Illinois Arthritis Initiative

Public Education
Target Group Assessment
2005

Illinois Department of Public Health
Division of Chronic Disease Prevention and Control
Arthritis Initiative
217-782-3300
TTY (for hearing impaired only) 800-547-0466

Acknowledgements

The Illinois Arthritis Initiative Program thanks all of the partners and work group members who contributed to the development of this document.

This project was funded by the U.S. Centers for Disease Control and Prevention, PA #03022. .

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Purpose

This report seeks to achieve four important goals:

- To provide a geographic "snapshot" of where Illinois Arthritis Initiative (IAI) target groups are located (counties with higher numbers/percentage of specific age groups, minority populations, rural or urban counties, counties with higher prevalence of arthritis, and counties with higher numbers/percentage of a males and females);
- To identify where areas of greatest arthritis prevalence exist;
- To identify geographic areas where Arthritis Foundation self-management programs exist; and
- To serve as a working document for the IAI Public Education Work Group to more effectively target arthritis awareness, education and programs.

The target groups highlighted in this report were determined using data from the 2000 Illinois census as well as information from the Illinois Behavioral Risk Factor Surveillance System. They include --

- individuals younger than age 18 (Map A),
- persons ages 25 to 44 (Map B),
- people ages 45 to 64 (Map C),
- those ages 65 and over (Map D),
- African-Americans or blacks (Map E) and Hispanics (Map F),
- males and females 18 years of age and older (Map G and Map H), and
- urban/rural residents.

The maps provided can be used to target arthritis interventions to specific groups or counties with the highest total population or percentage of the population of these specific groups.

Information from the Greater Illinois and Greater Chicago Arthritis Foundation chapters was used to determine the locations of People with Arthritis Can Exercise (P.A.C.E.) and Arthritis Foundation Aquatics programs in Illinois. These maps can be used to target underserved areas and to increase self-management opportunities in those locations (Map J and Map K).

In addition, interventions can be targeted to counties with higher arthritis prevalence as indicated by Illinois county BRFSS (ICBRFSS) arthritis prevalence rates. The ICBRFSS data are collected for one-third of all Illinois counties each year. Three years makes up a "round." Round 2 ICBRFSS arthritis prevalence data, collected from 2001 to 2003, are shown on Map L.

Definition of Arthritis

The word "arthritis" literally means joint inflammation. There are more than 120 different types of arthritis. Arthritis affects all ages, both genders and all race and ethnic groups; however, some groups are more likely to be affected than others. With these facts in mind, the Illinois Arthritis Initiative Program has chosen to focus public education efforts on persons with the condition, especially rural, inner city, minority and underserved/uninsured populations. Identifying underserved target areas will allow programs and services to be more closely tailored to serve the needs of Illinois residents with arthritis and to utilize funding more efficiently.

For the purposes of this assessment, the Illinois Behavioral Risk Factor Surveillance System (BRFSS) questions were used to determine a "case" of arthritis. In 2002, three questions on the BRFSS survey were used to estimate arthritis prevalence in Illinois:

1. During the past 12 months, have you had pain, aching, stiffness or swelling in or around a joint?
2. Were these symptoms present on most days for at least one month?
3. Have you ever been told by a doctor that you have arthritis?

Beginning with 2002 data, U.S. Centers for Disease Control and Prevention (CDC) recommended a change in the case definition of arthritis. For the purposes of this report, arthritis and chronic joint symptoms were separated into *doctor-diagnosed arthritis* (those who answered "yes" to question 3 above) and *possible arthritis* (those with chronic joint symptoms consistent with arthritis without diagnosis who answered "yes" to questions 1 and 2 but "no" to question 3).

Burden of Arthritis

Nationally, approximately 49 million adults have doctor-diagnosed arthritis. Another 21 million have possible arthritis (*MMWR* 51[42]: 948-50). An estimated 7.8 million adults are limited in some way because of their arthritis (*MMWR* 50[17]: 334-6).

