

# OKLAHOMA ARTHRITIS ACTION PLAN



Maximizing Ability  
Minimizing Disability  
... in all Communities

A PUBLIC HEALTH STRATEGY



# The Oklahoma Arthritis Network

Collaborative Partnerships with over 100 organizations including:

Ability Resources  
AccessOKC.com  
Areawide Aging Agency  
Arthritis Foundation  
    Eastern Oklahoma Chapter  
    Oklahoma Chapter  
Balanced Healing Medical Center  
Bone and Joint Hospital  
Central Oklahoma Integrated Health Network  
Creek Nation  
Patient Advocates  
    Jinny Caldwell - Behcet's Disease  
    Lin Kisslinger - Fibromyalgia  
    Betsy Replogle - Scleroderma  
Daily Living Centers  
Deaconess Hospital  
Department of Human Services  
    Aging Services Division  
    Family Support Services  
    Older Women's Initiative  
    Rehabilitation Services  
Fountains at Canterbury Retirement Community  
Hanger Orthotics and Prosthetics  
Health Advance  
HealthOklahoma.com  
Heartland Health Center  
Hertz Corporation  
Hillcrest Health Center  
INTEGRIS Health System  
Lifestyle Center of America  
Lighthouse - Sports, Fitness, and Health  
Mary Mahoney Memorial Health Center  
McBride Clinic  
Metro Transit  
Mobility King  
Native American Center of Excellence  
Nursing Home Association of Oklahoma  
Oklahoma Center for the Advancement of Science and Technology  
Office of Handicapped Concerns  
Oklahoma ABLE Tech  
Oklahoma City-County Health Department  
Oklahoma City Public Schools  
Oklahoma Christian University  
OKC Mayor's Committee on Disability Concerns  
Oklahoma County Medical Society  
Oklahoma Employment Benefits Council  
Oklahoma Employment Lawyers Association  
Oklahoma Farm Bureau Women's Committee  
Oklahoma Foundation for Medical Quality  
Oklahoma Geriatric Education Center  
Oklahoma Health Care Authority  
Oklahoma Lupus Association  
Oklahoma Medical Research Foundation  
Oklahoma Occupational Therapy Association  
Oklahoma Pharmacists Association  
Oklahoma Physical Therapy Association  
Oklahoma Rehabilitation Council  
Oklahoma State Department of Health  
    Chronic Disease Service  
    Eldercare Program  
    Injury Prevention Service  
    Nursing Services  
    Office of Primary Care  
    Office of Rural Health  
Oklahoma State Medical Association  
Oklahoma State University  
Oklahoma Turning Point Council  
Ombudsman-ASCOG  
Orthopedic & Reconstructive Center  
Orthopedic & Reconstructive Research Foundation  
OU Medical Center  
Pharmacia  
Progressive Independence  
RehabCare at Deaconess Hospital  
Rose State College  
Saint Anthony Hospital  
Saint Francis Health System  
Senior Health>>>>On The Go  
Sonic Corporation & Subsidiaries  
Statewide Independent Living Council  
University of Oklahoma Health Sciences Center  
    Department of Rehabilitation Sciences  
    Department of Geriatric Medicine  
    College of Medicine  
    College of Nursing  
    Department of Health Administration and Policy  
    Department of Pediatric Rheumatology  
United States Public Health Service  
    Indian Health Service  
United Way of Metro Oklahoma City  
Volunteers of America  
Wichita and Affiliated Tribes  
Wyeth-Ayerst  
YWCA



# Preface

In September 1999, the Centers for Disease Control and Prevention awarded a grant to establish the Arthritis Prevention and Education Program (APEP) within the Oklahoma State Department Health. A few months later, APEP formed an extension of the program: the Oklahoma Arthritis Network (OAN). OAN consists of organizations including the Arthritis Foundation, Oklahoma Department of Human Services, University of Oklahoma Health Sciences Center, Indian Health Service of the United States Public Health Service, Oklahoma Occupational Therapy Association, county health departments, health professional associations, local hospitals, fitness centers, media outlets, major employers, civic groups and private medical providers.

Members of OAN have collaborated in the development of this document, the *Oklahoma Arthritis Action Plan*. This Plan guides the use and organization of Oklahoma's health resources to combat the greatest single cause of chronic pain and disability among Oklahomans: arthritis and related conditions. Following the lead of the *National Arthritis Action Plan: A Public Health Strategy*, OAN is focused on enhancing state-wide recognition of the impact of arthritis – among Oklahomans in general, and in particular among people with arthritis and their families, health care providers, and policy makers.

Through collaborative efforts of individuals and organizations throughout Oklahoma, OAN will provide assistance to all people affected by arthritis and related conditions. Prevention and treatment information will be the means by which the OAN will endeavor to significantly reduce the disabling consequences of arthritis and related conditions in Oklahoma.



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# Executive Summary

The title of the Oklahoma Arthritis Action Plan, “Maximizing Ability – Minimizing Disability... in all Communities,” provides a concise summary of the OAN mission. In addition to identifying the impact of arthritis

and related conditions on the people of Oklahoma, the Oklahoma State Department of Health (OSDH) and its OAN partners have created a comprehensive plan to reduce the burden arthritis places on

those affected and on our state’s health-care system. Areas of focus include surveillance and research, communication and education, and programs, policies, and systems. The Plan’s goals, objectives and strategies describe how

our statewide partnerships will accomplish OAN’s mission. We believe that community partnerships are essential to effectively address underlying issues and conditions that lead to public health concerns such as arthritis.

## Mission



To increase public awareness about arthritis and related conditions and to maximize the quality of life for Oklahomans affected by these conditions through the

development of resources, promotion of access to appropriate health care management, and the provision of education.

The National Institute of Arthritis and Musculoskeletal and Skin Diseases defines the term “arthritis” as *inflammation of a joint*, but uses it more broadly to include all rheumatic diseases. Over 100 diseases are classified in the general diagnostic category of arthritis and related conditions. The most common are osteoarthritis, rheumatoid arthritis, and fibromyalgia. Some rheumatic diseases also are known as connective tissue diseases, because they affect the body’s *connective tissues*, which provide a supportive framework to the body and its

internal organs. Others are known as *autoimmune diseases*, because the immune system harms the body’s own healthy tissues.

Recent estimates suggest that arthritis, rheumatic diseases, and related conditions affect over 679,000 people in Oklahoma. They are the leading cause of disability not only in Oklahoma, but also in the United States. They may limit a person’s work, recreation, and other activities such as feeding, bathing, dressing, toileting, and

grooming - tasks that we may take for granted until we acquire a disabling condition as arthritis. Even though arthritis and rheumatic diseases are common, many Oklahomans do not appreciate the range of conditions the term “arthritis” includes nor the variety of manifestations the rheumatic diseases entail. In general, symptoms may include pain, aching, and stiffness. An affected person may notice swelling in or around joints and other connective tissues, but may not be aware that some

rheumatic diseases can affect internal organs.

Some people may perceive arthritis as a disease that affects only older people, and may have an attitude that would lead them to say, “It’s just a part of growing old; you can’t do anything about it.” This plan and its associated surveillance report provides empirical evidence that challenges such assumptions. This report supports the position that the disabling effects of arthritis and related conditions can be minimized through early diagnosis and appropriate health care management.

# Introduction

The Burden of Arthritis and Other Related Conditions on People in the State of Oklahoma and the United States

## Oklahoma

- More than 679,000 or one out of six Oklahomans have been diagnosed with arthritis and related conditions. <sup>a1</sup>
- Approximately \$860 million lost in productivity and medical costs are associated with arthritis. <sup>a1</sup>
- Women are more likely to be diagnosed with arthritis and related conditions than men. <sup>a2</sup>
- The likelihood of being diagnosed with arthritis and related conditions increases with age. <sup>a2</sup>
- When it comes to treatment for arthritis, women are more likely to report being treated than men. <sup>a2</sup>
- People between the ages of 45-54 are the most likely to report receiving more treatment for their arthritis. <sup>a2</sup>
- American Indians are the most likely racial group to report receiving treatment for their arthritis or related condition. <sup>a2</sup>
- In 1998, \$175 million were spent on the hospitalization associated with arthritis alone. <sup>a3</sup>
- In FY 98, there were 383 hospital inpatient visits associated with arthritis documented by the Indian Health Service(IHS). <sup>a4</sup>
- In FY 99, IHS reported 400 inpatient visits due to arthritis. <sup>a4</sup>

<sup>a</sup> SOURCES:

1. National Arthritis Foundation, Atlanta, Georgia
2. 1999 Behavioral Risk Factor Surveillance System (BRFSS)
3. 1998 Hospital Discharge Data (HDD)
4. 2000 Indian Health Service (IHS)

## In the United States

- Arthritis affects nearly one of every six Americans.
- In 2020, an estimated 60 million people will be affected.
- More women than men are affected.
- Leading cause of disability in the United States affecting seven million people.
- Arthritis is second only to heart disease as a cause of work disability.
- For adults over age 45, causes job loss, disability, and impairment than any other disease.
- Nearly three of every five people with arthritis are younger than 65 years.
- The lives of individuals, family, friends, and other caregivers are significantly affected by the painful disease process and disabling consequences.
- Arthritis costs our nation \$65 billion in social and medical costs, equaling 1.1% of the gross national product - a figure equivalent to a moderate recession.

SOURCE: Centers for Disease Control and Prevention

# Disability Associated with Arthritis in Oklahoma

## Health Effects

The 1999 Behavioral Risk Factor Surveillance System (BRFSS) is the largest national telephone survey that measures health risks. BRFSS data for Oklahoma residents indicate

those with arthritis and related conditions report fair to poor health more frequently, i.e., approximately three times as often as those without arthritis (30% vs. 9%). Additionally,

there is a significant difference in how these people felt their arthritis impacted their lives physically, mentally, and functionally.

<b>With Arthritis</b>	<b>Without Arthritis</b>
<b>Physical Days</b> 5.7	<b>Physical Days</b> 2.1
<b>Mental Days</b> 3.2	<b>Mental Days</b> 2.3
<b>Activity days</b> 3.5	<b>Activity days</b> 1.1

Average number of days of poor physical or mental health or limited activities in the past 30 days: BRFSS Oklahoma 1999

When comparing our state with others, it is found that Oklahoma ranks lower in poor health

days. However, these differences are not significant.

