to advocate and collaborate for quality health care and healthy lifestyles within Native American communities. OCAITHB seeks to maximize health care resources, and to enhance abilities and skills while maintaining tribal sovereign rights and independence.

Health, Balance, and Harmony – A Guide to Public Health presents the achievements and ongoing efforts that public health professionals have made to bring healthier living in our daily lives. The purpose of this report is to describe public health simply and clearly in terms of what it is, what it does, how it works, and why it is important to American Indians/Alaskan Natives (AI/ANs).

The OCAITHB remains committed to ensuring that comprehensive, culturally acceptable personal and public health services are available and accessible to AI/AN people. Now more than ever the public health services profession needs young AI/AN people to enter the field. We must strive together to improve the health in Indian country and make a healthier place to live for the current and future generations.

# introduction



Native people have always watched nature; it is their textbook for living.

The Path of Power, by Sun Bear,  
Wabun, and Barry Weinstock



## Public Health and Indian Country

Traditional concepts and teachings of balance and harmony have guided our American Indian and Alaska Native people. For generations, we have been taught that our physical, emotional and spiritual well-being is interconnected with our community and what affects our surroundings will affect our health.

For our people to be healthy and strong, the community must live in balance and harmony with all things — the earth, the water, the animals, the family and each other. Whenever illness afflicts our community, we come together and find a solution to heal and prevent future sickness.<sup>1</sup>

Public Health is what we do collectively to assure the conditions in which people can be healthy. While health care systems such as tribal and Indian Health Service (IHS) hospitals and clinics serve patients on an individual basis, Public Health focuses on the health of populations and overall health within the community. Public Health does the most good, for the most people, with the least amount of funding.

Many professionals are part of our tribal public health system — public health nurses, community health representatives, environmental health sanitarians, epidemiologists, emergency responders, and others. In public health, everyone plays a role to help keep our Native communities safe and clean and promote a healthy environment in which to live.

# publichealthoverview



Remember, our traditional values are based on order, the law of the universe; decency, the law of humankind; wisdom, the gift of the Great Spirit; and health, the gift of healing, endow us with the knowledge that our life is our religion; this land is our church; and the universe is our relative.

Elizabeth A. Wells - Mescalero Apache



## What is Public Health?

Public health is the art and science of protecting and improving the health of a community through an organized and systematic effort that includes education, assurance of the provision of health services, and protection of the public from exposures that will cause harm.<sup>1</sup> In order to effectively address challenges to people's health, public health practice requires an organized and sustained population-based approach.<sup>2</sup> The population can be as small as a handful of people or as large as the inhabitants of several continents such as the H1N1 pandemic influenza.

### Public health...

- tests your water to make sure it's safe to drink,
- assures water is fluoridated to prevent tooth decay,
- licenses restaurants and food establishments to ensure that food is safe,
- assures quality and accessibility of health services,
- provides prenatal care,
- educates parents on the importance of immunizing children,
- evaluates risks from environmental hazards, and
- protects the public from rabies and other zoonotic diseases.

## Ethical Values

Ethical values are at the heart of community decision-making and necessary for successful public health programs. Basic ethical principles include:

**Beneficence** - the principle of doing good with every action.

**Non-maleficence** - the principle of avoiding harm if at all possible.

**Autonomy** - the principle of individual decision-making, respecting the right of each human to make his or her own life choices.

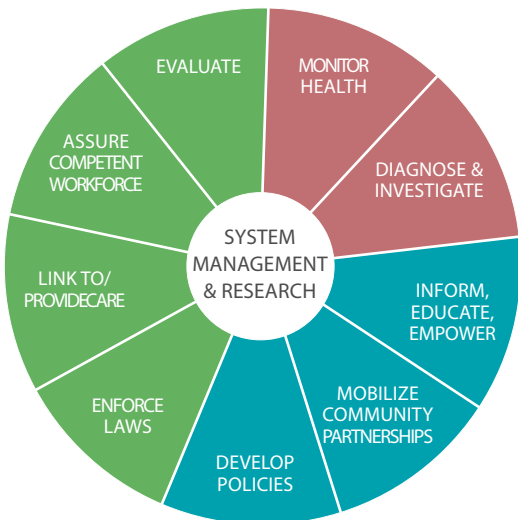
**Social justice** requires that like cases be treated in like manner and that every individual's right to social justice be respected.

**Truth-telling** demands that accurate information be available to all participants in any information exchange or decision-making situation.<sup>3</sup>

Ethical decisions in the establishment of regulations — such as requiring immunization of school aged children or limiting the use of commercial tobacco products — represent a balance between what individuals may prefer to do and actions necessary for the good of all.

## Ten Essential Public Health Services

In a 1988 report, *The Future of Public Health*, the Institutes of Medicine (IOM) defined three core functions of governmental public health: assessment, policy development, and assurance. In 1994, a steering committee comprised of representatives from various Public Health Service agencies and other health organizations developed the framework for the ten essential public health services. These services create "common ground" and a comprehensive infrastructure to support any public health priority in a community.<sup>4</sup>



### ● ASSESSMENT

- 1 Monitor health status to identify and solve community health problems.
- 2 Diagnose and investigate health problems and health hazards in the community.

### ● POLICY DEVELOPMENT

- 3 Inform, educate, and empower people about health issues.
- 4 Mobilize community partnerships and action to identify and solve health problems.
- 5 Develop policies and plans that support individual and community health efforts.

### ● ASSURANCE

- 6 Enforce laws and regulations that protect health and ensure safety.
- 7 Link people to needed personal health services and assure the provision of health care when otherwise unavailable.
- 8 Assure competent public and personal health care workforce.
- 9 Evaluate effectiveness, accessibility, and quality of personal and population-based health services.
- 10 Research for new insights and innovative solutions to health problems.<sup>4</sup>

## Core Areas in Public Health

Six core areas of Public Health include Epidemiology, Community Health Promotions and Education, Health Administration and Policy, Environmental Health Sciences, Biostatistics, and Public Health Preparedness. These disciplines involve staying abreast of the cross-cutting issues in areas relevant to contemporary public health.

### Epidemiology

Epidemiology is the study of the distribution and determinants of health-related states or events in specified populations and the application of this study to control health problems. A comparison between the practice of public health and the more familiar practice of health care helps in describing epidemiology.

First, where health care practitioners collect data on an individual patient by taking a medical history and conducting a physical exam, epidemiologists collect data about an entire population through surveillance systems or descriptive epidemiological studies. The data is used to generate hypotheses about the relationships between exposure and disease. Both disciplines then test the hypotheses, the health care practitioner by conducting additional diagnostic studies or tests, the epidemiologist by conducting analytical studies such as cohort or case-control studies.

The final step is to take action. The health care practitioner prescribes medical treatment, and the epidemiologist, some form of community intervention to end the health problem and prevent its recurrence. All communities need access to comprehensive epidemiology services so they can quickly detect, investigate, and respond to diseases in order to prevent unnecessary human suffering.

#### Epidemiology Websites

- E is for Epi: <nccphp.sph.unc.edu/training>
- Epidemiolog.net: <www.epidemiolog.net>

#### Online Epidemiology Journals

- American Journal of Epidemiology
- American Journal of Public Health
- Emerging Infectious Diseases
- Morbidity and Mortality Weekly Report

### Community Health Promotions and Education

Community Health Promotions and Education is the application of the social and behavioral sciences that encompass educational strategies and techniques using evidence-based approaches such as the use of health behavioral models. The rubric of Health Promotions is to promote, maintain, and improve individual and community health by assisting individuals and communities to adopt healthy lifestyles and a healthy built environment. Health promotions focuses on reducing risks to health in the population, and increasing benefits to achieve healthier individuals, families, social networks, neighborhoods, and tribal communities.

#### Community Health Promotions Websites

- The Community Tool Box <ctb.ku.edu>
- OSCAR – the IHS online search, consultation, and reporting system Oklahoma City Area Indian Health Service: Health Promotion/Disease Prevention Plan <home.oklahoma.ihs.gov/Hcs/Services/OCA\_Health\_Promotion2.doc>

#### Key Peer Reviewed Journals in Health Promotion:

- Journal for Health Promotion Practice
- American Public Health Journal

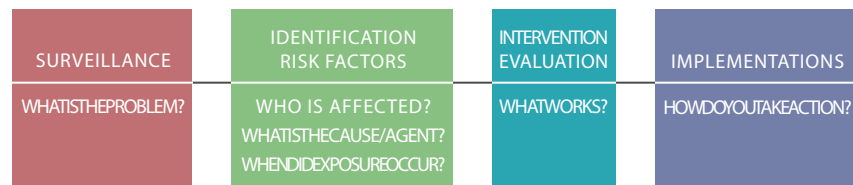
### Health Administration and Policy

Health Administration and Policy (HAP) represents the study of management, economics, and policy that drive our health care delivery. HAP professionals assume leadership positions in health care organizations that provide direct care (such as hospitals, group practices, and home health agencies), those that pay for and organize health care (such as governments, health insurers, and health maintenance organizations), and those that supply direct-care providers (such as pharmaceutical companies and biotechnology firms). Health Policy is the process where public health agencies evaluate and determine health needs and the best ways to address the needs, including the identification of appropriate resources and funding mechanisms. Health administrators and policy makers shape the future of health care for all people.

#### HAP Websites

- Centers for Medicare & Medicaid Services <www.cms.gov>
- NIH Office of Science Policy <osp.od.nih.gov>
- NIH Office of Legislative Policy and Analysis <olpa.od.nih.gov>
- WHO Health Policy <www.who.int/topics/health\_policy/en>

#### EPIDEMIOLOGY: PUBLIC HEALTH APPROACH



PROBLEM → RESPONSE

## Environmental Health Sciences

Environmental Health Sciences represent the study of environmental factors, including biological, physical, and chemical factors that affect the health of a community. Areas in the environmental health field include food safety, air and water pollution, toxicology, and environmental health policy to name a few.

Environmental Health Sciences Websites

- Environmental Protection Agency <[www.epa.gov](http://www.epa.gov)>
- National Institute of Environmental Health Sciences <[www.niehs.nih.gov](http://www.niehs.nih.gov)>

Environmental Health Journals

- Environmental Health <[www.ehjournal.net](http://www.ehjournal.net)>
- Environmental Health Perspectives <[www.ehponline.org](http://www.ehponline.org)>
- Environmental Science and Technology available free <[pubs.acs.org/journals/esthag](http://pubs.acs.org/journals/esthag)>

## Biostatistics

Biostatistics is the development and application of statistical reasoning and methods in addressing, analyzing, and solving problems in public health, health care, and biomedical, clinical, and population-based research. The role of biostatisticians in public health is to guide the design of an experiment or survey prior to data collection, to analyze data using proper statistical procedures and techniques, and to present and interpret the results to decision makers and researchers including the tribal governments and public health agencies.

Biostatistics Websites

- The Decision Tree for Statistics <[www.graphpad.com/www/Book/Choose.htm](http://www.graphpad.com/www/Book/Choose.htm)>
- CDC Epi Info <[www.cdc.gov/Epiinfo](http://www.cdc.gov/Epiinfo)>
- Open Epi <[www.openepi.com](http://www.openepi.com)>
- Journal of Biometrics and Biostatistics <<http://omiconline.org/jbmbshome.php>>

## Public Health Preparedness

Public Health Preparedness is the ability of the public health system, communities, and individuals to prevent, protect against, quickly respond to, and recover from health emergencies; particularly those in which scale, timing, or unpredictability threatens to overwhelm routine capabilities. The federal government has developed a National Response Framework to train our Public Health workforce in the four pillars: Surveillance, Vaccination, Mitigation Measures, and Communications and Education.

Surveillance

Enhanced efforts to achieve timely and accurate situational awareness of evolving disease and the impact on critical sectors to inform policy and operational decisions.

Mitigation Measures

Interventions to slow the spread of illness and reduce the impact of infection and illness on individuals and communities.

Vaccination

Actions to secure safe and effective vaccines and to ready a national vaccination program to enable the United States to begin voluntary immunization upon a recommendation that this approach is warranted.

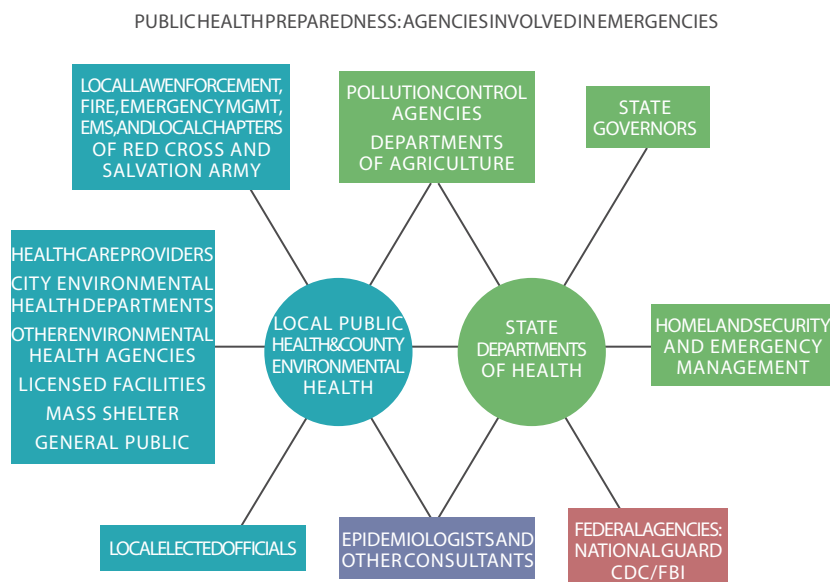
Communications and Education

A coordinated campaign to foster a convergence of action across all levels of government, the private sector, the entire health care sector, faith-based and community-based organizations, and individuals.