Based on 2002 Illinois BRFSS data, approximately 22.7 percent of Illinois adults (2,096,345) have doctor-diagnosed arthritis and another 9.1 percent (846,848) have possible arthritis. Illinois ranks seventh in the nation with 4.35 percent of all cases of doctor-diagnosed arthritis.

Arthritis poses a tremendous economic burden. The CDC has estimated direct and indirect costs both nationally and on a state level. The following chart shows these direct (medical care expenditures) and indirect costs (lost earning attributable to arthritis or other rheumatic conditions).

Direct and Indirect Cost of Arthritis

	Direct	**Indirect**	**Total**
National	$51.1 billion	$35.1 billion	$86.2 billion
Illinois	$2.2 billion	$1.5 billion	$3.7 billion

Source: Update: Direct and Indirect Costs of Arthritis and Other Rheumatic Conditions – United States, 1997. (*MMWR* 53[18]:388-9)

Illinois has unique geographic and racial diversity challenges. Approximately 23.3 percent of the state's population resides in the city of Chicago (2000 U.S. Census), and 84 of Illinois' 102 counties are designated rural (Illinois Department of Public Health, Center for Rural Health). Fifteen percent of the population is African-American and 12.3 percent reported being Hispanic. Twelve percent of Illinois' population is 65 years of age or older. Because the prevalence of arthritis in the 65 years and older age group is higher, and because the population of Illinois and other states will continue to age, additional burdens will fall on the health care infrastructure to serve the needs of those persons. Lack of health insurance is another factor that may increase the burden of arthritis in Illinois (and elsewhere). Not having a primary care physician and lack of health insurance are strongly associated with not seeing a health care provider for chronic joint symptoms (*MMWR* 52[18]: 419-419). In 2002, approximately 163,038 Illinois adults with doctor-diagnosed arthritis (13.2 percent of the total Illinois adult population) and 118,521 Illinois adults with possible arthritis (9.6 percent of the total Illinois adult population) did not have any type of health care coverage (e.g., health insurance, pre-paid plans such as HMOs, or government plans such as Medicare) (2002 Illinois BRFSS).

Arthritis is the leading cause of disability in the United States. The 2002 Illinois BRFSS data showed that, of the 22.7 percent of Illinois adults who suffered from doctor-diagnosed arthritis, 40.9 percent stated their activities were limited because of their joint symptoms. Of those reporting possible arthritis, 33 percent were limited in their activities because of joint symptoms.

The Public Education Work Group and the Illinois Arthritis Initiative Program staff will utilize the findings in this report to identify areas of the state that are in greatest need of interventions specific to particular target groups and to tailor programs to achieve the greatest reach, thereby using the available funding most effectively.

ASSESSING TARGET GROUPS

Data from the 2000 census were used to geographically map target groups. Illinois county arthritis prevalence data were obtained from round 2 (2001-2003) Illinois County BRFSS (ICBRFSS) data. Statewide prevalence was obtained from 2002 Illinois BRFSS.

A process known as "mapping" was used to identify the geographic location of target populations statewide. For the purposes of this report, census data were used to identify the demographic characteristics of residents in each of Illinois' 102 counties. These demographics were tabulated by age, race, gender and urban/rural residence. Counties with the highest *total population* of target groups are featured with a color, while counties with the highest *percentages* of target groups are highlighted in yellow followed by percentages.

Age

Arthritis can affect persons of all ages; however, the prevalence rises with age. The prevalence of doctor-diagnosed arthritis ranges from 4.5 percent among persons ages 18-24 to 53.1 percent among persons ages 65 and older.

The prevalence of possible arthritis is highest among the 45-64 age group at 11.8 percent compared to 8.2 percent among persons age 25 to 44 and 6.9 percent among those age 65 and over.

The following maps illustrate age breakdowns by county:

Map	Age
A	population under age 18
B	population ages 25-44
C	population ages 45-64
D	population ages 65 and over

Note: Age groups were broken down into categories to parallel BRFSS age breakdowns. Per CDC's guidelines, the focus of the Illinois Arthritis Initiative is persons with arthritis age 35 and older. Activities of some partners target children and teens addressing juvenile arthritis.