Compare the above poor health days with the data given below:

<b>With Arthritis</b>	<b>Without Arthritis</b>
<b>Physical days</b> 5.9	<b>Physical days</b> 1.7
<b>Mental days</b> 3.9	<b>Mental days</b> 2.3
<b>Activity days</b> 3.3	<b>Activity days</b> 1.0

Average number of poor health days within past month, BRFSS 11 States 1996 - 1998

## Economic Effects

Poor health outcomes have a direct impact on the Oklahoma economy. Businesses experience employee absenteeism, health organizations experience greater demand for their limited resources, and families experience higher costs for health insurance. Every community member, organization, and

business may in some way experience the economic burden of arthritis.

In 1998, 12,433 hospitalization events occurred in Oklahoma that involved a primary diagnosis of arthritis, for a total cost of nearly \$175,000,000 and an average cost of more than \$13,000 per event.

In that same year, another 18,610 hospitalization events involved a secondary diagnosis of arthritis, for an additional cost of nearly \$225,000,000 and an average cost of about \$12,000 per event.

**It is important to note that these are only inpatient hospitalizations and the true economic burden of arthritis is significantly higher.**

## Who will implement the actions of the Plan?

The Oklahoma Arthritis Network (OAN), established in 1999, as a collaborative partnership among health professionals, consumers, business leaders, educators, and private/public organizations, is prepared to take action to meet the goals, objectives and strategies described in the Oklahoma Arthritis Action Plan. OAN and the OSDH Arthritis Prevention and Education Program (APEP) are focused on reducing the burden of arthritis and related conditions on Oklahomans.

Community-based decision-making is a key element in developing and implementing the Oklahoma Arthritis Action Plan. Adopting the concept of Oklahoma's Turning Point Health Initiative, OAN will include representation by members from every community. Participating individuals and organizations will be the driving forces to implement attitudinal and behavioral changes that we intend to bring about and sustain the long-term success of this program. The rate at which change takes place, and the chance of sustaining progress once made, depends on the diversity and commitment of participants from each community.

Oklahoma's APEP is located in the Office of Community Development, Community Health Services of the Oklahoma State Department of Health. The program administers and coordinates OAN activities. It is an innovative program that is an integral part of the Oklahoma Turning Point Health Initiative.

This public health approach in no way negates the importance of primary prevention of arthritis, but rather acknowledges that at this initial stage of our program, resources would best be spent addressing the needs of persons already experiencing the pain and disability associated with arthritis. It is here that the CDC feels that the most significant and immediate impact can be made.

---CDC, 2000

Tertiary prevention strategies work toward reducing pain and disability. Useful strategies include: *self-management* in the form of weight control and physical activity, *education* - arthritis self help course and other Arthritis Foundation community programs, and other arthritis-related *rehabilitation services* - occupational therapy and physical therapy services, and *medical and surgical treatment* - medications for some types of arthritis can limit disease progression, control symptoms, and prevent serious complications, and joint replacement.

## Who will benefit and what will the Plan emphasize?

The target population for this action plan is *ALL Oklahomans affected by arthritis*. The program will use secondary and tertiary public health prevention approaches.

*Early diagnosis and medical treatment* is the focus of secondary prevention. Nearly 200,000 people fail to see a doctor even when their arthritis is causing them problems that limit their activity. Medications are available that can significantly improve long-term outcomes by alleviating symptoms.

## Oklahoma's Vision

The Oklahoma State Department of Health, the Oklahoma Arthritis Network and the Turning Point Council are inspired by the vision described in the National Arthritis Action Plan. This shared vision is as follows:

### Building Healthy Communities by...

- increasing public awareness of arthritis as the leading cause of disability and an important public health problem.
- preventing arthritis whenever possible.
- promoting early diagnosis and appropriate health care management for people with arthritis to ensure them the maximum number of healthy lifeyears.
- minimizing preventable pain and disability due to arthritis.
- supporting people with arthritis in developing and accessing the resources they need to cope with their disease.
- ensuring that people with arthritis receive the family, peer, and community support they need.

## Oklahoma Strengths

### Public Health Framework

Oklahoma's public health infrastructure functions using a centralized model approach. The nine persons appointed to the Board of Health serve staggered, nine-year terms, thus providing stability and continuity to public health leadership. The Board of Health is responsible for appointing the Commissioner of Health as well as establishing the state's overall public health policy. The central office of the Oklahoma State Department of Health (OSDH), located in Oklahoma City, traditionally has directed public health decisions for the entire state.

Oklahoma's centralized organization has brought about several significant achievements. Few states can boast of having such a solid, "brick and mortar" infrastructure as Oklahoma: community health departments are active in 69 of its 77 counties. Such development could not have occurred without the foresight and continuing efforts of OSDH, and the commitment and concern of the Oklahoma Legislature for protecting the health of the citizens of Oklahoma.



## Oklahoma's Health Future: A Turning Point

Oklahoma's long-standing, centralized public health system laid the foundation for addressing today's public health needs. However, we believe a new model and new strategies are necessary to best address the needs of tomorrow. Oklahoma's public health organization and programs are at a turning point. We see a future involving a statewide, county-based public health network. We envision direction of public health initiatives not from one central office for all, but from each county for the unique needs of its constituents.

Members of Oklahoma communities must have a greater voice in their community health needs and take active roles in public health decisions. Such an evolu-

tion in organization and process will require significant changes at local and state levels. OSDH will implement systems to collect community health information and data from the sources closest to the needs themselves: the county health department staff and other community organizations. Local health departments will develop systems to incorporate community-specific needs, conditions, and concerns into their day-to-day decision-making. In making these changes, both state and local health departments will preserve and enhance their core functions and responsibilities for protecting the public health. As a result, Oklahoma's centralized system will evolve into a county-based public health network.

New strategies include soliciting recommendations from stakeholder groups, and coordinating interaction among individuals and organizations that previously may have not pooled their expertise. Stakeholders represent local community members as well as those not traditionally connected to public health (government, secondary and higher education, health care, voluntary agencies, business, and the faith community). The future will see greater collaboration among these groups. Such interaction involves state and local agencies sharing responsibility for community health; including sharing resources, extending responsibility to local agencies for determining use of some public health resources, and sharing accountability for the outcomes of public health decisions.

### Special Focus:

With over 273,230 Native Americans, comprising 7.9% of the total population of Oklahoma, the Oklahoma State Department of

Health along with key OAN partners will direct special attention to this ethnic group. This population represents 39 tribes

headquartered in Oklahoma including the Five Civilized Tribes: Choctaw, Chickasaw, Cherokee, Creek and Seminole.





# The Plan

**Maximizing Ability  
Minimizing Disability  
... in all Communities**

# 2001



## **Objective I: Establish and Sustain Partnerships Throughout Oklahoma to Reduce the Burden of Arthritis Through a Statewide Coordinated Effort.**

**Strategy 1.** Establish and Sustain the Oklahoma Arthritis Network (OAN)

- Identify partners.
- Conduct regular meetings.
- Utilize videoconferencing to enhance communication/education among statewide partners.
- Link Oklahoma State Department of Health (OSDH) website to other arthritis websites.
- Encourage those who have an interest in arthritis to subscribe to the OAN Listserv.
- Provide and support continuing education opportunities, e.g., satellite conferences, audio-conferences.
- Engage other partnerships such as Turning Point Advisory Council in addressing arthritis and related conditions.

**Time Frame:** November 1999 and throughout the life of the program

### **Indicators of Success/Evaluation:**

- Recruitment tools are created.
- Evidence of in-kind participation and donations.
- Number of hits on website.
- Number of listserv subscribers.
- External arthritis information posted on listserv.
- Number of workshops, trainings, informal programs, technical assistance to partners.
- Number of participants trained, support systems implemented.
- Number of attendees at meetings, workshops, trainings, informal programs.
- Number of new partnerships formed.

**Strategy 2.** Develop and Promote Speakers Bureau to Communicate OAN Message

- Develop core OAN public speaking message.
- Develop core OAN public speaking training sessions.
- Develop list of trained speakers.
- Coordinate community presentations that are not limited to: health fairs, school assemblies and health professional conferences.
- Coordinate other opportunities for formal and informal dissemination of information.

## **The Plan**

**Goal I: Increase the awareness of arthritis and related conditions, their impact on persons of all ages, their family and their community, the importance of early diagnosis and appropriate management, and current effective prevention strategies through statewide efforts.**

**Time Frame:** September 2001 - ongoing

**Indicators of Success/Evaluation:**

- Number of presentations.
- Number in audience or people reached.
- Number of people trained.
- Number of workshops, trainings and informal programs.

**Strategy 3.** Develop and Distribute OAN Brochure(s)

- Develop brochure and other promotional media describing OAN, Oklahoma arthritis facts, challenges, partners, and public health framework.
- Distribute copies to OAN for dissemination.

**Time Frame:** April 2000 (original brochure); updated and printed as needed

**Indicators of Success/Evaluation:**

- Number of brochures distributed.

**Objective II: Collaborate with Community Partners to Deliver Consistent Science-Based Information about Arthritis and Related Conditions to the Public.**

**Strategy 1.** Utilize Information from the Centers for Disease Control and Prevention (CDC), the Arthritis Foundation (AF) and Other Recognized Science-Based Organizations

- Acquire universal message from CDC/AF.
- Disseminate message to state and community partners.
- Survey partners on an annual basis to determine utilization.

**Time Frame:** September 2001 - ongoing

**Indicators of Success/Evaluation:**

- Number of organizations receiving the message.
- Number of organizations utilizing the message.

**Strategy 2.** Develop and Promote Arthritis and Related Conditions Information Websites

- Create OSDH/OAN website.
- Link other (community-based, statewide and national) arthritis-related resources.
- Promote partner-sponsored arthritis-related programs,
- OAN sponsored events and continuing education.
- Link other websites to use arthritis information.
- Assist OAN partners to establish link to OSDH Arthritis Prevention and Education Program/OAN.
- Educate and provide monthly reminders to partners on how to utilize website for shared purposes.



- Promote the utilization of existing arthritis programs by creating a resource directory; updating it regularly; and providing it to health care professionals, community education and training programs, the general public and persons with or affected by arthritis. Re-evaluate process semi-annually.

**Time Frame:** Website originated; ongoing  
Resource Directory: Initiate September 2001- Completed by May 2002

**Indicators of Success/Evaluation:**

- Number of hits to website.
- Identify existing education programs, support groups and other resources.
- Resource listing on the OSDH website and display links to AF other science-based organizations.
- Report the number of partners utilizing this service.

**Strategy 3.** Make Consumer Guidelines Available on Complementary and Alternative Therapies for Arthritis and Related Conditions

- Utilize current and new brochures.
- Evaluate current literature on complementary and/or alternative therapies.
- Develop a list of educational references related to alternative and complementary therapies.
- Integrate guidelines into the training of OAN speakers.
- Disseminate information to state and community partners.