Public Health Preparedness Websites

- Federal Emergency Management Agency at <<http://www.fema.gov/>>
- Preparedness and Emergency Learning Center <<http://swperlc.ouhsc.edu>>

Peer Reviewed: Journal of Homeland Security and Emergency Management



## Great Achievements in Public Health

The dramatic achievements of public health have led to an increased life expectancy, a reduction in infant and child mortality, and the elimination or reduction of many communicable diseases.

### Vaccination

Public health immunization programs have resulted in the eradication of smallpox; elimination of poliomyelitis; and control of Hepatitis A, Hepatitis B, Human Papillomavirus, influenza, measles, mumps, rubella, tetanus, diphtheria, pertussis, Haemophilus influenzae type b, and other infectious diseases in the United States and other parts of the world.

#### History of Smallpox and Vaccination

In modern times we no longer worry about smallpox thanks to the remarkable work of Edward Jenner. Jenner completed the first vaccination using cowpox material taken from a dairymaid who had fresh cowpox lesions on her hands and arms, and injected the material into both arms of an 8-year-old boy. Two months later the child was inoculated with material from a smallpox lesion. No disease developed. The results of the first vaccination and of what followed saved millions of lives. In 1967, the World Health Organization (WHO) began international efforts to eradicate smallpox using vaccinations with cowpox. In 1980, the WHO declared that smallpox had been eradicated.<sup>5,6</sup>

### Safer Workplaces

Work-related health problems, such as coal workers' pneumoconiosis (black lung), and silicosis — common at the beginning of the century — have been significantly reduced. Severe injuries and deaths related to mining, manufacturing, construction, and transportation also have decreased; since 1980, safer workplaces have resulted in a reduction of approximately 40% in the rate of fatal occupational injuries.

### Fluoridation of Drinking Water

The connection between fluoride and healthy teeth is the great discovery and success story for better oral health in the past 100 years. Community water fluoridation is one of the great preventive health measures in history. The fluoridation movement can be traced to the early years of the 20th century when dentists began to focus on naturally fluoridated water for its preventive action on dental caries and tooth decay. Today over 170 million people live in fluoridation communities in the United States. Only 11 states, the District of Columbia and Puerto Rico have passed laws that require fluoridation. Fluoridation has played an important role in the reductions of tooth decay and of tooth loss in adults. Long range studies show that children who grow up from infancy until age six drinking fluoridated water are much less prone to dental caries and other oral diseases.<sup>7</sup>

### Decline in Deaths from Coronary Heart Disease and Stroke

Coronary heart disease is the leading cause of death for both men and women among all racial and ethnic groups. Decline in deaths from coronary heart disease and stroke have resulted from risk-factor modification, such as smoking cessation and blood pressure control, coupled with improved access to early detection and better treatment. Age adjusted death rates for coronary heart disease have decreased from 478 per 100,000 in 1963, to 239 per 100,000 in 1987, and to 125 per 100,000 in 2007.<sup>7</sup>

### Safer and Healthier Foods

In the United States, the food safety system is based on federal and state laws that are strong, flexible and science-based and on a legal responsibility to produce safe foods. Since 1900, safer and healthier foods have resulted from decreases in microbial contamination and increases in nutritional content. Identifying essential nutrients and establishing food-fortification programs have almost eliminated major nutritional deficiency diseases such as rickets, goiters, and pellagra in the United States.<sup>7</sup>

### Family Planning

Access to family planning and contraceptive services has altered social and economic roles of women. Family planning has provided health benefits such as smaller family size and longer interval between births; increased opportunities for preconception counseling and screening; fewer infant, child and maternal deaths; and the use of barrier contraceptives to prevent pregnancy and transmission of human immunodeficiency virus and other sexually transmitted disease.<sup>7</sup>

### Recognition of Tobacco Use as a Health Hazard

No single issue has preoccupied the Surgeons General of the past four decades more than smoking. The reports of the Surgeon General have alerted the nation to the health risks of smoking, and have transformed the issue from one of individual and consumer choice to one of epidemiology, public health, and risk for smokers and non-smokers alike. According to CDC, adult smoking rates have been cut nearly in half between 1965 and 2001, from 42.4 percent to 22.8 percent. However smoking still remains the leading preventable cause of death and disease in the United States, claiming more than 440,000 American lives a year. Recognition of tobacco use as a health hazard and subsequent public health anti-smoking campaigns have resulted in changes in social norms to prevent initiation of tobacco use, promote cessation, and reduce exposure to environmental tobacco smoke.<sup>7</sup>

## Healthier Mothers and Babies

Healthier mothers and babies have resulted from better hygiene and nutrition, availability of antibiotics, greater access to health care, and technologic advances in maternal and neonatal medicine. According to the US Department of Labor and the National Center for Health Statistics, at the beginning of the 20th century, for every 1000 live births, six to nine women in the United States died of pregnancy-related complications, and approximately 100 infants died before reaching their first birthday. From 1915 through 2010, the infant mortality rate declined more than 90 percent to 6.0 per 1000 live births, and from 1900 through 2010, the maternal mortality rate declined almost 99 percent to less than 0.1 reported death per 1000 live births.<sup>7</sup>

## Control of Infectious Diseases

Advances in the control of infectious disease led to a dramatic reduction in morbidity and mortality. Public health action to control infectious diseases resulted from improvements in sanitation and hygiene, the discovery of antibiotics and antivirals, and the implementation of universal childhood vaccination programs. Scientific and technologic advances played a major role in each of these areas and are the foundation for today's disease surveillance and control systems. Infections such as typhoid fever and cholera transmitted by contaminated water have been reduced dramatically by improved sanitation. In addition, the discovery of antimicrobial therapy has been critical to successful public health efforts to control infections such as tuberculosis and sexually transmitted diseases.<sup>8</sup>

### The Hantavirus Outbreak

In the Spring of 1993, an outbreak of acute illness characterized by abrupt onset of fever, myalgia, headache, and cough followed by rapid development of respiratory failure and death were being reported in the Four Corners (southwest) area of the U.S. The 'mystery illness' was unexplained and occurred primarily in young, healthy Native American adults. An epidemiological investigation was immediately conducted by the Indian Health Service, Centers for Disease Control and Prevention, and state health departments. Investigators determined that the infectious agent was a newly discovered Hantavirus carried by the deer mouse and named it Hantavirus Pulmonary Syndrome (HPS). The investigation concluded that individuals became infected when they were cleaning or disinfecting rodent-infested areas and inadvertently inhaled rodent droppings or urine contaminated with HPS.

The IHS and state health departments launched a major educational campaign to reduce risk and were successful in curtailing the transmission of the disease.

## Motor-Vehicle Safety

Improvements in motor-vehicle safety have resulted from engineering efforts to make both vehicles and highways safer. Since 1986, the CDC has funded research on injury biomechanics, epidemiology, prevention, acute care and rehabilitation. In 1992, the National Center for Injury Prevention and Control was established to contribute a public health direction to automotive safety as well as other injury areas. NCIPC targets the high-risk population of alcohol-impaired drivers, young drivers, and passengers and pedestrians in an effort to reduce fatalities in motor vehicle accidents. NCIPC advocates the use of occupant-protection systems including safety belts, child-safety seats and booster seats. These efforts have contributed to large reductions in motor vehicle-related injuries and fatalities.<sup>9</sup>

## Environmental Health

Earth Day in April 1970 was a signal achievement awakening the American public to environmental health issues. In 1970, Congress passed the Clean Air Act and formed the Environmental Protection Agency to deal with pollution and environmental health issues. In 1972, a major victory for the environmental health movement occurred when the EPA placed a ban on DDT, an agricultural insecticide that scientists suggested caused cancer and was a threat to wildlife. The US DDT ban is cited by scientists as a major factor in the comeback of the bald eagle, the national bird of the United States.

### Lead Poisoning

Lead poisoning is one of the oldest known work and environmental hazards. Humans have been mining and using this metal for centuries, unknowingly poisoning themselves in the process due to accumulation, exposure and direct contact. It was originally thought that many deaths of Omaha Indians during the late 1700s were a result of epidemic infectious disease. At the request of the Omaha tribe, paleopathologists analyzed Omaha burials from this time. The analysis demonstrated very high levels of lead isotopes in half of the skeletal remains, suggesting that many deaths may have been due to lead poisoning. This was traced to trade items Indians procured from colonists, such as casks, paint, and bullets.<sup>10</sup>

In a 1970 study by Dr. Herbert Needleman, lead exposure was found to have a negative effect on a child's IQ, attentiveness, and school success with long term implications. The study led to The Lead Contamination Control Act of 1988, that authorized the CDC to initiate program efforts to eliminate childhood lead poisoning in the United States. As a result of this Act, the CDC Childhood Lead Poisoning Prevention Program was created.<sup>10</sup>

# healthlegislation



All things share the same breath — the  
beast, the tree, the man... the air shares  
its spirit with all the life it supports.

Chief Seattle, Chief of the Suquamis



## Indian Health Care Improvement Act

The Indian Health Care Improvement Act (IHCA) is the key legal authority for the provision of health care to American Indian and Alaska Native people. Originally enacted by Congress in 1976, IHCA was enacted to provide funding for health care services to AI/AN people through the Indian Health Service.

In March 2010, the passage of the Patient Protection and Affordable Care Act (PPACA) once again brought to the forefront the health of indigenous people. Due to PPACA's expanded health insurance coverage individuals expressed concern that the Indian Health Service would no longer exist. However, the PPACA not only includes the reauthorization of IHCA, but made IHCA permanent. New programs are authorized to ensure that IHS is well-equipped to meet its mission, that is, to raise the health status of the AI/AN community to the highest level.

The new legislation brings substantial developments for Indian health care systems through:

- directing the IHS to establish comprehensive behavioral health, prevention, and treatment programs for Indians;
- improving workforce development and recruitment of health professionals;
- providing funds for facilities construction as well as maintenance and improvement funds to address priority facility needs;
- creating opportunities for access to and financing of necessary health care services for AI/AN;
- establishing an office to focus on Indian men's health and maintaining the office of Indian women's health; and
- assisting with the modernization in the delivery of health services provided by the Indian Health Service.

There are several provisions in the Affordable Care Act that will specifically benefit American Indian and Alaska Native individuals such as:

- American Indian and Alaska Natives who purchase health insurance on the individual market through an Exchange will not have to pay co-pays or other cost-sharing if their income does not exceed 300 percent of the poverty level.
- Members of American Indian and Alaska Native Tribes are exempt from individual responsibility assessments.
- IHS, Indian tribe or tribal organization, or urban Indian organization spending will count toward the annual out-of-pocket threshold in the "donut hole" as of January 1, 2011 for individuals who have Medicare drug coverage (Part D coverage).

New and/or expanded authorities for health care services include:

- expanded authorities for long-term care services, including home health care, assisted living, and community based care;
- authorities for new and expanded programs for mental and behavioral health treatment and prevention;
- new authorities for provision of dialysis services;
- new authorities for facilitation of care for Indian veterans; and
- new authorities for urban Indian health programs.

Due to the many provisions in the Affordable Care Act and the reauthorization of the Indian Health Care Improvement Act, implementation will be a complex undertaking. The Department of Health and Human Services and the Indian Health Service are currently reviewing every provision in the new laws that relates to Indian country.<sup>1</sup>

## The Patient Protection and Affordable Care Act

Under the Affordable Care Act (ACA) a new interagency council was created to promote healthy policies and establish a national prevention and health promotion strategy. The Act establishes a Prevention and Public Health Investment Fund to provide expanded and sustained national investment in prevention and public health.<sup>2</sup>

**Increasing Access to Clinical Preventive Health Services.** ACA establishes new programs and benefits relating to prevention, including School-Based Health Clinics and an oral health care prevention education campaign. The Act also provides Medicare coverage with no payments or deductibles for annual wellness visits or the development of personalized prevention plans; waives coinsurance requirements and deductibles for most preventive services, so that Medicare covers 100 percent of the costs; requires Medicaid coverage for pregnant women for cessation of tobacco use counseling and pharmacotherapy; and make grants available to provide incentives for Medicaid beneficiaries to participate in programs providing incentives for healthy lifestyles.

**Creating Healthier Communities.** The Secretary of Health and Human Services (HHS) is authorized to award grants to eligible entities to promote individual and community health and to prevent chronic disease. The Centers for Disease Control and Prevention (CDC) is also authorized to provide grants to states and large local health departments to conduct pilot programs to evaluate chronic disease risk factors among the 55- to 64-year-old population, conduct evidence-based public health interventions, and ensure that individuals with chronic disease or at risk for chronic disease receive clinical treatment. Chain restaurants with 20 or more locations doing business under the same name are required to list calorie counts on the menu board and in written form.

**Support for Prevention and Public Innovation.** The HHS Secretary will provide funding for research in public health services and systems to examine best practices in the area of prevention. A new CDC program will help state, local, and tribal public health agencies improve surveillance for and responses to infectious diseases and other conditions. CDC also will evaluate best employer wellness practices, develop an educational campaign and provide technical assistance to promote the benefits of worksite health promotion.