Public education messages can be tailored to meet the specific needs of various age groups in a chosen county. For example, radio stations that target a particular age group could be chosen to promote events designed for that population, etc.

Under Age 18

Twenty Illinois counties have more than 20,000 children younger than 18 years of ; five of these counties have more than 80,000 children (See Map A).

Implications

A prevailing myth is that arthritis is an "old person's disease." The fact is that arthritis affects nearly 300,000 children in the United States (CDC unpublished data). Juvenile arthritis is often misunderstood, sometimes unpredictable and frequently painful. As a result, arthritis education, not only for the child but for the child's family, other students and school personnel, is especially important.

Prevention is very important for this age group. A single knee injury early in life can put a person at fives times the risk for osteoarthritis later in life, and a hip injury puts a person at three times the risk (Gelber, et al., *Annals of Internal Medicine* 133[5]: 321-328, September 5, 2000). Injury prevention strategies such as warm-ups, strengthening exercises and appropriate equipment help to avoid joint injuries and damage to ligaments and cartilage, especially in sports activities. With obesity rates rising, even among children, weight control and physical activity will be especially important to prevent arthritis later in life.

Awareness also is very important for this age group. Juvenile arthritis – its signs and symptoms, the importance of early diagnosis and the special needs of students with arthritis – must be brought to the attention of parents, school nurses, teachers, students and other school personnel.

Although programs and services are needed to reach underserved areas, facilities and services for persons in this age group do exist in many communities. Services may include the Arthritis Foundation (AF) Juvenile Aquatics program, juvenile arthritis camps and other services. However, persons with arthritis, as well as health professionals, are often not aware of the existence of such programs and services. School programs are one way to reach children and families with important messages about signs and symptoms of arthritis, the importance of weight control, physical activity and injury prevention, and resources that are available to assist persons with arthritis. Local health departments/agencies and health care providers need to be aware of arthritis resources in their communities.

The cost of medications as well as other health care costs for children with arthritis can be a burden for many families. Families could benefit from access to lists of financial and social support resources.

Much collaboration is needed to increase awareness; to promote and support programs and prevention strategies; and to provide resources. Partnering with new groups in creative ways to reach the diverse population is very important.

Under Age 18 Focus

Awareness

- Increase awareness of juvenile arthritis signs and symptoms, the importance of early diagnosis, and special needs of students with arthritis among parents, school nurses, teachers, students and other school personnel. (Venues could include articles in professional journals, distribution of juvenile arthritis awareness materials, e-newsletters to school health nurses, school in-services, etc.)

- Increase awareness about the availability of assistive devices.

Programs
- Develop a plan for a school-based program designed to educate families of children with juvenile arthritis about available treatment and self-management programs.