**Time Frame:** January 2002 - May 2002, update annually

**Indicators of Success/Evaluation:**

- Number of brochures created.
- Number of brochures distributed.

**Strategy 4.** Identify Science-Based Clinical Trials within the Region

- Publicize on the OSDH website and OAN listserv.
- Announce where clinical trial location are available at OAN meetings.
- Number of patients enrolled.

**Strategy 5.** Identify and Promote Arthritis Research and Funding Resources

- Identify and publicize funding resources for arthritis and related research.
- Document current research activities throughout Oklahoma.

**Time Frame:** March 2002 and ongoing



**Indicators of Success/Evaluation:**

- Funding sources identified.
- Organizations doing research are identified and matched with funding sources.
- Directory/Listing of relevant research for OAN materials and public information, updated annually.

**Objective III: Incorporate Arthritis and Related Conditions Educational Programs into the Services Offered by State and Local Health Departments and Community Organizations.****Strategies:**

- Develop resource package of existing materials.
- Identify opportunities at the local and state level for arthritis related programs.
- Identify at least two outreach activities for a targeted audience, e.g., Native Americans, Hispanics and/or women between the ages of 35-65.
- Facilitate implementation teams within each county.
- Train personnel.
- Assist in the implementation of the programs.
- Monitor program usage.
- Support the development of loan libraries and demonstration labs for assistive technology trial use.

**Time Frame:** July 2002 through July 2003

**Indicators of Success/Evaluation:**

- Number of county health departments participating.
- Number of personnel trained.
- Number of community partners participating.
- Number of consumer/patients participating.

**Objective IV: Coordinate Local Efforts to Motivate People With Arthritis Symptoms to Seek Early Diagnosis and Appropriate Management.**

**Strategy 1.** Collaborate with Community Organizations to Reach People in their Communities

- Identify health, social, civic, faith, and educational-based organizations at the community level for distribution of arthritis-related information.
- Identify traditional and nontraditional sites for information distribution.
- Coordinate implementation of arthritis-related information distribution.

**Time Frame:** June 2001 - ongoing

**Indicators of Success/Evaluation:**

- Diversity of the type of groups reached.
- Number of community contacts made.



**Strategy 2.** Promote the Use of the AF Arthritis Screening Tool

- Utilize arthritis-screening tool, developed by the AF, in various community settings.
- Introduce tool to health care settings, health fairs, etc.

**Time Frame:** May 2001 - ongoing

**Indicators of Success/Evaluation:**

- Number of screenings completed.

**Strategy 3.** Utilize Public Service Announcements (PSAs) - Print/Video/Audio

- Explore the feasibility of developing PSAs to be made available in physician offices (waiting rooms), pharmacy waiting areas, organizational newsletters, etc.

**Time Frame:** February 2002 - ongoing

**Indicators of Success/Evaluation:**

- Number of patients in waiting area to view the video.
- Number of brochures distributed.

**Objective V: Improve the Knowledge, Attitudes, and Practices of Students, Physicians and Allied Health Professionals as they Relate to Arthritis and Related Conditions.****Strategy 1.** Develop a Working Relationship with Medical and Allied Health Educational Programs

- Develop an advisory committee to act as a statewide resource to educational programs in relation to their curricula about arthritis and related conditions.
- Develop and list OAN opportunities for student experiences.

**Time Frame:** May 2002 - September 2004

**Indicators of Success/Evaluation:**

- Telemedicine.
- Incorporate regional linkages to increase access to specialists.

**Strategy 2.** Develop a Working Relationship with Medical and Allied Health Professional Associations

- Collaborate with professional associations and health organizations to exchange current information on arthritis and related conditions.
- Collaborate with associations to create policies that support the mission of the OSDH Arthritis Prevention and the OAN.

**Time Frame:** June 2001- ongoing

**Indicators of Success/Evaluation:**

- Continuing education opportunities are scheduled.
- Policies are created.
- OAN and OSDH will be aware of those association policies.



**Strategy 3.** Develop and Promote Continuing Medical Education (CME)/ Continuing Education Units (CEU) Arthritis-Related Seminars/Conferences

- Identify health professional association conferences.
- Initiate actions to include arthritis related information as part of conference format.
- Conduct an annual conference related to arthritis and related conditions.
- Print press releases for distribution and dissemination to be included in the association's vehicles of communication.

**Time Frame:** February 2001 - ongoing

**Indicators of Success/Evaluation:**

- Number of attendees.
- Number of CME certificates awarded.
- Number of CEU certificates awarded.
- Pre-post tests.

**Strategy 4.** Promote the Use of Expert Lecturers

- Develop and maintain a list of state and national expert speakers.
- Combine speaker lists with those already existing within professional associations.
- Publicize to the community the availability of expert speakers.
- Number of attendees.

**Time Frame:** March 2001 - ongoing

**Indicators of Success/Evaluation:**

- Number of speakers on Master Faculty List.
- Number of requests for speakers.
- Number of scheduled speaking engagements.
- List of where presentations were made (which counties).
- Number of attendees.
- Pre-post tests given at selected seminars.

**Strategy 5.** Provide Program Information for Grand Rounds/Health Organization Inservices

- Identify one teaching hospital that will include arthritis and other related conditions information in their Grand Rounds.
- Coordinate inservices within health related organizations.
- Coordinate patient/caregiver education at local health related organizations.

**Time Frame:** January 2002 - January 2003

**Indicators of Success/Evaluation:**

- At least one grand rounds presentation occurred.
- The dates, number and location of inservices.



**Goal II:**  
**Implement**  
**programs to**  
**prevent the**  
**potentially**  
**disabling effects**  
**of arthritis and**  
**related conditions.**

**Objective I: Deliver Secondary and Tertiary Prevention Programs from the Arthritis Foundation and other Recognized Science-Based Organizations throughout the 77 Counties of Oklahoma.**

**Strategy 1.** Implement an Annual Survey of Existing Oklahoma Arthritis Prevention Programs

- Arthritis Foundation (AF) Programs.
- Other arthritis-related programs.

**Time Frame:** September 2001 - ongoing

**Indicators of Success/Evaluation:**

- Document findings as part of consolidated surveillance report.

**Strategy 2.** Promote the AF's Arthritis Self Help Course (ASHC) Leader Training Programs

- Develop partnerships between OAN and AF to ensure an adequate number of qualified leaders exist throughout the state to conduct secondary and tertiary evidence-based prevention programs such as the ASHC.

**Time Frame:** Initiated May 2001; ongoing

**Indicators of Success/Evaluation:**

- Number of training sessions and where they are located in the state.
- Number of leaders trained and their location.
- Number of projected ASHC courses.
- Evaluated effectiveness of leaders by participant surveys.

**Strategy 3.** Increase the Number of ASHCs in the Community

- Utilize the AF Arthritis Self Help Course.
- Collaborate with community partners.
- Implement training sessions; evaluate responses of participants, course leaders and sponsoring agency.

**Time Frame:** October 2001 - ongoing

**Indicators of Success/Evaluation:**

- Number of ASHC community courses provided and where.
- Number of attendees.
- Pre-Post assessments of knowledge increase.

**Strategy 4.** Introduce and Implement ASHCs in the Workplace

- Utilize the AF Arthritis Self Help Course.



- Recruit (x) number of private employers/corporations to pilot the ASHC as an industry-sponsored self-management course for employees.
- Collaborate with employers to identify measures of success.
- Implement training sessions; evaluate responses of participants, course leaders and sponsoring agency.
- Analyze outcomes and share results with participating employer.
- Utilize aggregate data to market program to other work settings.
- Communicate findings to surveillance subcommittee.

**Time Frame:** December 2002 - ongoing

**Indicators of Success/Evaluations:**

- Decrease lost productivity/work absenteeism (sick days).
- Decrease work-related disability.
- Decrease visits to physician.
- Employer requests for additional educational programs.
- Employer encourages their insurance providers to offer a discount to those people who have taken the ASHC or any other arthritis related evidence-based self-help program.

**Objective II: Educate Legislative and Regulatory Bodies Regarding the Needs of Persons with Arthritis and Related Conditions**

**Strategy 1.** Provide Surveillance and Cost Benefit Analyses Related to Arthritis Prevention Activities to Educate the Legislature, Regulatory Bodies, and Third Party Payors

- Distribute action plan/executive summary.
- Develop a plan to identify needs requiring legislative action.
- Identify individuals within OAN designated as advocacy representatives.
- Establish advocacy objectives.

**Time Frame:** October 2003 - ongoing

**Indicators of Success/Evaluation:**

- Quality of life module in place in January 2001, data gathered at least every other year, and analyzed every other year thereafter.
- Surveillance subcommittee to be established by October 2001.
- Other data sources identified; data gathered, analyzed and reported.

**Objective III: Seek Legislative Support to Fund the Establishment of the Arthritis Prevention and Education Program within the Oklahoma State Department of Health**

**Strategy 1:**

- Develop a program proposal.
- Identify potential legislative authors.
- Provide technical information to committees.
- Facilitate the support of OAN within the legislative process.
- Enlist grassroots support from the community.

**Time Frame:** October 2003 - September 2004

**Indicators of Success/Evaluation:**

- Proposed legislation is created.
- State funding is secured to continue the APEP within the Oklahoma State Department of Health.

### **Objective IV: Influence Health Care Reimbursement Systems to Better Meet the Needs of People With Arthritis and Related Conditions**

**Strategy 1:** Using Arthritis Conditions as a Focal Point, Identify Operational, Reimbursement and Medical Service Opportunities in the Oklahoma Public Health System

- Develop strategies and partnerships.
- Identify boards, administrative meetings, and legislative task forces where there should be consistent arthritis representation.
- Conduct surveys.
- Collect data from pilot projects/studies.
- Evaluate results and make recommendations.

**Time Frame:** March 2003 - September 2005

**Indicators of Success/Evaluation:**

- A committee is formed.
- A strategic plan is developed.
- An OAN representative will attend appropriate meetings and will report back to OAN.
- An analysis of findings will be compiled into a report with findings reported back to OAN.

### **Objective V: Utilizing State and Local Efforts, Target Ethnic Populations that are at Greater Risk of Arthritis and Other Related Conditions**

**Strategy 1.** Develop Cultural/Language-Specific Strategies for the Native American Population and One Other where Arthritis and Related Conditions are Highly Prevalent

- To evaluate the surveillance data to discern the impact of arthritis and related conditions within different ethnic groups.



**Goal III: Establish a scientific base of knowledge about arthritis and related conditions through surveillance, epidemiology and the evaluation of treatment and prevention strategies.**

- Develop language-specific resource directory.
- Explore the development of websites in other languages, e.g., Spanish.