**United States Preventive Services Task Force.** ACA sets standards for preventive service coverage through the United States Preventive Services Task Force (USPSTF). All insurance companies and health plans must cover any service given a rating of 'A' or 'B' in the current recommendations of the USPSTF. This does not mean that services not recommended by the USPSTF can or should necessarily be denied by insurers. ACA also sets up a separate task force to deal specifically with community health care, to be called the Community Preventive Services.

- **Community Task Force.** The community task force will be responsible for developing recommendations around the effectiveness of community preventive interventions at the population level for organizations including primary care professionals, health care systems, professional societies, employers, community organizations and others. The community task force will work closely with the USPSTF in delivering recommendations.
- **Pain Care.** The Act authorizes an Institute of Medicine conference on pain to focus on policy and medical issues related to the delivery of pain care, creates a training program for health care professionals to assess and treat pain, and expands the National Institute of Health's pain research program.
- **Cancer.** ACA includes a number of provisions that make cancer treatment more affordable and accessible, such as insurance subsidies and the elimination of annual and lifetime caps on coverage and exclusion from coverage based on preexisting conditions. ACA focuses on prevention and early detection of disease and requires all insurance plans to provide coverage for essential, evidence based preventive measures with no additional co-payments or deductibles. ACA also expands Medicaid and tax subsidies, increasing access to cancer treatment and prevention services for low-income populations.

**Other Public Health Authorizations.** ACA includes the authorization of numerous new public health initiatives and programs including, but not limited to: a congenital heart disease patient registry; a public health workforce corps; maternal, infant, and early childhood home visiting programs; and efforts to improve cultural competency in the delivery of health care and enhance the aptitude of individuals working with people with disabilities.

## Milestones in Indian Health

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### 1832 SMALLPOX IMMUNIZATIONS PROVIDED

Given smallpox's epidemic nature and the availability of a highly effective preventive, smallpox vaccination was among the first organized public health care efforts rendered to the Indians.

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### 1836 HEALTH SERVICES PROGRAM

The federal government began a program providing health services and physicians to the Ottawa and Chippewa tribes.

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### 1911 FUNDING FOR INDIAN HEALTH

The first separate funding specifically for Indian health (\$40,000) identified in an appropriation act.

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### 1921 SNYDER ACT

Considered to be the general authorization for Indian Health Service. The Snyder Act authorized federal programs for Indians within the Bureau of Indian Affairs (BIA), including health care, but did not establish an Indian medical agency.

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### 1954 TRANSFER ACT

Directed the responsibilities, functions and facilities for Indian health care under the Surgeon General of the Public Health Service in the Department of Health.

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### 1959 INDIAN SANITATION FACILITIES ACT

Enabled IHS to build, upon the request of the Indian community, facilities for the provision of safe water and sanitary waste disposal.

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### 1975 SELF-DETERMINATION AND EDUCATION ASSISTANCE ACT

Provides for tribal administration of federal Indian programs, especially BIA IHS programs, under self-determination contracts and self-governance compacts.

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### 1976 INDIAN HEALTH CARE IMPROVEMENT ACT

In this legislation, Congress established two major national goals: to ensure that the health status of Indian people is elevated to the highest possible level and to achieve the maximum participation of Indian people in Indian health programs. Established many specific IHS programs, such as urban health, professions recruitment, and mental health.

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### 1997 TRIBAL EPIDEMIOLOGY CENTERS FORMED

The Inter-Tribal Council of Arizona and the Northwest Tribal Epidemiology Centers were formed with the goal to assist member tribes to improve their health status and quality of life. There are currently 12 tribal epidemiology centers nationwide.

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### 2010 PATIENT PROTECTION AND AFFORDABLE CARE ACT

Includes the reauthorization of the Indian Health Care Improvement Act that reaffirms the government's trust responsibility to provide health care to American Indian/Alaska Natives.

# publichealthinfrastructure



So long as we define our sacred mother earth, as long as the elderly go without health care, as long as men and women labor for bare subsistence, the pain goes on, and the promise is unfulfilled.

Larry Echohawk – Pawnee



## Public Health Service Agencies

Over the years, the scope and responsibilities of public health service have broadened from caring for the American merchant seamen in the late 1700s to the vast health services provided under the Executive Branch of the US Government in the Department of Health and Human Services (DHHS).

At the outset of our nation, concern for protection against imported infectious diseases and the need to care for sick seamen led to the creation of the Marine Hospital Service (MHS). The MHS was the predecessor of today's U.S. Public Health Service (USPHS), a uniformed service of health professionals on call for local, national or international service in the protection of the public's health.

The USPHS Commissioned Corps continues to provide a wide range of services, from staffing Indian Health Service facilities to international epidemic response teams.

The chief of the USPHS is the Surgeon General and Assistant Secretary for the DHHS. The Surgeon General does not run any agency, and has no line authority, however, there is enormous authority in the 'presence' of the office, and in the access to the HHS Secretary and to the President.

### Department of Health and Human Services

DHHS is the United States government's principal agency for protecting the health of all Americans. Within DHHS eleven agencies are designated components of the Public Health Service. Each agency plays an integral role in improving the health of Americans. Key functions and the mission of select DHHS agencies are described below and accompanied with examples of the agency projects that embrace the AI/AN community.

### Agency for Healthcare Research and Quality

The mission of the Agency for Healthcare Research and Quality (AHRQ) is to improve the quality, safety, efficiency, and effectiveness of health care by: using evidence to improve health care; improving health care outcomes through research; and transforming research into practice. The AHRQ provides grants to enhance the health services research knowledge base; develops tools and talent that foster the health services research infrastructure; and builds relationships with tribal and other AI/AN organizations, the Indian Health Service, and other Federal agencies to advance excellence in health care for AI/ANs.<sup>1</sup>

Native Telehealth Outreach & Technical Assistance Program is a community based approach to the development of multimedia focused health care information for rural communities. <[www.ahrq.gov/research/amindbrf2.htm](http://www.ahrq.gov/research/amindbrf2.htm)>  
AHRQ website: [www.ahrq.gov](http://www.ahrq.gov)

### Agency for Toxic Substances and Disease Registry

The mission of the Agency for Toxic Substances and Disease Registry (ATSDR) is to serve the public by using the best science, taking responsive public health actions, and providing trusted health information to prevent harmful exposures and disease related to toxic substances. ATSDR performs specific functions concerning the effect on public health of hazardous substances in the environment. These functions include public health assessments of waste sites, health consultations concerning specific hazardous substances, health surveillance and registries, response to emergency releases of hazardous substances, applied research in support of public health assessments, information development and dissemination, and education and training concerning hazardous substances.<sup>2</sup>

Public Health Assessment, Occurrence of Selected Health Conditions in Ottawa County, Oklahoma.

The assessment addresses health issues relevant to the Tar Creek Superfund Site, including those concerning children and cancer. The ATSDR's efforts to protect the health of children living near the Tar Creek Superfund site have proven successful, even though cleanup of the primarily tribal lands continues.<sup>3</sup>

ATSDR website: [www.atsdr.cdc.gov](http://www.atsdr.cdc.gov)

### Centers for Disease Control and Prevention

The Centers for Disease Control and Prevention (CDC) is the nation's principal public health agency, providing coordination and support for a variety of population-based disease and injury control activities. The CDC provides technical assistance, including workforce support, specialized laboratory services, data management, and other services to support public health investigations. The CDC coordinates, analyzes, and disseminates public health information derived from a number of health surveys and disease surveillance systems. The CDC also publishes Morbidity and Mortality Weekly Report (MMWR), a weekly journal reporting on public health investigations and surveillance findings.<sup>4</sup>

In January, 2010, the CDC's new reorganization has officially announced a new Office of State, Tribal, Local and Territorial Support.

American Indian/Alaska Native Vaccination (Protect the Circle of Life: Immunize Our Nations)

Immunization protects people. Some vaccine-preventable diseases affect AI/AN people at a higher rate compared to other populations. Immunizations are provided for AI/AN people free of charge at Indian Health Service, Tribal, and Urban facilities located in 35 states. [www.cdc.gov/vaccines/spec-grps/ai-an.htm](http://www.cdc.gov/vaccines/spec-grps/ai-an.htm). Recommendations and Guidelines are available at <[www.cdc.gov/vaccines/recs/schedules](http://www.cdc.gov/vaccines/recs/schedules)>.<sup>5</sup>

Together We are Stronger: Addressing Homophobia and HIV Stigma In Native Communities

A CDC funded campaign that addresses homophobia and HIV stigma in AI/AN and native Hawaiian communities and is sponsored by the National Native American AIDS Prevention Center. <[www.cdcpin.org/scripts/population/native.asp](http://www.cdcpin.org/scripts/population/native.asp)><sup>6</sup>

Through the Eyes of the Eagle: Illustrating Healthy Living for Children Traveling Exhibit

The exhibit features original watercolors used in diabetes prevention stories for Native American children and all those interested in the road to healthy living. In the Eagle Books, a wise eagle is the tribal elder, who teaches traditional ways of health that children can remember and retell in their homes, schools, and communities. The Eagle Book series was developed by the Centers for Disease Control and Prevention in collaboration with the Tribal Leaders Diabetes Committee and the Indian Health Service.<sup>7</sup>

CDC Website: [www.cdc.gov](http://www.cdc.gov)

### Food and Drug Administration

The early part of the 20th century saw a dramatic increase in industrialization and urbanization, which, in turn, increased threats to health in the form of the sale of adulterated and contaminated food products and pharmaceuticals. The Food and Drug Administration (FDA) was created to administer the Pure Food, Drug and Cosmetic Act. The FDA mission is to promote and protect the public health by helping safe and effective products reach the market in a timely way, to monitor products for continued safety after they are in use, and to help the public get the accurate, science based information needed to improve health. The FDA provides consumer health education about making the best medicine choices, buying safely, and using medicine in ways that increase its safety and effectiveness.<sup>8</sup>

Women's Health: Take Time To Care

Today, over half of all people who use medications do not use them correctly. The consequences can be serious, even fatal. Medication errors can be particularly pronounced when people lack information, have limited reading skills, and have language or cultural barriers. This risk is especially acute for women, because they often dispense medications to family members, and women over 45 use more medicines than any other group. The FDA Office of Women's Health created Women's Health: Take Time To Care, a national public awareness campaign about safe medicine use.<sup>9</sup>

FDA Email Alert Service · Allows you to receive important news and information as it becomes available on topics such as consumer health information, drugs, food and nutrition, MedWatch safety alerts, tobacco products and women's health, etc.

FDA Women's Health Updates for American Indian/Alaska Women · Provides FDA information relevant to American Indian/Alaska Native Women, including special programs and campaigns. <[www.fda.gov/AboutFDA/ContactFDA/StayInformed/GetEmailUpdates/default.htm](http://www.fda.gov/AboutFDA/ContactFDA/StayInformed/GetEmailUpdates/default.htm)>

FDA Website: [www.fda.gov](http://www.fda.gov)

### Substance Abuse and Mental Health Services Administration

The Substance Abuse and Mental Health Administration (SAMHSA) mission focuses on building resilience and facilitating recovery for people with or at risk for mental and substance use disorders. Native American Center for Excellence, Prevention Technical Assistance Resource Center – The Center is a first-of-its-kind national Native American-run project to promote effective substance abuse prevention programs in Native American communities throughout the United States. Once it is established, the center's data base will be accessible through SAMHSA website. The center will serve as the repository for the best available information on effective services and strategies for preventing substance abuse and related disorders in Native American populations.<sup>10</sup>

The Native American Center for Excellence

The Native American Center for Excellence will work with five tribes to identify innovative and promising programs and practices that prevent substance abuse disorders and related problems among Native Americans. The center will provide these programs with technical support and additional opportunities for demonstrating their efficacy.

SAMHSA website: [www.samhsa.gov](http://www.samhsa.gov)

### National Institutes of Health

The National Institutes of Health (NIH) is the primary agency of the federal government charged with conducting and supporting behavioral and biomedical research. It also has major roles in research training and health information dissemination. The NIH mission is science in pursuit of fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to extend healthy life and reduce the burdens of illness and disability.<sup>11</sup> The NIH consists of 27 institutes and centers, each of which focuses on particular diseases, areas of human health and development, or aspects of research support.

The NIH provides leadership and direction to programs designed to improve the health of the nation by conducting and supporting research in:

- causes, diagnosis, prevention, and cure of human diseases;
- processes of human growth and development;
- biological effects of environmental contaminants;
- understanding of mental, addictive and physical disorders; and
- directing programs for the collection, dissemination, and exchange of information in medicine and health, including the development and support of medical libraries and the training of medical librarians and other health information specialists.

National Center for American Indian and Alaska Native Mental Health Research

This center is the only program in the country focusing on mental health of AI/AN populations.

NIH website: [www.nih.gov](http://www.nih.gov)

## Health Resources and Services Administration

The Health Resources and Services Administration (HRSA) provides leadership and support for health services and resources for people who are uninsured, isolated, or medically vulnerable through grants to community based organizations, colleges and universities, hospitals, tribal, local and state governments, and foundations. The Office of Rural Health Policy is significant in its mission to promote access to health care services in rural populations.<sup>12</sup>

### Maternal and Child Health Bureau

Seeks to strengthen the infrastructure for maternal and child health services through the MCH Block Grant, Healthy Start, and Emergency Medical Services Grants.