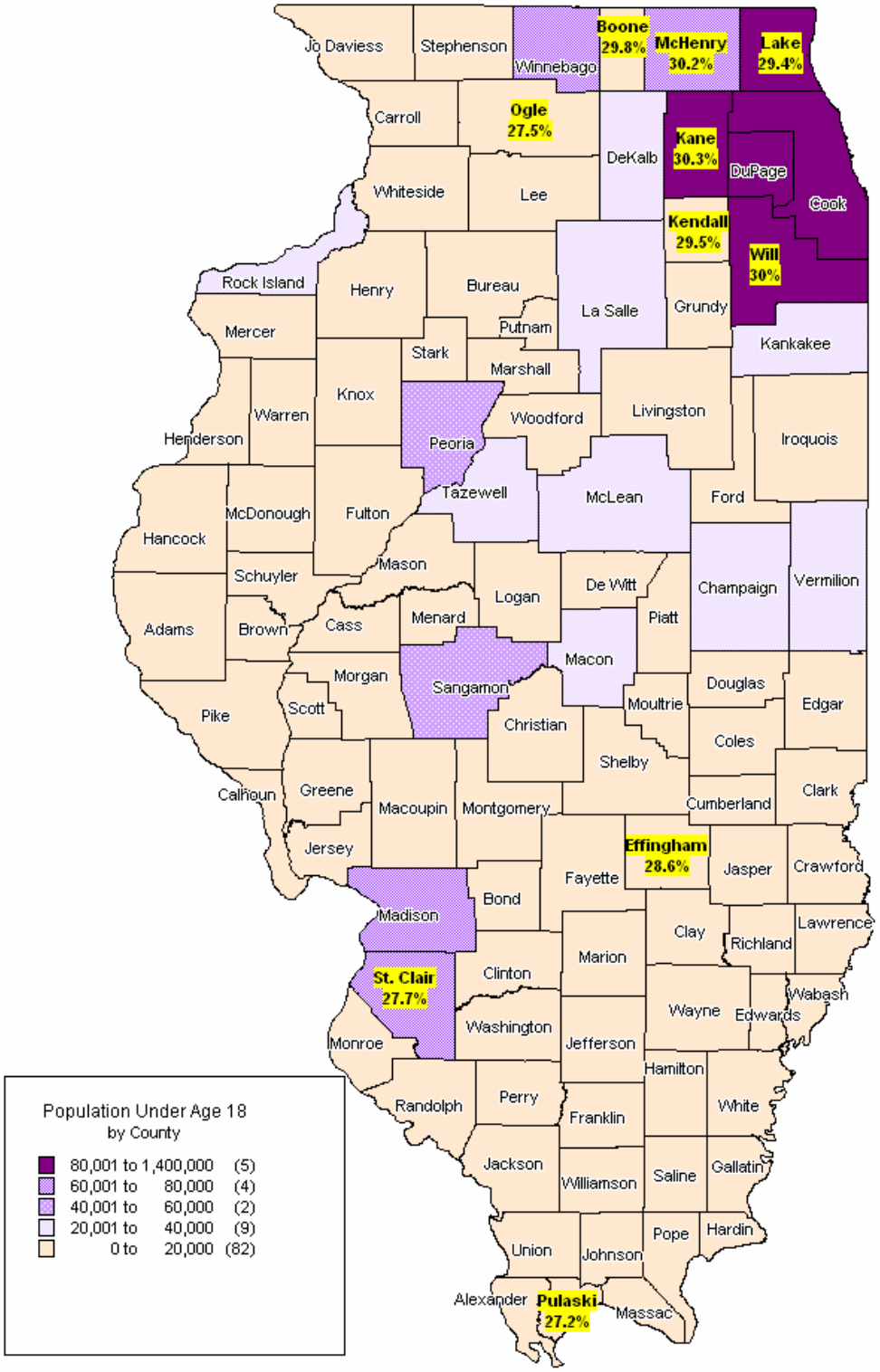
Referral to Self-Management
- Promote self-management programs (juvenile arthritis camps, juvenile aquatics, etc.) to health care providers and local health departments/agencies to assist those with arthritis.

Prevention
- Include arthritis prevention messages in health education/healthy lifestyle programs in schools (a goal of the *National Arthritis Action Plan*) and organizations responsible for offering/coordinating youth sports.
- Promote injury prevention programs to physical education teachers and coaches.
- Promote weight control and physical activity for persons in this group to lessen the severity or onset of arthritis.

Resources
- Make arthritis resources, including lists of rheumatologists and caregivers and evidence-based program offerings, available to health care providers, educators, local health agencies and the public.
- Develop a list of financial and social support resources for caregivers.
- Develop a list of financial resources for medications.

Partnerships
- Partner with new groups (schools, local health department programs including WIC, immunizations, etc., and organizations that offer school health conferences) to increase awareness; to promote and support programs; to provide resource materials; to promote injury prevention, etc.

Map A
Illinois Population Under Age 18 by County



NOTE: Top 10 counties with the highest *percentage* of the population under 18 are highlighted in yellow.

Ages 25 to 44

Twenty Illinois counties have populations of more than 20,000 adults ages 25 to 44; seven of these counties have more than 80,000 adults (See Map B).

Implications

According to 2002 Illinois BRFSS, the prevalence rate for doctor-diagnosed arthritis among Illinoisans ages 25 to 44 was 9.9 percent. An additional 8.2 percent of those in this age group have possible arthritis.