**Time Frame:** October 2004 - September 2005

**Indicators of Success/Evaluation:**

- A strategic plan has been developed and implemented.
- A language-specific resource directory is created.

**Objective I: Ensure Uniform and Consistent Use of Data Terms by OAN Partners**

**Strategy 1.** Identify a Team to Develop a Reference Guide of Uniform Arthritis-Related Terminology Used in Different Settings

- Identify key partners.
- Develop agreements to use common terminology.
- Create, publish and distribute reference guide to OAN partners.

**Time Frame:** Initiate November 2002, reference guide to be completed, published by November 2002.

**Indicators of Success/Evaluation:**

- Team is formed.
- Written agreements are on file.
- Reference guide is produced and distributed.

**Objective II: Enhance Statewide Surveillance of the Prevalence and Treatment of Arthritis and Related Conditions.**

**Strategy 1.** Develop and Utilize Coordinated Data Collection

- Identify at least three health service agencies/organizations who maintain patient care databases.
- Develop agreements about how data will be gathered, organized and submitted.
- Develop a process to report statistical data to OSDH.
- Promote annual data reporting by primary providers/health agencies.
- Obtain and analyze arthritis-related data.
- Publish annual report and recommendations.

**Time Frame:** December 2001 - September 2005

**Indicators of Success/Evaluation:**

- Written agreements with three partners to provide data.
- Reporting mechanism is developed.
- Publish annual report with recommendations.

**Strategy 2.** Expand Behavioral Risk Factor Surveillance System (BRFSS) through Arthritis Follow-Up and Quality of Life Questions

- Collect and review all arthritis-related questions currently used in state and national surveys.
- Incorporate additional arthritis questions.



**Time Frame:** October 2002 - ongoing

**Indicators of Success/Evaluation:**

- Expansion of BRFSS has occurred.

**Strategy 3.** Facilitate the Integration of BRFSS and Other Arthritis-Related Surveillance Questions into Public and Private Health/Wellness Assessments

- Create a set of questions concerning arthritis and related conditions.
- Identify health assessment activities conducted by OAN partners.
- Provide standard set of arthritis-related questions for potential use in other surveys.
- Provide methodology for reporting results to OSDH.
- Provide feedback to participating agencies.
- Incorporate results in annual CDC report.

**Time Frame:** September 2001 - ongoing

**Indicators of Success/Evaluation:**

- Report findings.
- Compare results annually.

**Strategy 4.** Survey Physicians and other Providers on Strategies and Rationale Used in Treating Arthritis and Related Conditions.

**Time Frame:** September 2002 - December 2002

**Indicators of Success/Evaluation:**

- Survey analysis completed.
- Report survey findings to OAN.

**Strategy 5.** Annually Collect and Analyze State-Level Information on Treatment Strategies Using Hospital Discharge Records, and Health Care Data.

**Time Frame:** September 2001 - ongoing

**Indicators of Success/Evaluation:**

- Data received from targeted agencies.
- Results of reports compiled and distributed.

**Objective III: Estimate the General Costs of Arthritis and Related Conditions in Oklahoma.**

**Strategy 1.** Develop and Distribute an Annual Cost Impact Report and Guidelines of Arthritis and Related Conditions in Oklahoma

- Contact health care funding resources.
- Obtain data.
- Analyze findings.
- Publish annual report.
- Develop intervention plan.



**Time Frame:** September 2003 - March 2005

**Indicators of Success/Evaluation:**

- A cost impact report is developed and distributed.
- A guideline of arthritis and related conditions is created.

**Strategy 2.** Collect and Analyze State-Level Information on the Impact of Arthritis and Related Conditions through Worker's Compensation and other Health Care Data.

**Objective IV: Conduct Semi-Annual Evaluations to Monitor Effectiveness of the Oklahoma Arthritis Action Plan.**

**Strategy 1.**

- Develop evaluation tools.
- Maintain documentation of program activities.
- Implement the evaluations.
- Review and revise evaluation components if necessary.
- Develop and distribute progress reports to CDC and all OAN partners.

**Time Frame:** Initiate February 2002; semi-annually

**Indicators of Success/Evaluation:**

- Documentation from evaluation provided to OAN and CDC semi-annually.
- Documentation of evaluation activities maintained.

**Strategy 2.**

- Provide ongoing data to OSDH administrative staff.
- Obtain OSDH administrative commitment.
- Arthritis data submitted to "State of the State's Health Report" editor.

**Time Frame:** September 2004 - September 2005

**Indicators of Success/Evaluation:**

- Arthritis data is included in the "State of the State's Health Report" by 2005.

**GOAL IV: Data on arthritis and related conditions will be included in the Oklahoma State of the State's Health Report**



# How to be involved in the implementation of the Plan

**contact** Oklahoma State Department of Health  
Office of Community Development  
Arthritis Prevention and Education Program  
1000 NE 10<sup>th</sup> Street  
Oklahoma City, OK 73117-1299  
(405) 271-6127  
(405) 271-1225 fax

**visit** <http://www.health.state.ok.us/program/apep> for information about the OSDH Arthritis Prevention and Education Program

**subscribe** to the Oklahoma Arthritis Listserv:  
Go to <http://groups.yahoo.com/group/OKArthritisNetwork/join>  
(You will need a YahooGroup ID and password, or you will have to register for one.)

**or**

Just send an e-mail to:  
[OKArthritisNetwork-subscribe@yahoogroups.com](mailto:OKArthritisNetwork-subscribe@yahoogroups.com)

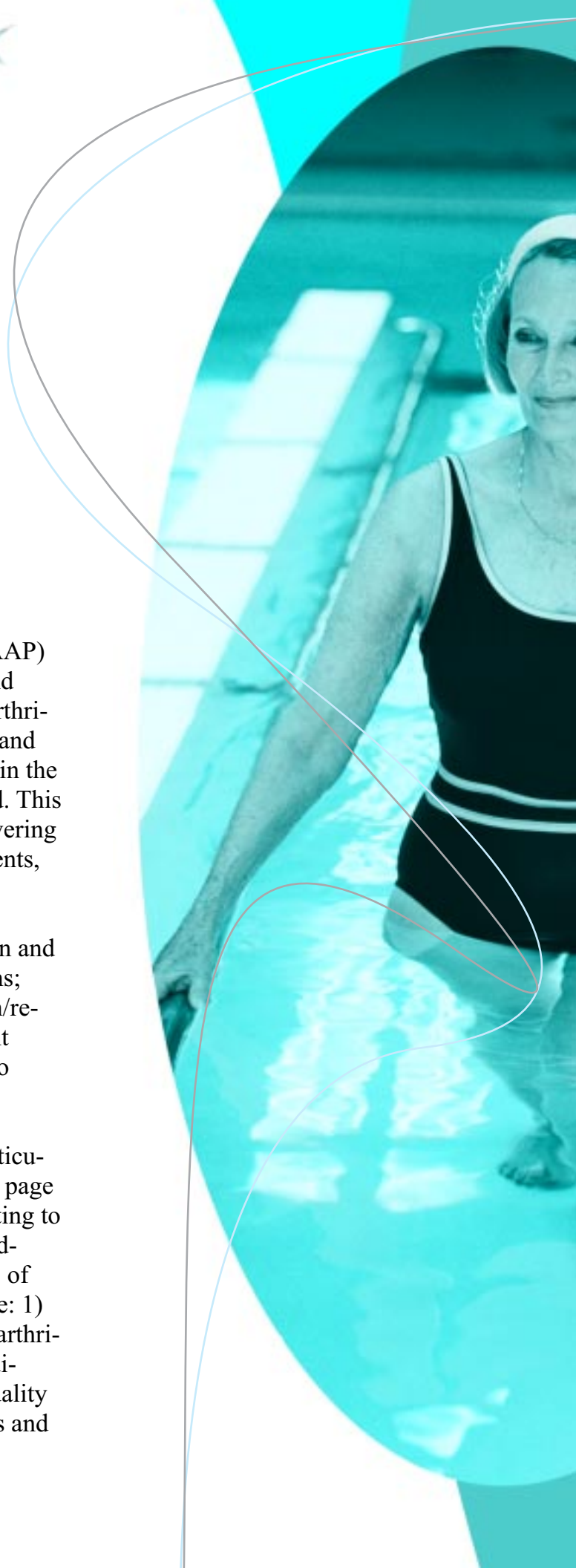


# Logic Model

## Guide to Reading OAAP Logic Model

The Oklahoma Arthritis Action Plan (OAAP) explains in detail the goals, objectives and strategies developed by the Oklahoma Arthritis Network. To give our readers a quick and concise understanding of the details within the action plan, a logic model was developed. This logic model is depicted on two pages covering the following areas: action plan components, processes, impact, outcomes and goals.

Action plan components - communication and education; programs, policies and systems; surveillance and research; and evaluation/re-evaluation - are distinguished by different colors. As you read the model from left to right, you will see these processes have shadow boxes which more than one plan component is being addressed in this particular area. As the logic model continues on page 2, you will see the “impact” column relating to the plan components. The next column addresses our expected outcomes and goals of the action plan. These long term goals are: 1) decreasing social and medical costs that arthritis and related conditions have on the individual and state and, 2) improving the quality of life of ALL people affected by arthritis and related conditions.