### HIV/AIDS Bureau

Administers programs consolidated by the Ryan White HIV/AIDS Treatment Modernization Act.

HRSA Website: [www.hrsa.gov](http://www.hrsa.gov)

## Indian Health Service

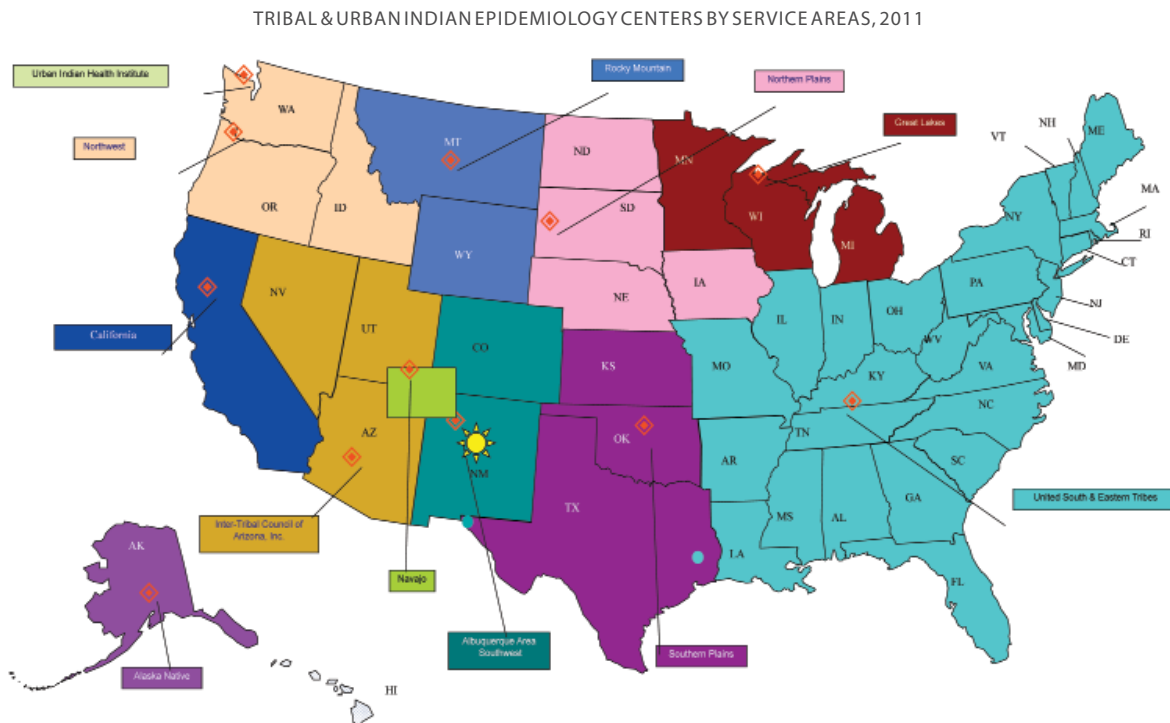
The foundation of the Indian Health Service (IHS) is to uphold the federal government's obligation to promote healthy American Indian and Alaska Native people, communities, and cultures and to honor and protect the inherent sovereign rights of tribes. The IHS mission is to raise the physical, mental, social, and spiritual health of American Indians and Alaska Natives to the highest level. IHS goal is to assure that comprehensive, culturally acceptable personal and public health services are available and accessible to American Indian and Alaska Native people.<sup>13</sup>

No other system of care so completely incorporates and integrates preventive services such as immunizations, environmental services, fluoride dental rinse, community injury prevention efforts, and many other personal and community services. The magnitude of the accomplishment of melding these into a coherent national program operating in more than five hundred communities, each of which possesses a strong element of sovereignty, is truly unprecedented.<sup>14</sup>

IHS public health services include home and community sanitation facilities, public health nurses, and epidemiology. Besides providing general clinical health services, IHS also focuses on special Indian health problems, such as fetal alcohol syndrome, diabetes prevention and treatment, alcoholism and mental health, hepatitis B and maternal and child health.

### Tribal Epidemiology Centers

Tribal Epidemiology Centers (TECs) are funded by the Indian Health Service, Division of Epidemiology and Disease Prevention. TECs serve American Indian and Alaska Native (AI/AN) tribal and urban communities by managing public health information systems, investigating diseases of concern, managing disease prevention and control programs, responding to public health emergencies, and coordinating these activities with other public health authorities. Their mission is to improve health by identifying and understanding associated health problems and disease risks and strengthening public health capacity in Indian country; and developing solutions for disease prevention and control.



\*Covers all urban Indian health organizations and AI/AN urban populations across the nation.

# careersinpublichealth



A very great vision is needed and the man who has it must follow it as the eagle seeks the deepest blue of the sky.

Crazy Horse/Tashunkewitko, Oglala



## Public Health Professionals

Perhaps there has never been a more exciting time to pursue a career in public health. Major advances in public health over the next decades will not come from medical findings or cures, but rather the broader development and application of population-based prevention programs. There are several careers available in the field of public health.<sup>1</sup>

### Health Policy & Management

- Academic Policy Advisor
- Legislative Policy Advisor
- Management Policy Advisor

### Epidemiology

- Tribal Epidemiologist
- Research Epidemiologist
- Pharmacoepidemiologist
- Local and State Epidemiologist

### Behavioral Science & Health

- Behavior Scientist
- Health Educator
- Mental Health Researcher

### Health Communications

- Communications Specialist
- Journalist

### Environmental Health Science

- State Environmentalist
- Federal Environmentalist

### Occupational Safety & Health

- Health Inspector
- Safety Manager
- Corporate Medical Director

### Oral Health

- Public Health Dentist

### International and Global Health

- Reproductive Health Specialist
- International HIV Specialist
- Tropical Disease Specialist

### Public Health Preparedness and Function

- State Epidemiologist
- Laboratory Director
- Lawyer

### Family Health

- Local Health Officer
- Nurse Educator
- Nutritionist

### Public Health Professionals Work for...

- Tribal Epidemiology Centers
- Local and State Health Departments
- Indian Health Services
- Nonprofit Public Health Organizations
- Hospitals and Clinics
- Managed Care Organizations
- Insurance Companies
- Voluntary Health Agencies
- Tribal, Local, State, and Federal Government
- Business and Industry
- Schools, Colleges, and Universities
- Community-based Service Organizations
- Professional and Advocacy Organizations

### Why pursue a public health career?

- Public health challenges professionals to confront complex health issues, such as improving access to health care, controlling infectious disease, and reducing environmental hazards, violence, substance abuse, and injury.
- Public health is a diverse and dynamic field. Professionals come from varying backgrounds, such as: journalists, researchers, administrators, environmentalists, demographers, social workers, laboratory scientists, and attorneys.
- Public health is a field geared toward serving others. Professionals serve local, national, and international communities. They are leaders who meet the challenges in protecting the public's health today and in the future.
- Public health is rewarding. Working towards improving people's health and well-being is fulfilling.

### Schools of Public Health

The following schools are accredited by the Council on Education for Public Health. Each has met rigorous standards and has unique strengths in research, service and education. Attendance at an ASPH member school assures a well-rounded graduate education.<sup>2</sup> For a complete list of accredited schools, visit the ASPH website at <[schools.asph.org](http://schools.asph.org)>.

University of Kansas School of Medicine  
Masters of Public Health Program  
Departments of Preventive Medicine and Public Health  
(913) 588-2767 <[www.kumc.edu/mph](http://www.kumc.edu/mph)>

University of Oklahoma Health Sciences Center  
College of Public Health  
(405) 271-2232 <[www.coph.ouhsc.edu/coph](http://www.coph.ouhsc.edu/coph)>

Texas A & M University System Health Science Center  
School of Rural Public Health  
(979) 845-2387 <[www.srph.tamhsc.edu](http://www.srph.tamhsc.edu)>

University of North Texas Health Science Center  
School of Public Health  
(817) 735-2323 <[www.hsc.unt.edu/education/sph](http://www.hsc.unt.edu/education/sph)>

University of Texas Health Science Center at Houston  
School of Public Health  
(713) 500-9050 <[www.sph.uth.tmc.edu](http://www.sph.uth.tmc.edu)>

University of Texas Medical Branch at Galveston  
Graduate Program in Public Health  
Department of Preventive Medicine & Community Health  
(409) 772-1128 <[www.pmch.utmb.edu](http://www.pmch.utmb.edu)>

# publichealthinaction



In Iroquois society, leaders are encouraged to remember seven generations in the past and consider seven generations in the future when making decisions that affect the people.

Wilma Mankiller



## Health Promotion through the Media

### Horse Song

Norman Patrick Brown's "Lii Biyiin" is a 60-minute video on diabetes prevention. Lii Biyiin was produced by Four Directions Health Communications, a media facility at Northern Navajo Medical Center in Shiprock, New Mexico. Because it is Native American and has English subtitles, all tribes would benefit from the story of Horse Song. Source: Tribal Programs – Navajo Area IHS Wears New Hat in Video Arena<sup>1</sup> <[www.ihs.gov/provider/documents/2000\\_2009/prov0101.pdf](http://www.ihs.gov/provider/documents/2000_2009/prov0101.pdf)>

### H1N1 Public Service Announcements

Mr. Wes Studi, Hollywood actor and Cherokee tribal member, urges American Indians and Alaska Natives to "Take 3" as the best way to protect themselves, their families and their tribal communities from flu and the H1N1 virus: get vaccinated, prevent the spread of germs, and take antivirals when prescribed.<sup>2</sup> <[www.cdc.gov/cdctv/take3/](http://www.cdc.gov/cdctv/take3/)> <[www.cdc.gov/cdctv/signs30](http://www.cdc.gov/cdctv/signs30)> <[www.cdc.gov/cdctv/circleoflife](http://www.cdc.gov/cdctv/circleoflife)>

## OCAITHB Tribal Epidemiology Center Projects

### American Indian & Alaska Native Health Disparities

A major goal of the AI/AN Health Disparities Grant is to assess the impact of racial misclassification on morbidity and mortality rates of cancer and select communicable diseases. To address the problems of incomplete reporting and misclassification — which can lessen funding for tribal programs that provide access to care, prevention, and control measures — the TEC has partnered with the Oklahoma City Area Indian Health Service, Oklahoma Central Cancer Registry, Oklahoma Department of Health, and Oklahoma University Health Sciences Center College of Public Health on a Data Enhancement Project.

### Tribal Epidemiology Center Consortium

A collaborative effort of the OCAITHB TEC, Northwest TEC, and California TEC, the goal of the Tribal Epidemiology Center Consortium (TECC) is to improve the collection and dissemination of high-quality health data for AI/AN communities by building a national network of TECs, foster community-based and culturally appropriate data collection practices, and increase the capacity of the TECs to affect culturally-relevant policy change. The TECC has also developed an Injury Prevention Toolkit as a resource for tribal communities that focuses on seat belt safety, child car seat safety, helmet safety, fire safety and elder safety.

### Tribal Community Health Profiles Project

The goal of the Tribal Community Health Profile (CHP) Project is to capture overall health status, identify health needs and problem areas, and establish priorities to improve the health for each of the federally recognized tribes in Kansas, Oklahoma, and Texas. The tribal CHP report can be used by health care professionals to devise strategies to reduce illness and enhance the health and well-being of their tribal members. The TEC provides trainings to demonstrate how to best utilize the CHP in areas, such as when writing grant proposals.

### Pandemic Influenza & Emergency Response Planning

The TEC partners with the Oklahoma State Department of Health and the Inter-Tribal Emergency Management Coalition to assist tribal personnel with public health preparedness and emergency response training along with assistance in developing or updating their tribe's All-Hazards/Pandemic Influenza Response Plan. The TEC holds workshops to provide tribal personnel with National Incident Management System (NIMS), Incident Command Structure (ICS), public health preparedness and emergency response trainings.

### Tribal Health Assessment Survey

The TEC developed the Tribal Health Assessment Survey in order to ascertain the health care needs of the tribe from the perspective of their individual members. The survey provides both quantitative and qualitative methodologies for data collection. The survey can be implemented as a face to face interview, a written questionnaire, or as a web-based survey.

### Methamphetamine & Suicide Prevention Initiative

The TEC has developed a Methamphetamine and Suicide Prevention Initiative (MSPI) evaluation tool to assist grantees with program evaluation. The tool uses core measures based on descriptive, qualitative, and quantitative methods for data collection and analyses. The TEC also facilitates communications between the MSPI grantees and OCA IHS. With 23 programs, there are many innovative ideas and approaches, and partnerships formed, with the goal of reducing the burden of methamphetamine and suicide in AI/AN communities.

### Maternal and Child Health

The goal of the TEC Maternal and Child Health Program is to eliminate the disparities in infant mortality, and maternal and child health for Native Americans living in Kansas, Oklahoma, and Texas. The TEC collaborates with state and national coalitions on various initiatives including Preparing for a Lifetime, Oklahoma Healthy Mothers Healthy Babies, Infant Safe Sleep, and text4baby. TEC epidemiologists provide networking opportunities with tribal organizations and assure cultural sensitivity is upheld on MCH projects.

### TEC Internship Program

The goal of the TEC Internship Program is to recruit two AI/AN students seeking education and careers in public health. Each of the interns will be provided a stipend for a two-year period as they progress through the Masters in Public Health (MPH) program. The TEC oversees the internship placement, student progress and provides advice, support and guidance.