Some forms of arthritis can be less disabling and severe if diagnosed and treated early. An important focus of the initiative is to increase awareness to assure that more persons with possible arthritis receive proper diagnosis in order to obtain appropriate treatment and management.

Although there is no cure for arthritis, some types can be prevented. As many persons in this age group are active and employed, preventing sports and occupational related injuries, controlling weight and getting the recommended amounts of physical activity are important to lessen the onset or severity of the disease.

The peak onset period for *rheumatoid arthritis* is between the ages of 20 and 45 (American College of Rheumatology). Early diagnosis and appropriate treatment are very important in the management of rheumatoid arthritis. Physicians now believe that damage to bones begins within the first two years that a person has the disease. Early diagnosis can decrease long-term complications. Therefore, it is very important to increase awareness about arthritis, especially rheumatoid arthritis, among this age group. Genetic screening of persons with arthritis is an avenue that needs to be explored as a tool to increase early diagnosis and prevention of disability.

Another type of arthritis is s*ystemic lupus erythematosis (SLE)*. The prevalence of SLE (40 to 50 cases per 100,000 population, according to the American College of Rheumatology) is highest among women of child-bearing age (Arthritis Foundation). Generally, detecting flares of lupus earlier facilitates control and decreases the chance of permanent tissue or organ damage (Lupus Foundation).

Fibromyalgia is another common type of arthritis that affects approximately 2 percent of the population, or 5 million people, in the United States (American College of Rheumatology). It mainly affects women, especially those of child bearing age (ACR). Fibromyalgia is often misunderstood and difficult to diagnose.

Successfully dealing with rheumatoid arthritis, fibromyalgia and lupus requires *self-management*. It is important for patients to learn about their disease and to take part in their own care. Working with a health care professional allows a person to share in decision-making and gain a sense of control.

Although more programs and services are needed to reach underserved areas, facilities and services for persons in this age group do exist in many communities. Services may include the Arthritis Foundation (AF) Self-Help Course, AF Aquatics, P.A.C.E. (People with Arthritis Can Exercise), Tai Chi for Arthritis and others. The Lupus Foundation of Illinois offers information about lupus, referral services, community education, support groups and financial support to qualifying patients. However, persons with arthritis, as well as health professionals, are often not aware of the existence of such programs and services.

Many employed persons participate in an employee-sponsored health plan. Arthritis and related conditions contribute to increasing medical costs for such health plans. Arthritis management as part of employee-sponsored health programs could benefit both the person with arthritis as well as the employer. In addition, preventing occupational injuries may help prevent the onset of arthritis.

Arthritis medications often tend to be very costly. Persons with arthritis who lack prescription benefits may need assistance locating financial resources to help pay for medications.

Much collaboration is needed to increase awareness; to promote and support programs and prevention strategies; and to provide resources. Partnering with new groups in creative ways to reach this diverse population is very important.

Ages 25 to 44 Focus

Awareness

- Increase awareness of arthritis signs and symptoms, the importance of early diagnosis, and availability of self-management opportunities and treatment options.
- Increase awareness about the availability of assistive devices.

Programs

- Increase the geographic availability and delivery of evidence-based self-management programs, including physical activity programs, for persons with arthritis.
- Develop a process to target employed persons with arthritis in collaboration with their workplaces.

Referral to Self-Management

- Promote self-management programs that assist those with arthritis to health care providers, local health departments/agencies, etc.

Prevention

- Promote weight control and physical activity for persons in this group to lessen the severity or onset of arthritis.
- Promote injury prevention (especially occupational injuries) to avoid further joint damage.