## Action Plan Components

## Process

**Increase Communication and Education**

Increase coordination of activities related to arthritis and related conditions throughout Oklahoma

Raise community awareness about arthritis and related conditions

Increase the integration of arthritis-related conditions within medical and allied health education programs and professional associations

**Promote the Integration of Information about Arthritis and Related Conditions into Programs, Policies and Systems**

Increase number of CME/CEU courses offered in Oklahoma

Increase number of arthritis prevention programs available in the community

Provide surveillance and cost benefit analyses related to arthritis prevention activities



Establish state funded APEP within OSDH

Identify operational, reimbursement and medical service opportunities within the Oklahoma public health system

Develop cultural/language specific strategies for the Native American population and one other ethnic group where arthritis and related conditions are highly prevalent



**Expand Surveillance and Research**

Develop a reference guide of standardized arthritis related terminology used in different settings

Develop and utilize a coordinated arthritis database

Expand BRFSS to include more arthritis-related questions

Integrate arthritis and related conditions into community wellness assessments

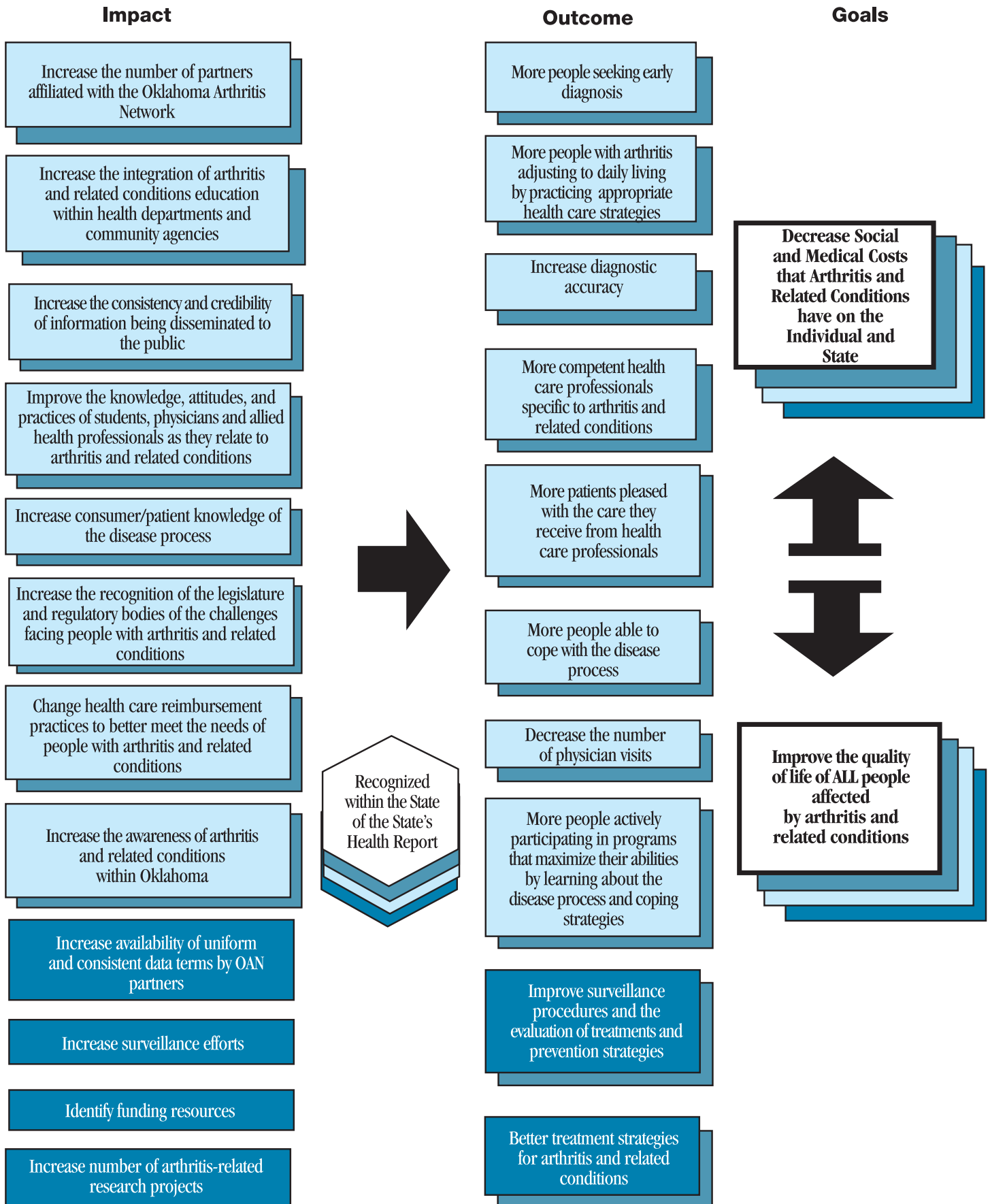
**Conduct Evaluation/ Re-evaluation Activities**

Increase surveys of health professional knowledge about arthritis and related conditions

Increase analyses of hospital discharge records, workers compensation, and other health care data

Introduce information into the State of the State's Health Report

# Model



# Appendix



# A. Glossary of Arthritis-Related Terms

**Analgesic** - A medication or treatment that relieves pain.

**Ankylosing spondylitis** - This type of arthritis primarily affects the spine, but may also cause arthritis in the hips, shoulders, and knees. The tendons and ligaments around the bones and joints in the spine become inflamed, resulting in pain and stiffness, especially in the lower back. Ankylosing spondylitis tends to affect people in late adolescence or early adulthood.

**Antibodies** - Special proteins produced by the body's immune system that help fight and destroy viruses, bacteria, and other foreign substances (antigens) that invade the body. Occasionally, abnormal antibodies develop that can attack a part of the body and cause autoimmune disease. These abnormal antibodies are called autoantibodies.

**Antigen** - A foreign substance that stimulates an immune response.

**Arthrography** - An x-ray procedure that provides a detailed image of the joint when air or a contrast substance is injected into the joint space.

**Arthroscopy** - A procedure performed with an arthroscope (a small, flexible tube that transmits the image of the inside of a joint to a video monitor). Arthroscopy is used for diagnosis as well as treatment of some types of joint injury. The arthroscope is inserted through a small incision in the skin near the affected joint.

**Bursa (Bursae, pl.)** - A small sac of tissue located between bone and other moving structures such as muscles, skin, or tendons. The bursa contains a lubricating fluid that allows smooth gliding between these structures.

**Bursitis** - This condition involves inflammation of the bursae, that help reduce friction between bones and other moving structures in the joints. The inflammation may result from arthritis in the joint or injury or infection of the bursae. Bursitis produces pain and tenderness and may limit the movement of nearby joints.

**Cartilage** - A resilient tissue that covers and cushions the ends of the bones and absorbs shock.

**Collagen** - The main structural protein of skin, bones, tendons, cartilage, and connective tissue.

**Connective tissue** - The supporting framework of the body and its internal organs.

**Computed tomography (CT or CAT)** - A diagnostic technique that uses a computer and an x-ray machine to take a series of images that can be transformed into a clear and detailed image of a joint.

**Corticosteroids** - Potent anti-inflammatory hormones that are made naturally in the body or synthetically for use as drugs. The most commonly prescribed drug of this type is prednisone.

**Fibromyalgia** - Fibromyalgia is a chronic disorder that causes pain and stiffness throughout the tissues that support and move the bones and joints. Pain and localized tender points occur in the muscles and tendons, particularly those of the neck, spine, shoulders, and hips. Patients may experience widespread pain, fatigue, and sleep disturbances.

**Fibrous capsule** - A tough wrapping of tendons and ligaments that surrounds the joint

**Gout** - This type of arthritis results from deposits of needle-like crystals of uric acid in the connective tissue, joint spaces, or both. Uric acid is a normal breakdown product of purines, which are present in body tissues and in many foods. Usually, uric acid passes through the kidney into urine and is eliminated. If the concentration of uric acid in the blood rises above normal levels, sodium urate crystals may form in the tendons, ligaments, and cartilage of the joints. These needle-like crystals cause inflammation, swelling, and pain in the affected joint. The joint most commonly affected is the big toe.

**Hydrotherapy** - Therapy that takes place in water.

**Infectious arthritis** - This is a general term used to describe forms of arthritis that are caused by infectious agents, such as bacteria or viruses. Parvovirus arthritis, gonococcal arthritis, and Lyme disease are examples of infectious arthritis. In those cases caused by bac-

teria, early diagnosis and treatment with antibiotics relieve the arthritis symptoms and cure the disease.

**Inflammation** - A typical reaction of tissue to injury or disease. It is marked by four signs: swelling, redness, heat, and pain.

**Joint** - The place where two or more bones are joined. Most joints are composed of cartilage, joint space, fibrous capsule, synovium, and ligaments.

**Joint space** - The area enclosed within the fibrous capsule and synovium.

**Juvenile rheumatoid arthritis** - This is the most common form of arthritis in childhood, causing pain, stiffness, swelling, and loss of function in the joints. The arthritis may be associated with rashes or fevers, or may affect other parts of the body.

**Ligaments** - Stretchy bands of cordlike tissues that connect bone to bone.

**Lupus** - A type of immune disorder known as an autoimmune disease that can lead to inflammation of and damage to joints, skin, kidneys, heart, lungs, blood vessels, and brain.

**Lyme disease** - A disease caused by the bacterium *Borrelia burgdorferi* in which arthritis is often a prominent symptom. Rash, heart disease, and nervous system involvement may also occur.

**Magnetic resonance imaging (MRI)** - A diagnostic technique that provides high quality cross-sectional images of a structure of the body without X-rays or other radiation.

**Manipulation** - A treatment by which health professionals use their hands to help restore normal movement to stiff joints.

**Mobilization therapies** - A group of treatments that include traction, massage, and manipulation. When performed by a trained professional, these methods can help control a patient's pain and increase joint and muscle motion.

**Nonsteroidal anti-inflammatory drugs (NSAIDs)** - A group of medications, including aspirin, ibuprofen, and related drugs, used to reduce inflammation that causes joint pain, stiffness, and swelling.

**Osteoarthritis** - Also known as degenerative joint disease, osteoarthritis is the most common type of

arthritis, affecting an estimated 20.7 million adults in the United States. Osteoarthritis primarily affects cartilage, which is the tissue that cushions the ends of bones within the joint. Osteoarthritis occurs when cartilage begins to fray, wear, and decay. In extreme cases, the cartilage may wear away entirely, leaving a bone-on-bone joint. Bony spurs (pointy bulges of bone) may form at the edges of the joint. Osteoarthritis can cause joint pain, reduced joint motion, loss of function, and disability. Disability results most often when the disease affects the spine and the weight-bearing joints (the knees and hips).

**Polymyalgia rheumatica** - A rheumatic disease that involves tendons, muscles, ligaments, and tissues around the joints. Pain, aching, and morning stiffness in the neck, shoulders, lower back, and hips characterize the disease. It is sometimes the first sign of giant cell arteritis (a disease of the arteries characterized by inflammation, weakness, weight loss, and fever).

**Polymyositis** - A rheumatic disease that causes weakness and inflammation of muscles.

**Psoriatic arthritis** - This form of arthritis occurs in some patients with psoriasis, a common scaling skin disorder. Psoriatic arthritis often affects the joints at the ends of the fingers and is accompanied by changes in the fingernails and toenails. Some people also have spinal involvement.

**Reactive arthritis** - This form of arthritis develops after an infection involving the lower urinary tract, bowel, or other organs. It is commonly associated with eye problems, skin rashes, and mouth sores. Reiter's syndrome is an example of reactive arthritis.

**Rheumatic** - A term referring to a disorder or condition that causes pain or stiffness in the joints, muscles, or bone.