# appendices



I do not regret being an Indian, for being one gives me an advantage that others do not have. First, I am an Indian and I am also an American, a good American. I was here yesterday. I am here today. I will be here tomorrow, because I am unique. I belong to a minority with seniority.

Joseph C. Vasquez – Apache/Sioux



## Public Health Resources

**American Association of Indian Physicians (AAIP)** · The AAIP membership is made up of physicians who are at least one-eighth AI/AN and licensed to practice medicine in the U.S. A major goal of AAIP is to motivate AI/AN students to pursue a career in the health professions. <[www.aaip.org](http://www.aaip.org)>

**American Indian Health (AIH)** · Sponsored by the National Library of Medicine, the AIH is an information portal to issues affecting the health and well-being of American Indians. The site includes health and medical resources pertinent to the AI/AN population such as policies, consumer health information, and research. <[americanindianhealth.nlm.nih.gov](http://americanindianhealth.nlm.nih.gov)>

**American Public Health Association (APHA)** · Representing over 50,000 public health professionals, the APHA is an association of individuals and organizations working to improve public health and to achieve health equity. The website includes access to the American Journal of Public Health and the Nation's Health, among other resources. <[www.apha.org](http://www.apha.org)>

**Association of Schools of Public Health (ASPH)** · The ASPH is the only national organization representing the deans, faculty and students of the CEPH accredited member schools of public health and other programs seeking accreditation as schools of public health. The website provides practical information for students about employment and training opportunities, including internships, fellowships, and funding opportunities. <[www.asph.org](http://www.asph.org)>

**Center for American Indian Health Research (CAIHR)** · The CAIHR is a multi-disciplinary research organization and conducts epidemiological and clinical studies of health problems among AI/AN populations, with emphasis on diabetes and its many complications including heart disease, retinopathy, renal disease, and cerebral vascular disease. <[www.coph.ouhsc.edu/coph/researchprograms](http://www.coph.ouhsc.edu/coph/researchprograms)>

**Centers for Disease Control & Prevention (CDC)** · The CDC serves as the national focus for developing and applying disease prevention and control, environmental health, and health promotion and education activities designed to improve the health of the people of the United States. The website provides a wealth of information on specific health and safety topics. <[www.cdc.gov](http://www.cdc.gov)>

**Fatality Analysis Reporting System (FARS)** · The FARS contains data on all fatal traffic crashes within the 50 states, the District of Columbia, and Puerto Rico. The system was conceived, designed, and developed by the National Center for Statistics and Analysis to assist the traffic safety community in identifying problems, developing and implementing vehicle and driver countermeasures, evaluating motor vehicle safety standards, and developing highway safety initiatives. <[www-fars.nhtsa.dot.gov](http://www-fars.nhtsa.dot.gov)>

**Healthy People 2020** · Healthy People 2020 is a set of national goals developed by the U.S. Department of Health and Human Services. These goals aim to improve our country's health by reducing preventable health threats. Health professionals at local, state, and national levels work to meet and exceed these goals through public health interventions and policy changes. <[www.healthypeople.gov](http://www.healthypeople.gov)>

**Indian Health Service (IHS)** · The IHS is responsible for providing federal health services to AI/AN. With a goal to raise health status as high as possible, the IHS provides a comprehensive health service delivery system for approximately 1.9 million AI/ANs. <[www.ihs.gov](http://www.ihs.gov)>

**National Indian Health Board (NIHB)** · The NIHB provides a variety of services to tribes, area healthboards, tribal organizations, federal agencies, and private foundations. The NIHB continually presents the tribal perspective while monitoring federal legislation, and opening opportunities to network with other national health care organizations to engage their support on Indian health care issues. <[www.nihb.org](http://www.nihb.org)>

**National Institute on Alcohol Abuse and Alcoholism (NIAAA)** · The NIAAA, a component of the National Institutes of Health, U.S. Department of Health and Human Services, is the lead agency in this country for research on alcohol abuse, alcoholism, and other health effects of alcohol. <[www.niaaa.nih.gov](http://www.niaaa.nih.gov)>

**National Vital Statistics System (NVSS)** · The National Center for Health Statistics (NCHS) collects and disseminates the nation's vital statistics through the NVSS. The data are provided through contracts between NCHS and vital registration systems in the various jurisdictions responsible for the registration of vital events — births, deaths, marriages, divorces, and fetal deaths. <[www.cdc.gov/nchs/nvss.htm](http://www.cdc.gov/nchs/nvss.htm)>

**Oklahoma City Area Inter-Tribal Health Board (OCAITHB)** · The OCAITHB provides a unified voice for the federally recognized tribes in the states of Kansas, Oklahoma, and Texas. Throughout their circle of life, strong Indian people making healthy, educated choices. OCAITHB membership includes representatives from the twelve service units in the Indian Health Service Oklahoma City Area. <[www.ocaithb.org](http://www.ocaithb.org)>

**Public Health Accreditation Board (PHAB)** · PHAB is a nonprofit organization dedicated to advancing continuous quality improvement of state, local, tribal, and territorial public health departments. PHAB is working to promote and protect public health by advancing the quality and performance of all public health departments in the U.S. through national voluntary accreditation. <[www.phaboard.org](http://www.phaboard.org)>

**Smoking Attributable Mortality, Morbidity, and Economic Costs (SAMMEC)** · SAMMEC is an internet-based application that calculates annual state and national smoking-attributable deaths and years of potential life lost for adults and infants in the U.S. The adult application also calculates medical expenditures and productivity costs. Likewise, the maternal and child health application estimates annual state and national smoking-attributable deaths and years of potential life lost for infants. <[apps.nccd.cdc.gov/sammecc](http://apps.nccd.cdc.gov/sammecc)>

**State Bureaus of Narcotics and Dangerous Drugs** · The State Bureaus of Narcotics and Dangerous Drugs whose goal is minimizing the abuse of controlled substances through law enforcement measures directed primarily at drug trafficking, illicit drug manufacturing, and major suppliers of illicit drugs. Kansas <[www.kansas.gov/kbi](http://www.kansas.gov/kbi)>, Oklahoma <[www.ok.gov/obnodd](http://www.ok.gov/obnodd)>, and Texas <[www.txdps.state.tx.us/criminal\\_law\\_enforcement/narcotics/index.htm](http://www.txdps.state.tx.us/criminal_law_enforcement/narcotics/index.htm)>

**State Health Departments** · State health departments focus on issues related to general health and are responsible for the oversight and care of matters relating to public health. Kansas Department of Health and Environment <[www.kdheks.gov](http://www.kdheks.gov)>, Oklahoma State Department of Health <[www.ok.health.gov](http://www.ok.health.gov)>, Texas Department of State Health Services <[www.dshs.state.tx.us](http://www.dshs.state.tx.us)>.

## Public Health Definitions

**agent** - A factor, such as a microorganism, chemical substance, or form of radiation, whose presence, excessive presence, or (in deficiency diseases) relative absence is essential for the occurrence of a disease.

**bias** - Deviation of results or inferences from the truth, or processes leading to such systematic deviation. Any trend in the collection, analysis, interpretation, publication, or review of data that can lead to conclusions that are systemically different from the truth.

**carrier** - A person or animal without apparent disease who harbors a specific infectious agent and is capable of transmitting the agent to others. The carrier state may occur in an individual with an infection that is in apparent throughout its course (known as asymptomatic carrier), or during the incubation period, convalescence, and post convalescence of an individual with a clinically recognizable disease. The carrier state may be of short or long duration (transient carrier or chronic carrier).

**case-fatality rate** - The number of people who die of a disease divided by the number of people who have the disease. Usually suited for a disease with short-term or acute conditions.

**cluster** - An aggregation of cases of a disease or other health-related condition, particularly cancer and birth defects, which are closely grouped in time and place. The number of cases may or may not exceed the expected number; frequently the expected number is not known.

**direct transmission** - The immediate transfer of an agent from a reservoir to a susceptible host by direct contact or droplet spread.

**droplet spread** - The direct transmission of an infectious agent from a reservoir to a susceptible host by spray with relatively large, short-ranged aerosols produced by sneezing, coughing, or talking.

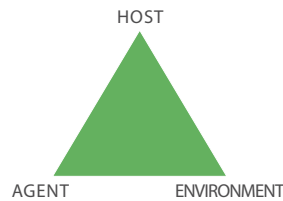
**endemic** - The constant presence of a disease within a given geographic area.

**endemic disease** - The constant presence of a disease or infectious agent within a given geographic area of population group; may also refer to the usual prevalence of a given disease within such area or group.

**epidemic** - The occurrence of more cases of disease than expected in a given area or among a specific group of people over a particular period of time.

**epidemiology** - The study of the distribution and determinants of health-related states or events in specified populations, and the application of this study to the control of health problems.

**epidemiologic triad** - The traditional model of infectious disease causation, includes three components: an external agent, a susceptible host, and an environment that brings the host and agent together, so that disease occurs.



- host - the person or population with the disease
- agent - the disease causing organism
- environment - place in which the host and agent interact

Changes in one of the elements of the triangle can influence the occurrence of disease by increasing or decreasing a person's risk for disease.

**health** - "A state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."

**health education** - The process by which individuals and groups of people learn to behave in a manner conducive to the promotion, maintenance, or restoration of health.

**health indicator** - A measure that reflects, or indicates, the state of health of persons in a defined population, e.g., the infant mortality rate.

**health promotion** - The process of enabling people to increase control over and improve their health. It involves the population as whole in the context of their everyday lives, rather than focusing on people at risk for specific disease, and is directed toward action on the determinants or causes of health.

**health statistics** - Aggregated data describing and enumerating attributes, events, behaviors, services, resources, outcomes, or cost related to health, disease, and health services. The data may be derived from survey instruments, medical records, and administrative documents. Vital Statistics are a subset of health statistics.

**herd immunity** - The resistance of a group to an attack by a disease to a large proportion of the members of the group that are immune. If a large percentage of the population is immune, the entire population is likely to be protected, not just those who are immune.

**host** - A person or other living organism that can be infected by an infectious agent under natural conditions.

**host factor** - An intrinsic factor (age, race, sex, behaviors, etc.) which influences an individual's exposure, susceptibility, or response to a causative agent.

**incidence** - Number of new cases of a disease that occur during a specified period of time in a population at risk for developing the disease.

**incidence rate** - A measure of the frequency with which an event, such as a new case of illness, occurs in a population over a period of time. The denominator is the population at risk; the numerator is the number of new cases occurring during a given time period.

**incubation period** - The interval from receipt of infection to the time of onset of clinical illness.

**indirect transmission** - Means by which infection occurs through a common vehicle such as contaminated water supply or air, or by a vector such as a mosquito.

**levels of prevention**

- primary (pre-event) - Goal is to prevent events that might result in the disease or injury. What can be done to avoid the disease or injury before the event occurs.
- secondary (event) - Goal is directed at modifying the consequences of events in order to prevent or reduce the severity of disease or injury.
- tertiary (post-event) - Goal is to limit long-term impairments and disability.

morbidity - A state of injury, sickness, or disease.

mortality - Death, or the frequency or number of deaths.

mortality rate - A measure of the frequency of occurrence of death in a defined population during a specified interval of time.

pandemic - An epidemic occurring over a very wide area (several countries or continents) and usually affecting a large proportion of the population.

prevalence - The number or proportion of cases or events or conditions in a given population.

public Health - A field of work that deals with broad societal concerns about ensuring conditions that promote optimum health for society as a whole by influencing the social, economic, political, and medical care factors that affect health and illness. The objective of public health is to prevent disease, prolong life, and promote health through organized community effort.

surveillance - The science of collecting, editing, and analyzing all types of chronic disease data used for epidemiologic trends, program planning and evaluation, and public policy development.

validity - The validity of a test is the ability to distinguish between individuals who have a disease and those who do not.

Validity has two components:

- sensitivity - The ability of a test to identify correctly those who have the disease.
- specificity - The ability of a test to identify correctly those who do not have the disease.

vector - An insect or any living carrier that transports an infectious agent from an infected individual or its wastes to a susceptible individual or its food or immediate surroundings. The organism may or may not pass through a development cycle within the vector.

## Select Native American Publications

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# Heart Disease

IS THE LEADING CAUSE OF DEATH IN THE UNITED STATES.

## Overview

Heart Disease includes a number of conditions which affect blood flow and functioning of the heart. The most common type of heart disease is coronary artery disease, also known as coronary heart disease.

A myocardial infarction, also known as a heart attack, occurs when vessels supplying blood to the heart become blocked. Heart muscle tissue is deprived of oxygen, resulting in tissue death.

## Signs and Symptoms of Heart Attack

- Chest discomfort: Most heart attacks involve discomfort in the center of the chest that lasts more than a few minutes, or that goes away and comes back. It can feel like uncomfortable pressure, squeezing, fullness or pain.
- Discomfort in other areas of upper body: Symptoms can include pain or discomfort in one or both arms, the back, neck, jaw or stomach.
- Shortness of breath: May occur with or without chest discomfort.
- Other signs: These may include breaking out in a cold sweat, nausea, or lightheadedness.

## Risk Factors

- Tobacco smoke: Smokers' risk of developing coronary heart disease is 2-4 times that of nonsmokers.
- High blood cholesterol: As blood cholesterol rises, so does risk of coronary heart disease.
- High blood pressure: High blood pressure increases the heart's workload, causing the heart to thicken and become stiffer causing the heart not to work properly.
- Physical inactivity: An inactive lifestyle can be reversed with regular, moderate-to-vigorous physical activity. The more vigorous the activity, the greater your benefits.