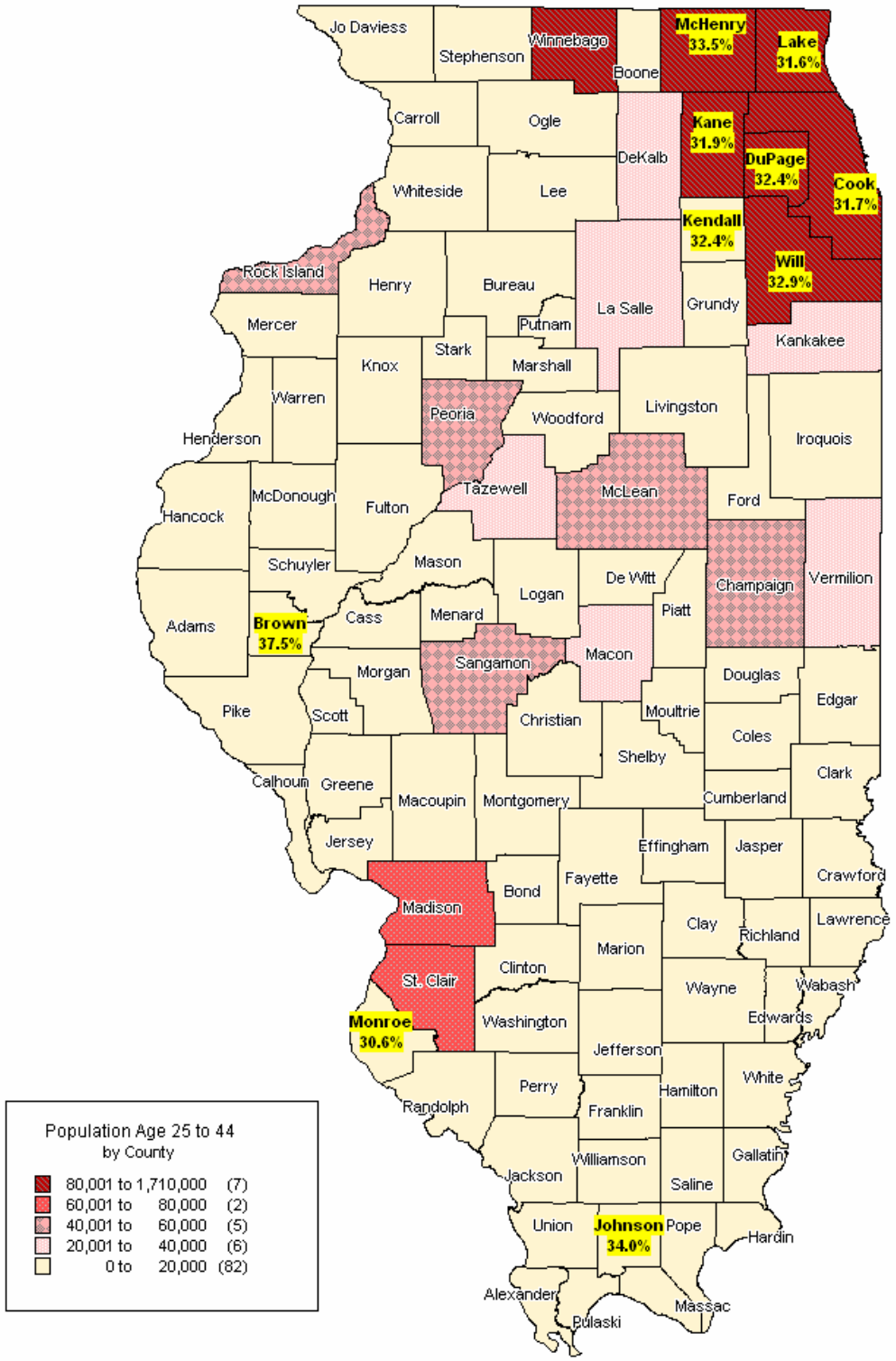
Resources

- Make arthritis resources, including lists of rheumatologists and caregivers and evidence-based program offerings, available to health care providers, educators, local health agencies and the public.
- Develop a list of financial resources for medications.

Partnerships

- Explore genetic screening of persons with a predisposition to inflammatory types of arthritis (i.e. rheumatoid arthritis) through IDPH genetic screening sites.
- Partner with new groups (major employers, unions, fitness centers, higher education institutions, health educators, and local health department programs such as WIC, well-baby clinics, immunization clinics, women's health, blood pressure clinics, etc.) to increase awareness, to promote and support programs, to provide resource materials, to promote injury prevention, etc.