**Rheumatoid arthritis** - Rheumatoid arthritis is an inflammatory disease of the synovium, or lining of the joint that results in pain stiffness, swelling, deformity, and loss of function in the joints. Inflammation most often affects joints of the

hands and feet and tends to be symmetrical (occurring equally on both sides of the body). This symmetry helps distinguish rheumatoid arthritis from other types of arthritis. About one percent of the U.S. population (about 2.1 million people) has rheumatoid arthritis.

**Rheumatologist** - A doctor who specializes in diagnosing and treating disorders that affect the joints, muscles, tendons, ligaments, and bones.

**Risk factor** - Something that increases a person's chance of developing a disease, such as age, gender, ethnicity, and genetics (family history).

**Scleroderma** - Also known as systemic sclerosis, the word scleroderma means "hard skin." It refers to several diseases that almost always affect the skin, blood vessels, and joints. A more serious form also affects internal organs such as the lungs and kidneys. In scleroderma, there is an abnormal and excessive production of collagen (a fiber-like protein) in the skin or internal organs.

**Synovial fluid** - Fluid released into movable joints by surrounding membranes. The fluid lubricates the joint and reduces friction.

**Synovium** - A thin membrane that lines a joint and releases a fluid that allows the joint to move easily.

**Systemic lupus erythematosus** - Systemic lupus erythematosus (also known as lupus and SLE) is an autoimmune disease in which the immune system harms the body's own healthy cells and tissues. In SLE, this can result in inflammation of and damage to the joints, skin, kidneys, heart, lungs, blood vessels, and brain.

**Tendinitis (Tendonitis)** - refers to inflammation of tendons (tough cords of tissue that connect muscle to bone) caused by overuse, injury, or related rheumatic conditions. Tendinitis produces pain and tenderness and may restrict movement of nearby joints.

**Tendon** - Tough, fibrous cords of tissue that connect muscle to bone.

**Transcutaneous** - Through the skin.

**Ultrasound** - A treatment that uses sound waves to provide deep heat and relieve pain.



# Healthy People 2010 Arthritis Objectives



# B. Healthy People 2010 Objectives

## Arthritis, Osteoporosis, and Chronic Back Conditions (Chapter 2)

1. (Developmental<sup>1</sup>) Increase the mean number of days without severe pain among adults who have chronic joint symptoms.
2. Reduce the proportion of adults with chronic joint symptoms who experience a limitation in activity due to arthritis.
3. Reduce the proportion of all adults with chronic joint symptoms who have difficulty in performing two or more personal care activities, thereby preserving independence.
4. (Developmental) Increase the proportion of adults aged 18 years and older with arthritis who seek help in coping if they experience personal and emotional problems.
5. Increase the employment rate among adults with arthritis in the working-age population.
6. (Developmental) Eliminate racial disparities in the rate of total knee replacements.
7. (Developmental) Increase the proportion of adults who have seen a health care provider for their chronic joint symptoms.
8. (Developmental) Increase the proportion of persons with arthritis who have had effective, evidence-based arthritis education as an integral part of the management of their condition.

**Increase** the proportion of persons with systemic rheumatic disease who receive an early specific diagnosis and appropriate management plan.

**Increase** the proportion of hospitals, managed care organizations, and large group practices that provide effective, evidence-based arthritis education for patients to use as an integral part of the management of their condition.

**Increase** the proportion of persons at risk for who have arthritis that receive counseling from their health care provider about weight control and physical activity to prevent arthritis-related disabilities.

Related objectives from other focus areas (persons with arthritis are a targeted subgroup).

<sup>1</sup> Developmental objectives are qualitative or descriptive in nature and generally do not provide a numeric value as a target. Quantitative measurement systems are under development but not yet available for application. Qualitative objectives do however provide a “vision” for a desired outcome or health status. Currently available surveillance systems and databases do not provide quantitative measures for these objectives. Inclusion of such objectives is expected to identify focus areas that are important and are also intended to motivate the development of national data systems through which they can be monitored.

# B. Healthy People 2010 Objectives

## Nutrition and overweight (Chapter 19)

1. Increased the proportion of adults who are at a healthy weight.
2. Reduce the proportion of adults who are obese.

## Physical activity and fitness (Chapter 22)

1. Reduce the proportion of adults who engage in no leisure-time physical activity.
2. Increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes per day.
3. Increase the proportion of adults who engage in vigorous physical activity that promotes the development and maintenance of cardiorespiratory fitness three or more days per week for 20 or more minutes per occasion.

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# Arthritis In Oklahoma: A Preliminary Report

Arthritis in Oklahoma: A Preliminary Report using Behavior Risk Factor Surveillance System, Hospital Discharge, Vital Records and Indian Health Service Data.

## Data Source

Behavior Risk Factor Surveillance System  
Hospital Discharge  
Vital Records  
Indian Health Service  
    Inpatient Visits  
    Ambulatory Care Data

## Year(s) Reported

1999  
1998  
1994-1998  
  
1998-1999  
1998-2000

Oklahoma State Department of Health Chronic Disease Services, partner of the Network, completed data collection and analysis.

# April 2001

## Oklahoma State Department of Health Purposes and Methodology

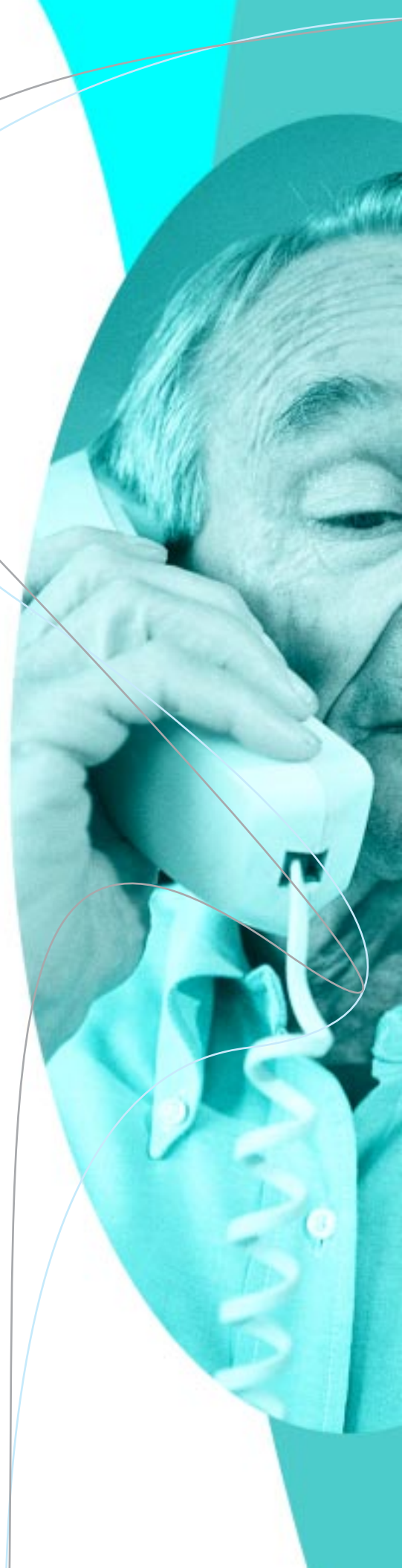
This short report is designed to provide the reader with an overview of arthritis in Oklahoma.

Surveillance is a means of providing data that is necessary to define disease burden, identify populations at highest risk, determine the prevalence of health risks, guide and evaluate disease prevention planning and implementation efforts at the national, state, and local levels.

This report is not designed to be a comprehensive analysis of arthritis in Oklahoma, nor, is it designed to be a comprehensive analysis of the data presented in this report.

**Behavioral Risk Factor Surveillance System (BRFSS)** is the world's largest telephone survey that tracks health risks in the United States. Information from the survey is used to improve the health of the American people. BRFSS began in 1984 when 15 states began collecting data. Oklahoma began its surveillance in 1989. By 1996, all 50 states, the District of Columbia, Puerto Rico, Guam and the US Virgin Islands were collecting BRFSS surveys. Models are now being developed internationally for Scotland, China and Australia. BRFSS is a telephone survey. Approximately 2,000 telephone numbers per month are collected with attempt made of each phone number up to 15 times. These calls are made over three shifts Monday through Saturday: Days - 11:00-4:00; Evenings - 5:00-9:00; Weekends - 9:00-1:00. In 1999, Oklahoma completed 3,682 surveys with 161,042 surveys conducted nationally. Data is directly weighted for the probability of selection of a telephone number, number of adults in a household, number of phones in a household, non-response and non-coverage of households without telephones.

The Arthritis Module was first used by four states in 1998 (Arizona, Georgia, New Jersey and Ohio). In 1999, six more states (Louisiana, Mississippi, Missouri, Nebraska, Oklahoma and West Virginia) and Puerto Rico began administering the Arthritis Module. In 2000, 37 additional states began collecting this information.



**Hospital Discharge Data:** The Oklahoma Health Care Information System Act (OS 63. Section 1-115 et seq) was enacted to create an information system for the State of Oklahoma. The Act calls for the development and operation of a method for collecting, processing, and disseminating health care data that would facilitate the ongoing analysis and evaluation of patterns and trends in the:

- 1) health status of Oklahomans;
- 2) utilization and costs of health care services; and
- 3) capability of various components of the health care industry to provide needed services.

The Oklahoma Health Care Information System Act mandates the collection of inpatient discharge data from facilities

licensed by the state. In order to comply with this mandate, the Oklahoma State Department of Health created the *Oklahoma Hospital Inpatient Discharge Data System* (HIDDS) and began collecting data in 1998. Since the legislation applies only to licensed facilities, data from Indian Health Service and military and veteran facilities were not collected for calendar year (CY) 1999. In order to facilitate hospital participation in 1998, HIDDS used existing fields in the Uniform Billing Form (UB-92). HIDDS continued use of the UB-92 in 1999 and 2000.

**Mortality Data:** Oklahoma Vital Records is the official registration point and repository for all birth and death certificates for those events that occur in Oklahoma. Mortality data is

collected from death certificates as the underlying cause of death. The underlying cause of death is the disease or injury that initiated the train of morbid events leading directly to death or the circumstances of the accident or violence that produced the fatal injury.

**Indian Health Service:** There are seven hospitals and 36 ambulatory clinics operated by the Indian Health Service or tribes within Oklahoma. These facilities abstract all hospitalizations and ambulatory patient visits into a statistical record that is then combined into an areawide database. This allows the Indian Health Service to share statistical summaries on specific disease entities with the Oklahoma Department of Health.