- Obesity and overweight: People who have excess body fat – especially if a lot of it is at the waist – are more likely to develop heart disease even if they have no other risk factors.
- Diabetes mellitus: Diabetes increases the risk, but the risks are even greater if blood sugar is not well controlled.

## Prevention

- Be 'Pro Active' with your health.
- Maintain a healthy lifestyle: healthy diet, regular physical activity, do not smoke, and maintain a healthy weight.
- Maintain normal blood pressure levels and treat high blood cholesterol.

## Types of Heart Attacks

- Silent heart attack; no major chest pain.
- Typical angina; chest pressure that doesn't go away.
- Sudden heart attack; a major obstruction in the heart.

## Next Steps

The need for prevention has never been greater! Heart Disease deaths are projected to increase sharply between 2010 and 2030.

## Resources

- American Heart Association <[www.americanheart.org](http://www.americanheart.org)>
- American Stroke Association <[www.strokeassociation.org](http://www.strokeassociation.org)>
- Center for Disease Control and Prevention <[www.cdc.gov](http://www.cdc.gov)>
- Indian Health Service. Trends in Indian Health, 2000-2001. Rockville, Maryland.

## Prevalance and Trends, U.S.

	2004	2009
Ever been told had high blood pressure	24.8%	28.7%
Ever been told had high blood cholesterol	33.1%	37.5%
Current smoker	22.0%	17.8%
People reporting a diagnosis of diabetes	7.1%	8.3%
No leisure time physical activity	23.1%	23.8%
Adults who reported being overweight or obese	60.0%	63.1%
Adults who reported not eating five fruits & vegetables per day	77.6%	76.6%

Source: BRFSS, 2004

# Injury

## UNINTENTIONAL INJURY WAS THE LEADING CAUSE OF DEATH AMONG AMERICAN INDIANS/ALASKAN NATIVES AGED 1 to 44 YEARS (2007).

### Overview

Injuries and violence are widespread in society. Most events resulting in injury, disability, or death are predictable and preventable. The burden of injuries and violence coupled with the enormous cost of these problems to society make them a pressing public health concern.

### Facts

- Unintentional Injuries are the leading cause of death for AI/AN aged 1 to 44 years.
- Injuries and violence account for 75% of all deaths among AI/AN aged 1-19.
- AI/AN 19 years and younger are at greater risk of preventable injury-related deaths than others in the same age group in the United States.

### Risk Factors

- Native American drowning rates were nearly three times that of whites and more than twice that of blacks.
- Adult motor vehicle-related death rates for Native Americans were more than twice that of whites and almost twice that of blacks.
- Fire-related death rates for Native Americans were almost two times greater than that of whites.
- Native Americans have the highest death rates from unintentional poisonings.

### Cost

- Injuries have physical, emotional, and financial consequences that can impact the lives of individuals, families, and society.
- National Health Accounts data found that injury-related medical expenditures cost Americans an estimated \$117 billion each year.

### Prevention

- Always wear your seatbelt and always put your children in a car seat suitable for their weight and age.
- Childproof all cabinets containing medicine or cleaning supplies.
- Install safety bars in bathrooms to prevent falls.
- Install fire alarms in all rooms and implement an escape plan.
- Always swim with a buddy and select swimming sites that have lifeguards whenever possible.
- Elderly should exercise regularly to improve balance.

### Trends

- Injury death rates among AI/AN in Oklahoma have steadily increased from 72.0 per 100,000 in 2000 to 100.4 per 100,000 in 2007.
- Injury death rates for AI/AN in the U.S. have increased from 69.9 per 100,000 in 2000 to 76.1 in 2007.
- In 2007, injuries and violence accounted for 78.8% of all deaths among AI/AN aged 1 to 19 years.

### Next Steps

- Develop an injury prevention coalition in your community.
- Talk to your Community Health Representative about upcoming events and get involved.

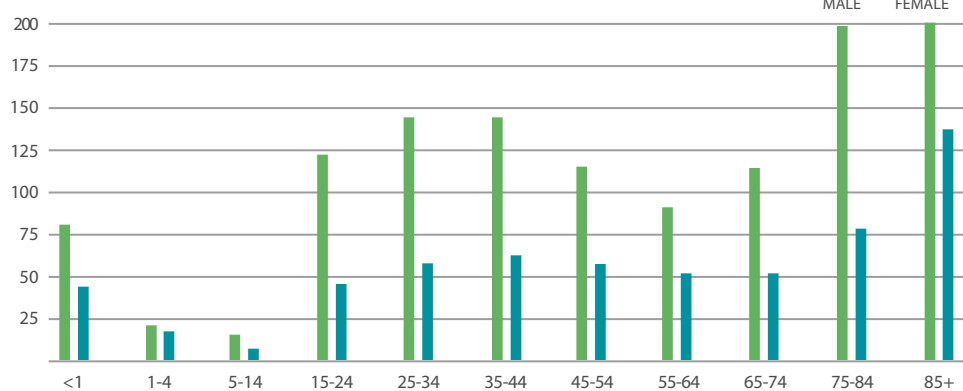
### Resources

Center for Injury Prevention Policy & Practice  
<[www.cipp.org](http://www.cipp.org)>

Indian Health Service Injury Prevention  
<[www.injprev.ihs.gov](http://www.injprev.ihs.gov)>

Prevention Institute  
<[www.preventioninstitute.org](http://www.preventioninstitute.org)>

ALL INJURY DEATHS FOR AI/AN BY AGE AND GENDER, U.S. RATE, 2007 (PER 100,000)



Source: WISQARS [www.cdc.gov/injury/wisqars/index.html](http://www.cdc.gov/injury/wisqars/index.html)

# Suicide

IS THE SECOND LEADING CAUSE OF DEATH AMONG AMERICAN INDIANS/  
ALASKAN NATIVES AGED 15 to 34 YEARS.

## Overview

Suicide is a major, preventable public health problem. Suicide occurs when a person ends their life. It is the eighth leading cause of death among American Indian/Alaska Natives. But suicide deaths are only part of the problem. An estimated 11 attempted suicides occur per every suicide death. They are often seriously injured and need medical care. Suicide also affects the health of the community. Family and friends of people who commit suicide may feel shock, anger, guilt, and depression.

## Facts

- In 2007, the suicide rate among AI/AN adolescents and young adults aged 15 to 34 years of 19.9 per 100,000 is 1.8 times higher than the national rate of 11.4 per 100,000.
- AI/AN males > 20 years take their own lives nearly 4 times the rate of AI/AN females >20 years.
- Firearms are the most commonly used method of suicide among males (55.7%).
- Poisoning is the most common method of suicide among females (40.2%).

## Risk Factors

- previous suicide attempts
- history of depression or other mental illness
- alcohol or drug abuse
- family history of suicide or violence
- feeling hopeless or alone
- impulsive and or aggressive tendencies

## Protective Factors

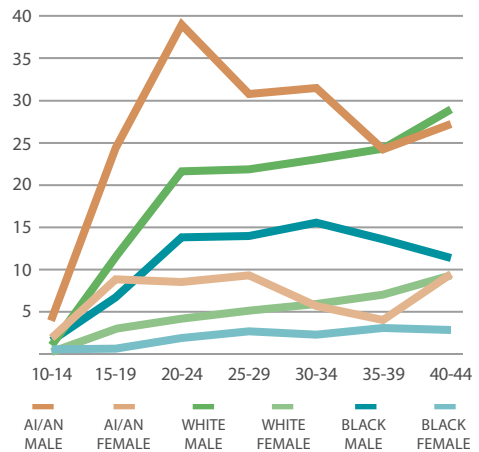
The most significant protective factors against suicide attempts among AI/AN youth are:

- Discussion of problems with family or friends.
- Connectedness to family.
- Emotional health.
- Culturally sensitive programs that strengthen family ties, including addressing substance abuse.
- Individuals with strong tribal spiritual orientation.

## Prevention

- Learn the warning signs of suicide; warning signs can include changes in a person's mood, diet, or sleeping pattern.
- Get involved in community efforts to develop programs and after school activities.

2007 SUICIDE RATES BY RACE AND AGE (per 100,000)



Source: WISQARS [www.cdc.gov/injury/wisqars/index.html](http://www.cdc.gov/injury/wisqars/index.html)

- Promote awareness that suicide is a public health problem that is preventable.
- Implement training for recognition of at-risk behavior and delivery of effective treatment.

## Trends

- Young adult and adolescent suicides in AI/AN communities have continued to increase over the past decade. The suicide rates for AI/AN aged 10 to 44 years have increased from 13.8 in 2000 to 16.4 in 2007.

## Next Steps

- Develop a suicide prevention coalition in your community.
- Talk to your family and friends and know the warning signs of depression and suicide.

## Resources

National Institute for Mental Health  
<[www.nimh.nih.gov](http://www.nimh.nih.gov)>  
Substance Abuse and Mental Health Services Administration  
<[www.samhsa.gov](http://www.samhsa.gov)>  
Suicide Prevention Resource Center  
<[www.sprc.org](http://www.sprc.org)>

If you are in a crisis and need help right away:  
Call this toll-free number, available 24 hours a day, every day: 1-800-273-TALK (8255). You will reach the National Suicide Prevention Lifeline, a service available to anyone. You may call for yourself or for someone you care about. All calls are confidential.

# Tobacco Use

AMONG AMERICAN INDIAN/ALASKAN NATIVES IS 40 PERCENT —  
THE HIGHEST RATE AMONG EVERY AGE, ETHNIC, AND GENDER.

## What is in tobacco?

- 4000 chemicals
- 500 poisons
- 43 cancer causing agents

## Habitual

- Means that a person has smoked more than 100 cigarettes in their entire life time and they smoke at least once on most days.
- Natives have the highest tobacco smoking rates of any ethnic or racial group in the United States.
- Different parts of Indian Country have more deaths from lung cancer, primarily due to tobacco smoking.
- Four of 10 Native Americans smoke habitually.

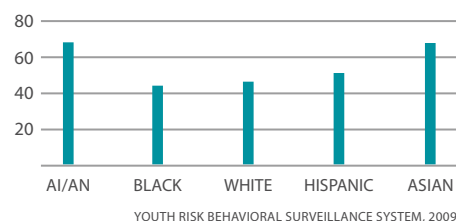
## Facts

- Tobacco is the leading preventable cause of premature death in the United States.
- Tobacco causes heart disease, stroke, cancer, and problems with pregnancy.
- More than 440,000 Americans die each year of tobacco-related diseases.
- Tobacco affects the health of children.
- Tobacco use increases cervical, uterine, bladder and esophageal cancers.
- Commercial use is decreasing among all racial groups except for American Indians

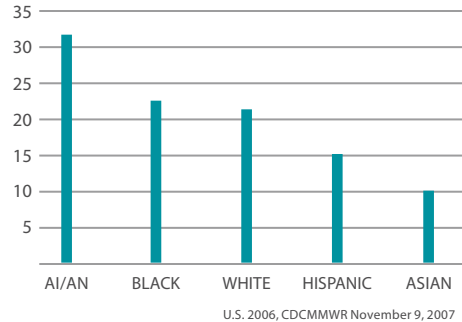
## Cost

- Tobacco results in \$75 billion in annual U.S. health care costs
- The Indian Health Service spends \$200 million a year on smoking related illnesses.
- Twenty percent of all Native health care costs have been due to illnesses caused by tobacco products.
- A pack-a-day smoker burns through about \$31.50 per week, or \$1638 per year.

PERCENT OF HIGH SCHOOL STUDENTS, EVER SMOKED



PERCENT OF ADULTS - CURRENT SMOKING



## Health Benefits of Quitting

- In just 20 minutes, blood pressure and pulse rate decrease.
- In 8 hours, carbon monoxide and oxygen levels in blood return to normal.
- In 1 day, the likelihood of heart attack decreases.
- In 2 days, nerve endings regenerate; sense of smell and taste are enhanced.
- In 2 weeks, circulation improves and lung function increases.
- In 1-9 months, coughing, sinus congestion, fatigue and shortness of breath decrease.
- In 1 year, the likelihood of a heart attack decreases.
- In 5 years, risk of stroke is reduced to the same levels as a non-smoker.
- In 10 years, risk of dying from lung cancer is about half that of a current smoker.
- In 15 years, risk of coronary heart disease and death become roughly equivalent to those who have never smoked.

## Resources

Native American Cancer Research  
<[www.natamcancer.org](http://www.natamcancer.org)>

CDC Morbidity and Mortality Weekly Report: Cigarette Smoking among Adults: 2003 National Health Interview Survey. May 27, 2005, 54: 20; 511.  
<[www.cdc.gov/tobacco/sgr/sgr\\_2004/factsheets/2.htm](http://www.cdc.gov/tobacco/sgr/sgr_2004/factsheets/2.htm)>

<[www.articles.moneycentral.msn.com/insurance/insureyourhealth/highcostofsmoking.aspx](http://www.articles.moneycentral.msn.com/insurance/insureyourhealth/highcostofsmoking.aspx)>



**Oklahoma Tobacco Helpline**

1 800 QUIT NOW

# Diabetes

IS THE FOURTH LEADING CAUSE OF DEATH IN AMERICAN INDIAN/ALASKAN NATIVES.