## Behavior Risk Factor Surveillance System (BRFSS) Arthritis Module

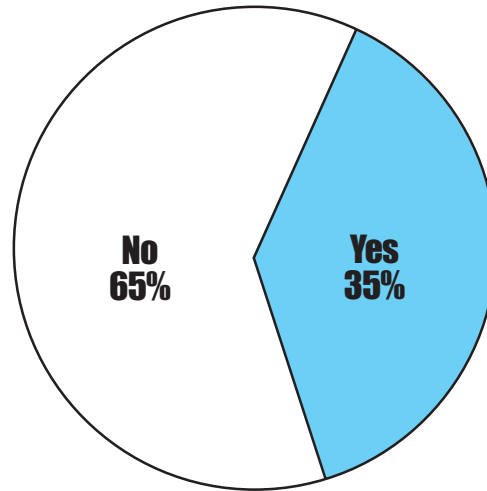
**The following questions were asked of Oklahomans:**

- Q1. During the past 12 month, have you had pain, aching, stiffness or swelling in or around a joint? Yes/No
- Q2. Were these symptoms present on most days or at least one month? Yes/No
- Q3. Are you now limited in any in activities because of joint symptoms? Yes/No
- Q4. Have you ever been told by a doctor that you have arthritis? Yes/No
- Q5. What type of arthritis did your doctor say you had?
- Osteoarthritis
  - Rheumatism
  - Lyme Disease
  - Rheumatoid Arthritis
  - Other (specify)
- Q6. Are you currently being treated by a doctor for arthritis? Yes/No

## Percent of Respondents Reporting...

pain, aching, stiffness or swelling in or around a joint in the past 12 months

### Oklahoma



#### Of those reporting in Oklahoma...

35% reported aching, stiffness or swelling in or around a joint in the past 12 months

43% had symptoms on most days for at least 1 month

34% were limited in some way because of joint symptoms

#### Of those reporting in the United States...

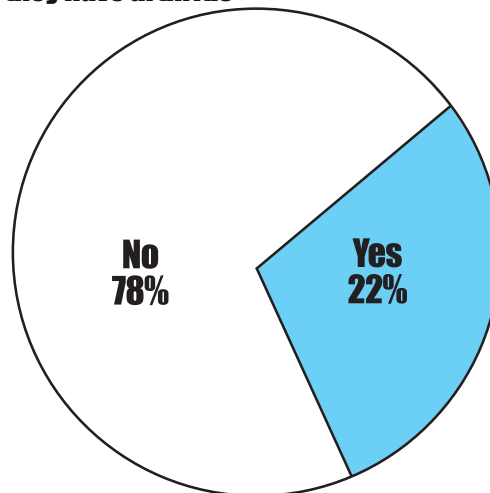
36% reported pain, aching, stiffness or swelling in or around a joint in the past 12 months

53% had symptoms on most days for at least 1 month

29% were limited in some way because of joint symptoms

Source:  
Behavior Risk Factor  
Surveillance System  
(BRFSS) 1999

### a doctor told them they have arthritis



In all reporting states including Oklahoma, 22% of respondents reported being told by a doctor they have arthritis.

#### In Oklahoma...

26% were female

19% were male

#### Of those,

5% were age 18-24

7% were age 25-34

26% were age 45-54

33% were age 55-64

48% were age 65 or older

19% report their race as African American and non-Hispanic

24% report their race as White and non-Hispanic

19% report their race as Native American and non-Hispanic

11% report their ethnicity as Hispanic

## Percent of respondents reporting...

### a doctor having diagnosed them with arthritis by type of arthritis reported

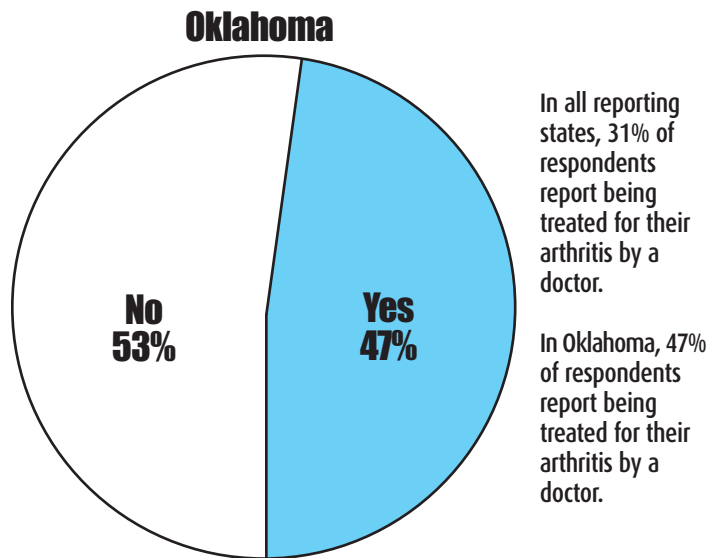
In Oklahoma, 51% of respondents did not know, or were not sure, the type of arthritis their doctor had diagnosed.

Of those respondents diagnosed with arthritis, 29% report having been diagnosed with osteoarthritis.

Of those respondents diagnosed with arthritis, 18% report having been diagnosed with Rheumatism or Rheumatoid Arthritis.

	Oklahoma	All Reporting States
Type of arthritis		
Osteoarthritis	29.3%	26.0%
Rheumatism	5.3%	6.0%
Lyme Disease	-	10.0%
Rheumatoid Arthritis	12.4%	6.0%
Other (specify)	1.7%	-
Did not know/not sure	51.2%	52.0%
Any Type	22.3%	22.0%

### being treated by a doctor for their arthritis



#### In Oklahoma...

- 51% were female respondents
- 41% were male respondents
- 39% were age 35-44
- 54% were age 45-54
- 50% were age 55-64
- 53% were age 65 or older
- 46% report their race as African-American and non-Hispanic
- 47% report their race as White and non-Hispanic
- 55% report their race as Native American and non-Hispanic
- 47% report their ethnicity as Hispanic

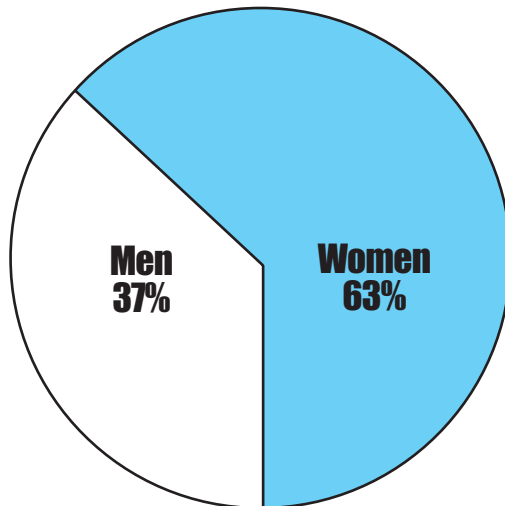
Source:  
Behavior Risk Factor  
Surveillance System  
(BRFSS) 1999

### Other important facts...

- Among those respondents who report they have been diagnosed with arthritis 30% report they have poor or fair health as compared to only 9% among respondents who have not been diagnosed with arthritis.
- Respondents who age 65 or younger report they have been diagnosed with arthritis, 15% report being unable to work.
- Among those respondents who report they have rheumatism, 47% report their health as poor or fair.
- Among those respondents who report they have arthritis and have participated in a physical activity or exercise during the past month, only 30% reported their health as fair or poor, compared to 49% who have arthritis and did not participate in any physical activity or exercise during the past month.

## For Arthritis and Related Conditions Number of Hospitalization Events...

by gender



Source:

Oklahoma Hospital Discharge  
Data

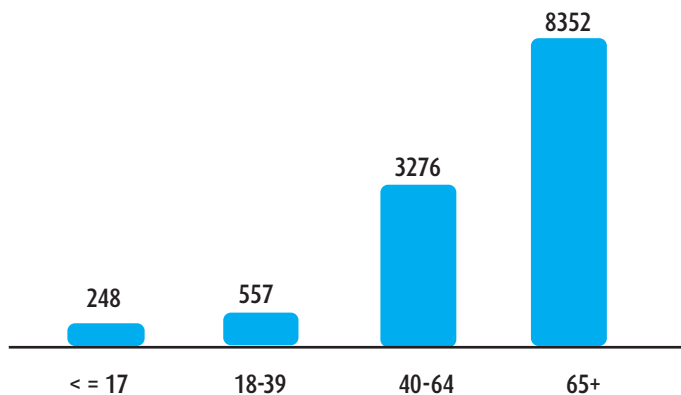
12,433 hospitalizations events  
with the primary diagnosis of  
arthritis occurred in 1998.

- Among hospitalizations with a primary diagnosis of arthritis, a combined cost of almost \$175,000,000 was incurred.
- Average cost for an event was over \$13,000.

31,043 hospitalization events  
with a primary or secondary  
diagnosis of arthritis occurred  
in 1998.

- Among hospitalizations with a primary or secondary diagnosis of arthritis, a combined cost of almost \$400,000,000.
- Average cost for an event was over \$12,000.

by age



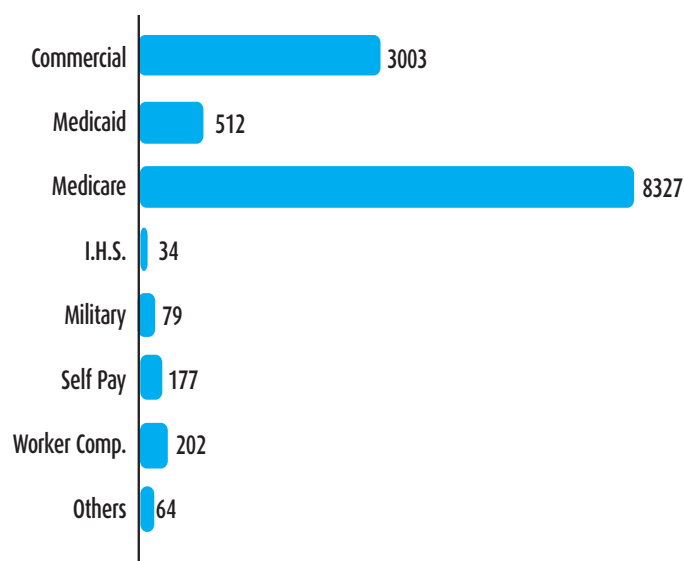
## Number of Hospitalization Events for Arthritis and Related Conditions

The most common diagnostic code reported for hospitalization with a primary diagnosis of arthritis was for osteoarthritis and allied disorders.

While only 74 hospitalization events occurred in 1998 from gout, almost 2,000 events occurred with a non-primary diagnosis of gout.