## Overview

Diabetes occurs when the body cannot produce or respond appropriately to insulin. Insulin is a hormone that the body needs to absorb and use glucose as fuel for the body's cells. Without a properly functioning insulin signaling system, blood glucose levels become elevated and other metabolic abnormalities occur, leading to the development of serious, disabling complications. Warning signs include: Frequent urination, unusual thirst, extreme hunger, extreme fatigue, irritability, blurred vision, frequent infections, cut/bruises slow to heal, tingling/numbness in the hands/feet, and sometimes Type 2 has no warning symptoms.

## Types of Diabetes

Type 1 diabetes develops when the immune system destroys pancreatic beta cells.

Type 2 diabetes (diabetes mellitus) begins as insulin resistance.

Gestational diabetes is a form of glucose intolerance in women.

## Facts

- Diabetes lowers life expectancy by up to 15 years
- Diabetes increases the risk of heart disease by 2 to 4 times.
- Diabetes is the leading cause of kidney failure, lower limb amputation and adult blindness.
- Women who have had gestational diabetes have a 35-60% chance of developing diabetes in the next 10-20 years.
- 16.3% of AI/AN adults have diagnosed diabetes, compared to 8.7% of non-Hispanic whites.
- An estimated 30% of AI/AN adults have pre-diabetes.

## Risk Factors

- American Indians with a family history of diabetes.
- American Indians who do not exercise regularly.
- American Indians over age 45.
- American Indians who are overweight.
- women with gestational diabetes, or delivering a baby weighing 9 pounds or more at birth.

## Cost

Diabetes costs Oklahomans \$2 billion dollars each year!

## Prevention

Maintaining a healthy lifestyle plays a key role in diabetes prevention.

Proper diet and exercise should be a part of your healthy lifestyle.

Make regular visits to your Health Care Provider.

Pre-diabetics that lose weight and exercise can prevent or delay diabetes.

Take steps to reduce your risk for diabetes, stop tobacco use, and moderate alcohol use.

## Resources

Center for Disease Control and Prevention  
<[www.cdc.gov](http://www.cdc.gov)>

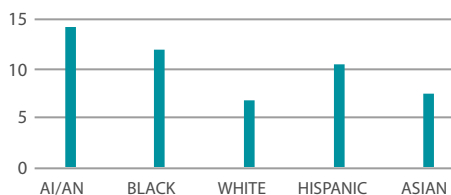
Harold Hamm Oklahoma Diabetes Center  
<[www.oklahomadiabetescenter.com](http://www.oklahomadiabetescenter.com)>

Oklahoma State Department of Health,  
Chronic Disease Service  
1-888-669-5934

Indian Health Service <[www.ihs.gov](http://www.ihs.gov)>

American Diabetes Association  
1-800-DIABETES (1-800-342-2383)  
<[www.diabetes.org](http://www.diabetes.org)>

PERCENT OF DIAGNOSED DIABETES, 20 YEARS OR OLDER



NATIONAL DIABETES STATISTICS FROM NATIONAL DIABETES INFORMATION CLEARINGHOUSE, 2007

# COPD

IS THE SIXTH LEADING CAUSE OF DEATH AMONG AMERICAN INDIANS/ALASKAN NATIVES.

## Overview

Chronic Obstructive Pulmonary Disease (COPD) is a term that refers to two lung diseases, chronic bronchitis and emphysema. The term COPD is used because both diseases are characterized by obstruction to airflow that interferes with normal breathing and the two frequently co-exist.

## Causes

Most causes of COPD develop after repeatedly breathing in fumes and other things that irritate and damage the lungs and airways. Tobacco use is the most common irritant that causes COPD. Pipe, cigar, and other types of tobacco smoke can also cause COPD, especially if smoke is inhaled. Breathing in other fumes and dusts over a long period of time may also cause COPD. The lungs and airways are highly sensitive to these irritants.

## Types

Chronic bronchitis sufferers experience obstructed breathing because the linings of the airways in the lungs are constantly inflamed and become thickened. The airways also become clogged because they are producing more mucus than usual.

Emphysema causes the walls between the alveoli (air sacs within the lungs) to lose their ability to stretch and recoil. The air sacs become stiff and weakened and may break, creating irreversible "holes" in the tissues of the lower lungs. These holes between the small air sacs create larger air sacs, in which air can become trapped more easily. The lungs have more difficulty moving air in and out and the exchange of oxygen and carbon dioxide with the blood may be impaired.

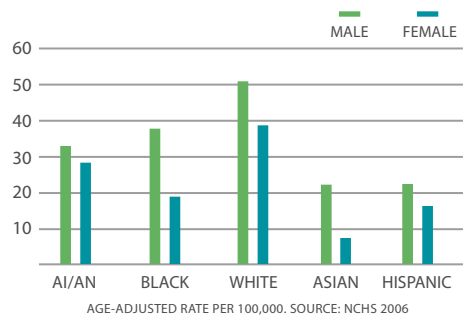
## Facts

- Smoking is the most common cause of COPD.
- COPD develops slowly, and it may be many years before you notice symptoms like feeling short of breath. Most of the time, COPD is diagnosed in middle-aged or older people.

## Signs & Symptoms

- persistent or progressive dyspnea (difficult or labored breathing; shortness of breath)
- chronic cough or sputum production
- decline in level of activity

DEATH RATES FOR COPD BY RACE/ETHNICITY & SEX, 2006



- COPD is more likely to occur in individuals with a history of smoking
- genetic factors and environmental or occupational exposures may also play a role (1 out of 6 Americans with COPD has never smoked)

## Prevention

- Avoiding smoking and smoke from others is essential in preventing the lung damage associated with these diseases. Avoiding other irritants and pollution is also important.
- Maintain good nutrition, drinking a lot of fluids.
- Avoiding respiratory illnesses such as the flu (influenza) and pneumonia can decrease the risk of COPD worsening. Talk with your doctor about getting vaccinations against them.

## Today

- COPD is very common. Approximately 12 million adults in the U.S. are diagnosed with COPD, and 120,000 die from it each year. An additional 12 million adults may have undiagnosed COPD.
- COPD death rates for women have risen steadily.

## Tomorrow

It is now recognized that 10-20% of COPD patients have never smoked! Furthermore, only a fraction of smokers develop COPD, suggesting that genetic and environmental factors influence the risk of developing COPD.

## Resources

- National Institutes of Health <[www.nih.gov](http://www.nih.gov)>
- National Heart Lung and Blood Institute <[www.nhlbi.nih.gov](http://www.nhlbi.nih.gov)>
- The Oklahoma State Board of Health 2002 State of the State's Health Interim Report. <[www.health.ok.gov](http://www.health.ok.gov)>

# Stroke

IS THE THIRD LEADING CAUSE OF DEATH IN THE UNITED STATES AND THE SEVENTH LEADING CAUSE OF DEATH AMONG AMERICAN INDIANS/ALASKAN NATIVES.

## Overview

A stroke occurs when blood flow is interrupted to any part of the brain, resulting in tissue injury and loss of brain function. An ischemic stroke occurs when a clot blocks the blood supply to the brain. A hemorrhagic stroke occurs when a blood vessel in the brain bursts.

## Facts

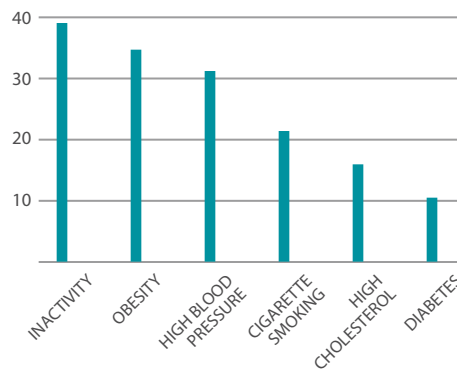
- Stroke is the leading cause of serious long-term disability.
- Each year, 795 000 people experience a new or recurrent stroke. Approximately 610 000 of these are first attacks, and 185 000 are recurrent attacks.
- In 2007, stroke accounted for 1 of every 18 deaths in the United States.
- On average, every 40 seconds, someone in the United States has a stroke.

## Signs and Symptoms

Someone having a stroke may experience only one, or several of these warning signs:

- Sudden numbness or weakness of the face, arm, or leg – especially on one side of the body.
- Sudden confusion, trouble speaking or understanding.
- Sudden trouble seeing in one or both eyes.
- Sudden trouble walking, dizziness, loss of balance or coordination.
- Sudden severe headache with no known cause.

PERCENT OF ADULTS WITH STROKE RISK FACTORS, U.S., 2005-2006



## Risk Factors

- High blood pressure and heart disease
- Genetics (stroke can run in families)
- Smoking
- Diabetes and high cholesterol
- Atrial fibrillation
- High blood cholesterol
- Overweight and Obesity
- Physical Inactivity
- Previous stroke or a TIA

If you smoke – quit. If you have high blood pressure, heart disease, diabetes, or high cholesterol, getting them under control – and keeping them under control – will greatly reduce your chances of having a stroke.

## Cost

The estimated direct and indirect cost of stroke for 2007 is \$62.7 billion.

## Prevention

- Keep a healthy weight.
- Don't smoke. If you do smoke, quit.
- Get moving. Aim for 30 minutes of exercise a day. Physical activity reduces stroke risk.

## Trends

- American Indians have higher risk ratios for stroke than whites.
- From 1997 to 2007, the stroke death rate fell 44.8%, and the actual number of stroke deaths declined 14.7%.

## Next Steps

- Develop a healthy lifestyle to prevent stroke both in your family and your community.
- Talk to your CHR's about upcoming events and get involved

## Resources

- Center for Disease Control and Prevention <[www.cdc.gov](http://www.cdc.gov)>
- American Heart Association <[www.americanheart.org](http://www.americanheart.org)>
- Brain Attack Coalition <[www.stroke-site.org](http://www.stroke-site.org)>
- American Stroke Association <[www.strokeassociation.org](http://www.strokeassociation.org)>
- Oklahoma City Area Inter-Tribal Health Board <[www.ocaithb.org](http://www.ocaithb.org)>

# Alcohol Abuse

IS HEAVY DRINKING OR BINGE DRINKING WHICH CAN LEAD TO INCREASED RISK OF HEALTH PROBLEMS SUCH AS LIVER DISEASE OR UNINTENTIONAL INJURIES.

## Forms of Alcohol Abuse

Heavy drinking is defined as having more than two drinks per day on average for men or more than one drink per day on average for women.

Binge drinking is defined as having 5 or more drinks during a single occasion for men or 4 or more drinks during a single occasion for women.

## Facts

- Excessive alcohol use is the third leading lifestyle-related cause of death for people in the U.S.
- American Indian alcohol-related deaths occur at more than four times the age-adjusted U.S. rate.
- Alcohol abuse results in years of productive life lost at a rate of nearly five times that of the U.S. population.
- Every year in the U.S., approximately 40 percent of fatal traffic crashes involve alcohol.
- Alcohol consumption increases the risk of cancer of the mouth, throat, esophagus, liver, and colon in men.

## Risk Factors

- alcohol abuse is five times more frequent in men than women
- family history of alcohol abuse
- cultural factors
- environment that encourages heavy drinking
- depression, anxiety, or low self-esteem
- significant stress (home, work, relationships)

## Cost

Alcohol abuse has physical, emotional, and financial consequences that can impact the lives of individuals, families, and society.

Alcohol costs the U.S. economy an estimated \$134 billion per year in lost productivity and earnings due to alcohol-related illness, premature death, and crime.

## Prevention

- Be a role model, either as a parent or as a friend.
- Stay involved; be connected with your family.
- Get involved in community efforts to develop alcohol abuse and prevention programs.
- Promote awareness that alcohol abuse is a preventable public health problem.

## Trends

During 2001-2005:

- an average of 1,514 Alcohol Attributable Deaths (AAD) occurred annually among AI/ANs, accounting for 11.7% of all deaths in this population.
- 771 (50.9%) of average annual AADs resulted from acute causes.
- The leading acute cause of death was motor-vehicle traffic crashes (417 AADs).
- 743 (49.1%) of average annual AADs from chronic causes.
- The leading chronic cause was alcoholic liver disease (381).
- The crude AAD rate among AI/ANs was 49.1 per 100,000 population (25.0 for acute causes and 24.1 for chronic causes).
- Of all YPLLs, 60.3% resulted from acute conditions, and 39.7% resulted from chronic conditions.
- The leading acute cause of YPLLs was motor-vehicle traffic crashes (34.4% of YPLLs).
- The leading chronic cause was alcoholic liver disease (21.2%).

## Next Steps

- Get people together and ask community members to define how alcohol and substance abuse affects your community.
- Work through a community committee, develop a plan, and decide who can help.
- Look for ways to coordinate existing and new activities and programs.

## Resources

Substance Abuse and Mental Health Services Administration <[www.samhsa.gov](http://www.samhsa.gov)>  
Alcohol Abuse Prevention <[www.stopalcoholabuse.gov](http://www.stopalcoholabuse.gov)>  
Substance Abuse Policy Research Program <[www.saprp.org](http://www.saprp.org)>  
Center for Disease Control and Prevention <[www.cdc.gov](http://www.cdc.gov)>  
Indian Health Service <[www.ihs.gov](http://www.ihs.gov)>  
Oklahoma City Area Inter-Tribal Health Board <[www.ocaithb.org](http://www.ocaithb.org)>

# Inhalant Abuse

ARE VOLATILE SUBSTANCES, GASES, AND NITRATES THAT ARE SNIFFED, SNORETED, HUFFED, OR BAGGED TO PRODUCE INTOXICATING EFFECTS SIMILAR TO ALCOHOL.