3 Digit ICD-9	Name	Primary Diagnosis	Any Diagnoses
274	Gout	74	2,042
344	Other paralytic syndromes	7	136
354	Carpal tunnel syndrome	41	259
443	Raynaud's syndrome	9	166
446	Polyarteritis nodosa	92	379
447	Other disorders of arteries and arterioles	55	202
711	Arthropathy associated with infections (including Arthritis)	409	409
714	Rheumatoid arthritis and other inflammatory polyarthropathies	16	96
715	Osteoarthritis and allied disorders	5,580	19,187
716	Other and unspecified arthropathies	3,722	3,722
719	Other and unspecified disorders of joint	1,729	1,729
721	Spondylosis and allied disorders	64	645
726	Peripheral enthesopathies and allied syndromes	257	639
727	Other disorder of synovium, tendon, and bursa	153	589
728	Disorders of muscle, ligament, and fascia	83	550
	Other	142	293
	All Arthritis	12,433	31,043

### Payor Sources for the Primary Diagnosis of Arthritis

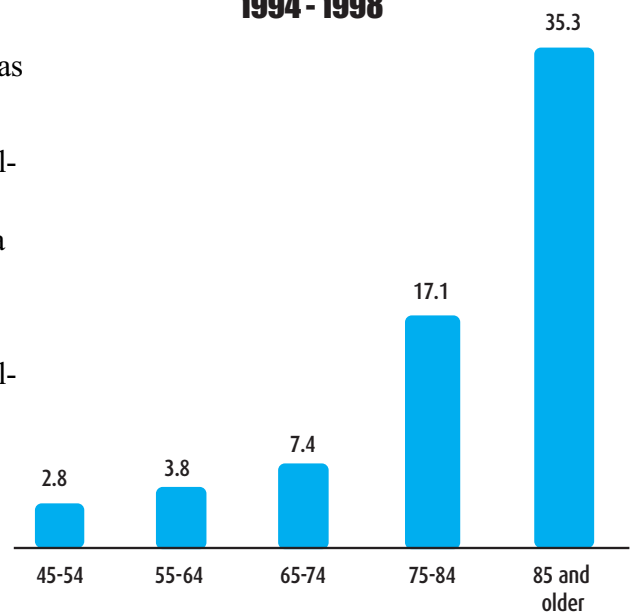


Source:  
Oklahoma Hospital Discharge  
Data

## Mortality Data

- 476 individuals reported arthritis (ICD-9 710.0-729.9) as the underlying cause of death in Oklahoma between 1989-1998.
- The age-adjusted mortality rate for Oklahoma 1994-1998 was 2.8/100,000\*.
- The age-adjusted mortality rate for the United States in 1998 was 2.8/100,000\*.
- The age-adjusted mortality rate for Oklahoma women from 1994-1998 was 3.5/100,000\*.
- The age-adjusted mortality rate for Oklahoma men from 1994-1998 was 2.1/100,000\*.
- The age-adjusted mortality rate for African-Americans in Oklahoma from 1994-1998 was 4.8/100,000\*.
- The age-adjusted mortality rate for whites in Oklahoma from 1994-1998 was 2.7/100,000\*.

## Age Specific Mortality Rates: Oklahoma Vital Statistics: 1994 - 1998



\*Numbers for younger ages are small and rates are unreliable.

## Indian Health Services Data Inpatient Visits

- In 1998, 382 hospitalization events with the diagnosis of arthritis occurred in 7 Indian Health Service Hospitals
  - In 1999, 400 hospitalization events with the diagnosis of arthritis occurred in 7 Indian Health Service Hospitals.
- For 1998 and 1999,
- Average age at admission was 57 years.
  - 141 (18%) were younger than 40.
  - Ages range from infants to over age 90.
  - 497 (64%) were women
  - 285 (36%) were men

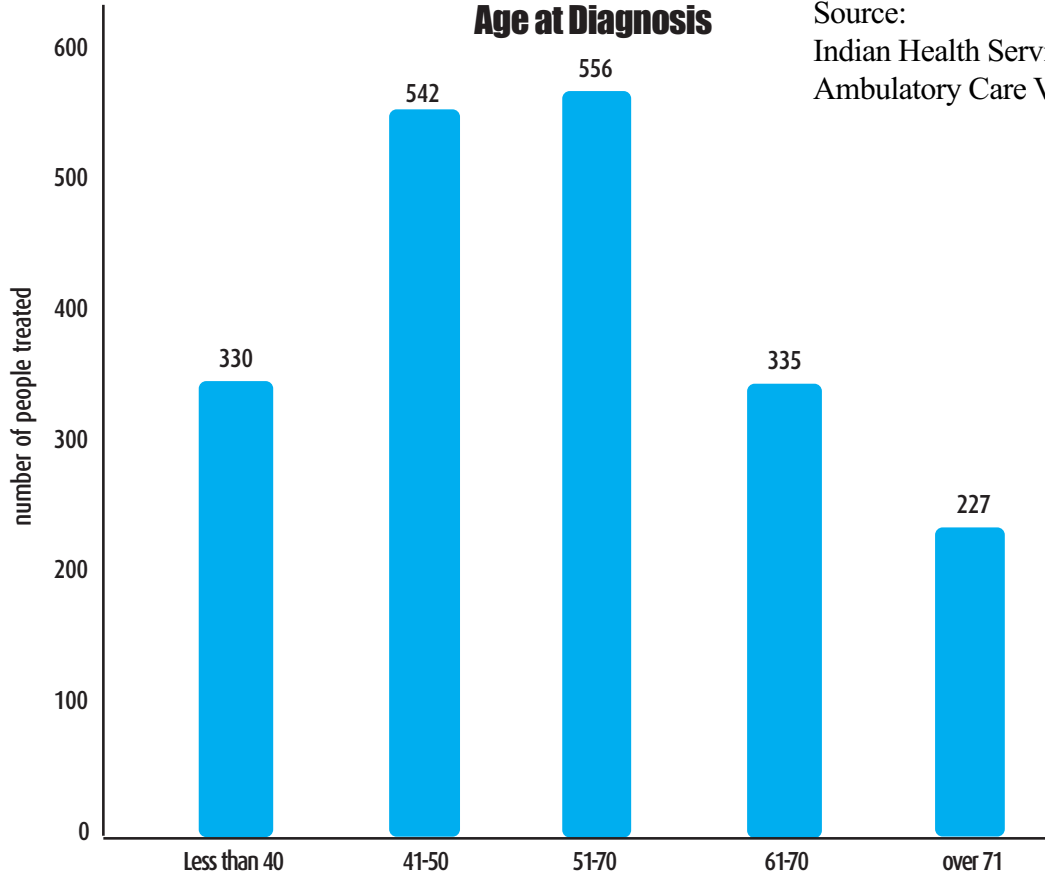
## Ambulatory Care Visits

From 1998-2000,

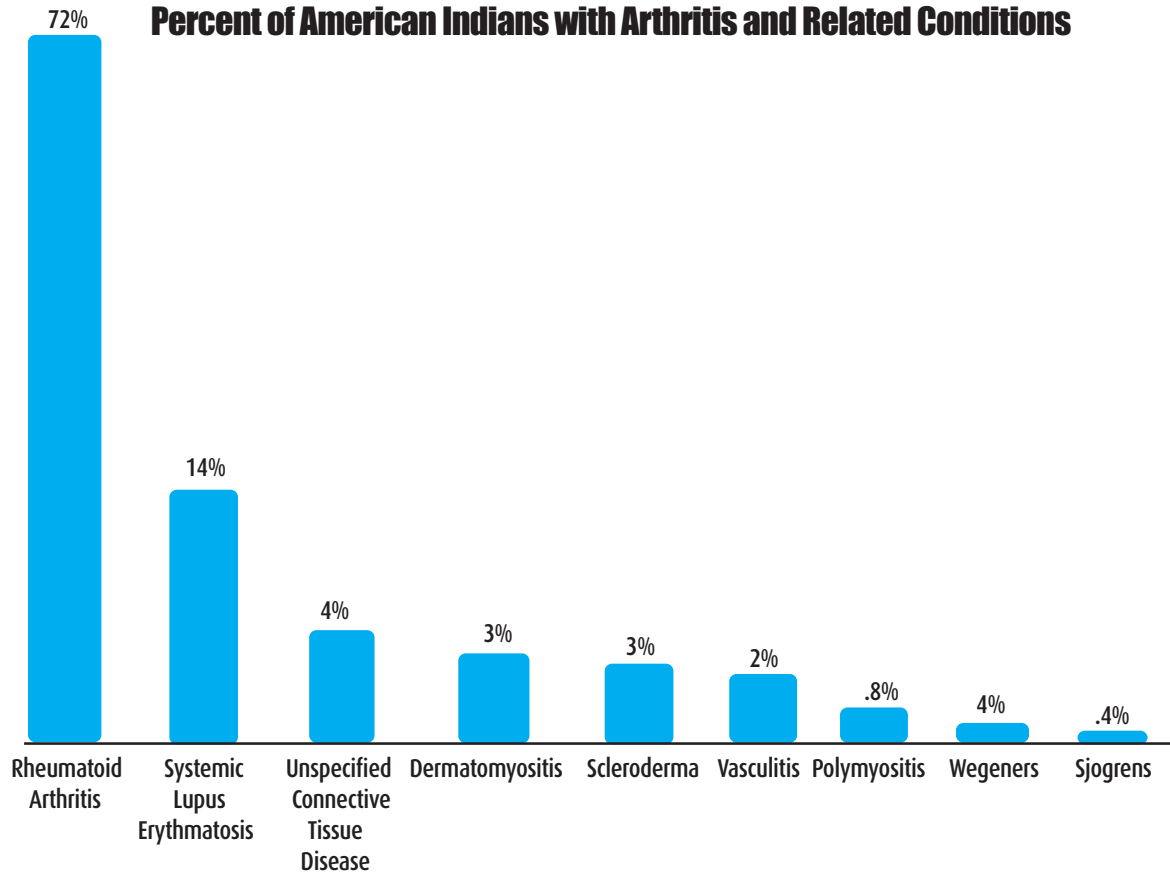
- 2,892 patients were treated with arthritis [or a related condition] at Oklahoma Area Indian Health Facilities.
- 61% were female, 39% were male.
- Of those conditions, rheumatoid arthritis was found to be the most prevalent among the patients.
- Of those American Indians visiting these facilities, more people between the ages of 41-60 were identified to have rheumatoid arthritis.

### Age at Diagnosis

Source:  
Indian Health Service - Oklahoma City Area  
Ambulatory Care Visits 1998-2000



### Percent of American Indians with Arthritis and Related Conditions



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