## Overview

Inhalant Abuse is the deliberate inhalation by “sniffing” or “huffing” fumes, vapors or gases from common household and commercial products for the purpose of “getting high.” To achieve this “high,” more than 1,400 household products can be misused — products that are found under your sinks, in your cabinets, in your garage, and throughout your house. These household products are chosen because they are inexpensive, easily accessible and legal to purchase

## Harmful Irreversible Effects

- Hearing loss (spray paints, glues, dewaxers, dry-cleaning chemicals, correction fluids).
- Peripheral neuropathies or limb spasms (glues, gasoline, whipped cream dispensers, gas cylinders).
- Central nervous system or brain damage (spray paints, glues, dewaxers).
- Bone marrow damage (gasoline).
- Sudden sniffing death.

## Serious but Potentially Reversible Effects

- Liver and kidney damage (correction fluids, dry-cleaning fluids).
- Blood oxygen depletion (varnish removers, paint thinners).

## Facts

- One in 5 children will abuse inhalants by 8th grade
- More 8th graders have tried inhalants in their lifetime than any other illicit drug, including marijuana
- The types of inhalants most frequently mentioned as having been used in the past year by new users were: glue, shoe polish, or toluene (30.5%), gasoline or lighter fluid (25.3%), nitrous oxide or “whippets” (23.9%), and spray paints (23.5%).
- Inhalants are among the first drugs used by American Indians; the average age of first use was 11.5 years.

## Signs and Symptoms

If someone is an inhalant abuser, some or all these symptoms may be evident:

- unusual breath odor or chemical odor on clothing,

- slurred or disoriented speech, drunk, dazed, or dizzy appearance,
- signs of paint or other products where they wouldn’t normally be,
- red or runny eyes or nose, spots and/or sores around the mouth,
- nausea and/or loss of appetite, anxiety, excitability, or irritability.

## Prevention

- Talk with your child about not experimenting with inhalants.
- Discuss this problem openly and stress the devastating and life-threatening consequences of inhalant abuse.
- Be alert for symptoms and signs of inhalant abuse.
- If you suspect there’s a problem, seek professional help immediately.

## Trends

- The percentage of adolescents who used inhalants in the past year was lower in 2007 (3.9%) than in 2003, 2004, and 2005 (4.5, 4.6, and 4.5 percent, respectively).
- Among adolescents who used inhalants for the first time in the past year, the rate of use of nitrous oxide or “whippits” declined between 2002 and 2007 among both genders (males: 40.2 to 20.2 percent; females: 22.3 to 12.2 percent)
- In 2007, 17.2 percent of adolescents who initiated illicit drug use during the past year indicated that inhalants were the first drug that they used; this rate remained relatively stable between 2002 and 2007.

## Resources

National Institute on Drug Abuse  
<[www.nida.nih.gov](http://www.nida.nih.gov)>

National Inhalant Prevention Coalition  
<[www.inhalants.com](http://www.inhalants.com)>

Inhalant Abuse & Education <[www.inhalant.org](http://www.inhalant.org)>

Center for Disease Control & Prevention  
<[www.cdc.gov](http://www.cdc.gov)>

Indian Health Service <[www.ihs.gov](http://www.ihs.gov)>

Substance Abuse & Mental Health Services Administration <[www.samhsa.gov](http://www.samhsa.gov)>

# Asthma

IS A DISEASE THAT AFFECTS YOUR LUNGS AND CAN CAUSE WHEEZING, BREATHLESSNESS, CHEST TIGHTNESS, AND MORNING AND NIGHT COUGHING.

Asthma attacks occur when things in the environment, such as smoke or dust mites, enter the lungs causing airways to get smaller making it harder to breathe.

Asthma is difficult to diagnose, especially in children. Regular checkups of lung function and checking for allergies can help a physician make a correct diagnosis. Asthma is best controlled when you listen to your doctor, take the right medication, and avoid things that cause you to have an attack.

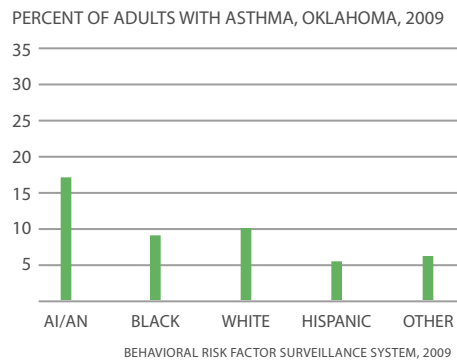
## Asthma Triggers

Asthma Triggers are things in the environment that may cause an asthma attack.

- Not all triggers affect everybody the same, and if you have asthma you should learn which triggers cause your attacks.
- Some common triggers are: secondhand smoke, dust mites, outdoor air pollution, pets, mold, cockroach allergen, or strenuous exercise.

## Facts

- 14.9 million people in the U.S. have asthma.
- 7.5% of Americans have asthma (6.6% of males and 8.4% of females).
- Asthma is the most common long-term disease in children.
- About 8.9% of children have asthma (10.4% of males and 7.4% of females).
- Each year asthma causes 500,000 hospitalizations, 5,000 deaths, and 134 million days of restricted activity in the U.S.



## Statistics

- In 2002, 7.5% of the U.S. population had asthma.
- In 2002, 11.6% of American Indians and Alaska Natives had asthma.
- In 2006, American Indians and Alaska Natives were 60% more likely to be diagnosed with asthma.
- In 2006, the asthma death rate for American Indians/Alaska Natives was 80% higher than any other race.

## Prevention of Symptoms

- Learn about your asthma and how to prevent flare-ups.
- Use medicines prescribed by your doctor.
- Avoid things that make your asthma worse.
- Get regular checkups from your doctor.

## Next Steps

- If you are not sure if you or someone in your family has asthma, go to the doctor.
- Once you are aware that you have asthma, it is easier to manage and control

## Resources

National Heart Lung and Blood Institute  
<[www.nhlbi.nih.gov](http://www.nhlbi.nih.gov)>  
The Mayo Clinic <[www.mayoclinic.com](http://www.mayoclinic.com)>  
American Lung Association <[www.lungusa.org](http://www.lungusa.org)>  
Center for Disease Control and Prevention  
<[www.cdc.gov](http://www.cdc.gov)>  
U.S. Environmental Protection Agency  
<[www.epa.gov/asthma](http://www.epa.gov/asthma)>

# Arthritis

IS JOINT INFLAMMATION OR SWELLING. THERE ARE OVER 100 RHEUMATIC DISEASES AND CONDITIONS THAT AFFECT THE JOINTS AND OTHER CONNECTIVE TISSUE.

## Overview

Arthritis, osteoarthritis, and gout all have major effects on quality of life, the ability to work, and basic activities of daily living.

## Cost

- In 2003, arthritis was estimated to cost \$128 billion including \$80.8 billion in medical expenditures and \$47 billion in lost earnings.
- Arthritis results in over 39 million doctor visits and a half million hospitalizations each year.

## Prevention

- Maintain a healthy weight – Extra weight puts a lot of stress and strain on your knees, hips, and feet.
- Exercise regularly – Light exercise can help lessen the symptoms of arthritis.
- Eat right – A proper, well-balanced diet including fruits, vegetables, and vitamins will improve your body's overall function.
- Injury Prevention – Injuries cause more wear and tear on the body, so preventing injuries, such as falls, may reduce the risk of developing or worsening arthritis.

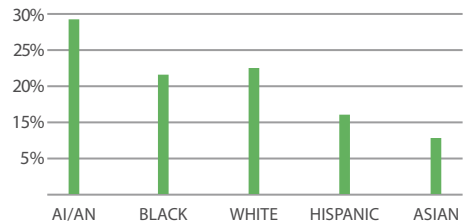
## Trends

- Arthritis affects 1 in 5 adults and continues to be the most common cause of disability.
- There are 21.1% of Americans with arthritis (24.7% women and 17.4% men). All of the human and economic costs are projected to increase over time as the population ages.

## Next Steps

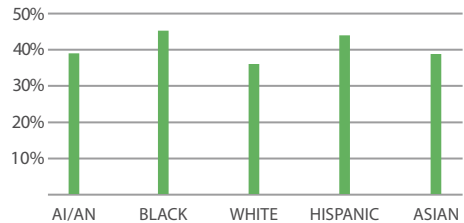
- If you think you may have arthritis, talk to a doctor to find out what treatment is best for you.
- Learn more about your arthritis so that you can control pain and improve or maintain function.

PREVALENCE OF ARTHRITIS AMONG ADULTS



Source: National Health Interview Survey, U.S., 2002, 2003, 2006

ACTIVITY LIMITATION AMONG ADULTS WITH ARTHRITIS



Source: National Health Interview Survey, U.S., 2002, 2003, 2006

## Resources

Arthritis Foundation <[www.arthritis.org](http://www.arthritis.org)>

Center for Disease Control and Prevention <[www.cdc.gov/arthritis](http://www.cdc.gov/arthritis)>

WebMD Osteoarthritis Center <[www.webmd.com/osteoarthritis](http://www.webmd.com/osteoarthritis)>

Sources:

Healthy People 2020 - Arthritis, Osteoporosis and Chronic Back Conditions

Bolen J, Schieb L, Hootman JM, Helmick CG, Theis K, Murphy LB, et al. Differences in the prevalence and impact of arthritis among racial/ethnic groups in the United States, National Health Interview Survey, 2002, 2003, and 2006. *Prev Chronic Dis* 2010;7(3).

# Maternal & Child Health

## Before Pregnancy

- Take 400 mg of Folic Acid every day for at least 3 months.
- Stop smoking and drinking alcohol.
- Talk to your doctor about any over-the-counter or prescription medication you are taking.

## During Pregnancy

- Avoid smoking during pregnancy – it is the most preventable cause of illness and death among mothers and infants.
- Go see your doctor – prenatal care is very important as soon as possible and throughout the entire pregnancy.
- Stay healthy – eat healthy, drink plenty of water, get plenty of rest, avoid getting sick by washing your hands, check with your doctor about exercising lightly.
- Learn about your pregnancy by talking to your doctor and getting more information from trusted sources.

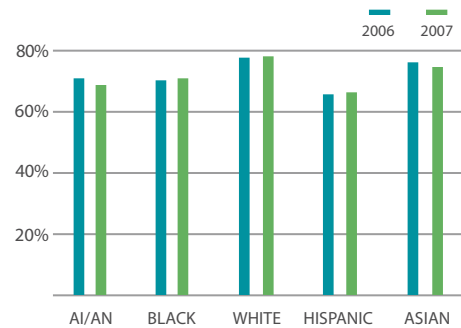
## When Baby Arrives

- Follow your doctor's instructions for activity after delivering.
- Breastfeeding is important for you and the baby.
- It is recommended to breastfeed for at least 12 months and longer if possible.
- If you are concerned with losing weight after pregnancy, talk to your doctor about dieting while breastfeeding.
- Watch for signs of post-partum depression: irritability, restlessness, feeling sad or depressed, being overly worried about the baby, feeling worthless and guilty.
- Make sure your infant is safe – place the baby on his or her back to sleep, remove loose bedding or toys from the baby's sleep area.

## Cost

- Prenatal care costs about \$1,862 (\$133 per visit for 14 visits).
- Delivery cost is about \$5,000-10,000 for vaginal and \$7,000-12,000 for c-section.
- Pre-term births cost the U.S. about \$26 billion per year, or \$51,600 per child.
- Newborns use about 300-400 diapers a month, costing about \$75-125 per month.
- Childcare costs over \$100 per week.

FIRST TRIMESTER PRENATAL CARE BY RACE, OKLAHOMA



SOURCE: THE OFFICE OF WOMEN'S HEALTH - QUICK HEALTH STATISTICS  
[http://healthstatus2010.com/ReportServer?/owh\\_2010/OWH\\_FIPS&rs:ClearSession=True&rc:Parameters=False&SESSION\\_ID=1he0nc45dk2jbm55123illev](http://healthstatus2010.com/ReportServer?/owh_2010/OWH_FIPS&rs:ClearSession=True&rc:Parameters=False&SESSION_ID=1he0nc45dk2jbm55123illev)

## Prenatal Care

- Prenatal care is the health care that you get for your baby during pregnancy.
- You should call the doctor as soon as you are pregnant or think you may be pregnant.
- Prenatal care is important to keep you and the baby safe and healthy, and it allows doctors to see problems early while there is still time to treat them.
- You should see their doctor once a month for the first six months of pregnancy, every two weeks during the seventh and eighth month, and weekly during the ninth month of pregnancy.

## Infant Development

- By the end of the third month, babies usually can raise their head while on their stomach.
- After the seventh month, babies usually can sit up, roll over, and start playing with sounds.
- At one year, babies can usually crawl, say "dada" and try to imitate other words.
- At two years, toddlers can usually walk on their own, say several single words, and start using simple phrases.

## Resources

US Department of Health and Human Services <[www.womenshealth.gov](http://www.womenshealth.gov)>

<[pregnancy.org](http://pregnancy.org)>

Center for Disease Control and Prevention <[www.cdc.gov](http://www.cdc.gov)>

Health Resources & Services Admin. <[www.mchb.hrsa.gov](http://www.mchb.hrsa.gov)>