Map B
Illinois Population Ages 25 to 44 by County



NOTE: Top 10 counties with the highest *percentage* of the population ages 25 to 44 are highlighted in yellow.

Ages 45 to 64

Eighteen Illinois counties have populations of more than 20,000 persons in this age group; of these, five have more than 80,000 adults (See Map C).

Implications

According to 2002 Illinois BRFSS data, the prevalence rate for doctor-diagnosed arthritis among Illinoisans ages 45 to 64 is 31.3 percent. An additional 11.8 percent of those in this age group have possible arthritis. Of all adults with doctor-diagnosed arthritis, 42 percent are aged 45 to 64. An important focus is to increase awareness to assure that more persons with possible arthritis do receive proper diagnosis in order to obtain appropriate treatment and management.

Osteoarthritis (OA), also called degenerative joint disease, is one of the most common types of arthritis, affecting nearly 21 million people in the United States (Arthritis Foundation). It is the leading cause of physical disability among adults. After age 45, OA is more common in women (National Institute of Arthritis and Musculoskeletal and Skin Diseases). Although age is a risk factor, OA is not a normal part of aging. People who are overweight have a greater risk of developing OA. Injuries and a family history of OA also may increase a person's risk (Mayo Clinic).

One form of arthritis that is more prevalent in this age range is *gout*. Gout accounts for about 5 percent of all cases of arthritis (National Institute of Arthritis and Musculoskeletal and Skin Diseases). Although it can affect persons of any age, gout occurs more often in men after age 40 (Arthritis Foundation). Women are more susceptible to gout after menopause. If diagnosed early, the disabling effects of gout may be prevented with medications, proper diet and weight loss.

As baby boomers age, the prevalence of arthritis is expected to increase dramatically. Although there is no cure for arthritis, some types of arthritis can be prevented. Therefore, preventing sports and occupational related injuries, controlling weight and getting the recommended amounts of physical activity are important to lessen the onset or severity of the disease.

An important component of dealing with gout and osteoarthritis, as well as other forms of arthritis, is *self-management*. It is important for patients to learn about their disease and to take part in their own care. Working with a health care professional allows a person to share in decision-making and gain a sense of control.

Although additional programs and services are needed to reach underserved areas, facilities and services for persons in this age group do exist in many communities. Services may include the Arthritis Foundation (AF) Self-Help Course, AF Aquatics, P.A.C.E. (People with Arthritis Can Exercise), Tai Chi for Arthritis and others. However, persons with arthritis, as well as health professionals, are often not aware of the existence of such programs and services. In addition, persons with arthritis may need assistance locating rheumatologists and caregivers in their community.

Persons with arthritis in this age group may turn to complementary and alternative medicine (CAM). They need to be aware of the effects of this course of treatment and the potential interactions it may have with their other medications.

Persons in this age group are generally employed. Arthritis contributes to increasing medical costs for employee health care plans. Arthritis management as part of employer-sponsored health programs

could benefit both the person with arthritis as well as the employer. Arthritis medications often tend to be very costly. Persons with arthritis who do not have prescription benefits may need assistance locating financial resources to help pay for medications.

Much collaboration is needed to increase awareness; to promote and support programs and prevention strategies; and to provide resources. Partnering with new groups in creative ways to reach the diverse population is very important.

Ages 45 to 64 Focus

Awareness

- Increase awareness about arthritis signs and symptoms, the importance of early diagnosis and self-management opportunities and treatment options.
- Increase awareness about complementary and alternative medicine (CAM) use and potential cautions.
- Increase awareness about the use/availability of assistive devices.

Programs

- Increase the geographic availability and delivery of evidence-based self-management programs, including physical activity programs, for persons with arthritis.
- Develop a process to target employed persons with arthritis in collaboration with their workplaces.
- Develop a process to target "early retirees."

Referral to Self-Management

- Promote self-management programs that assist those with arthritis to health care providers and local health departments/agencies.

Prevention

- Promote weight control and physical activity for persons in this group to lessen the severity or onset of arthritis.
- Promote injury prevention (especially occupational injuries and fall prevention) to avoid further joint damage.

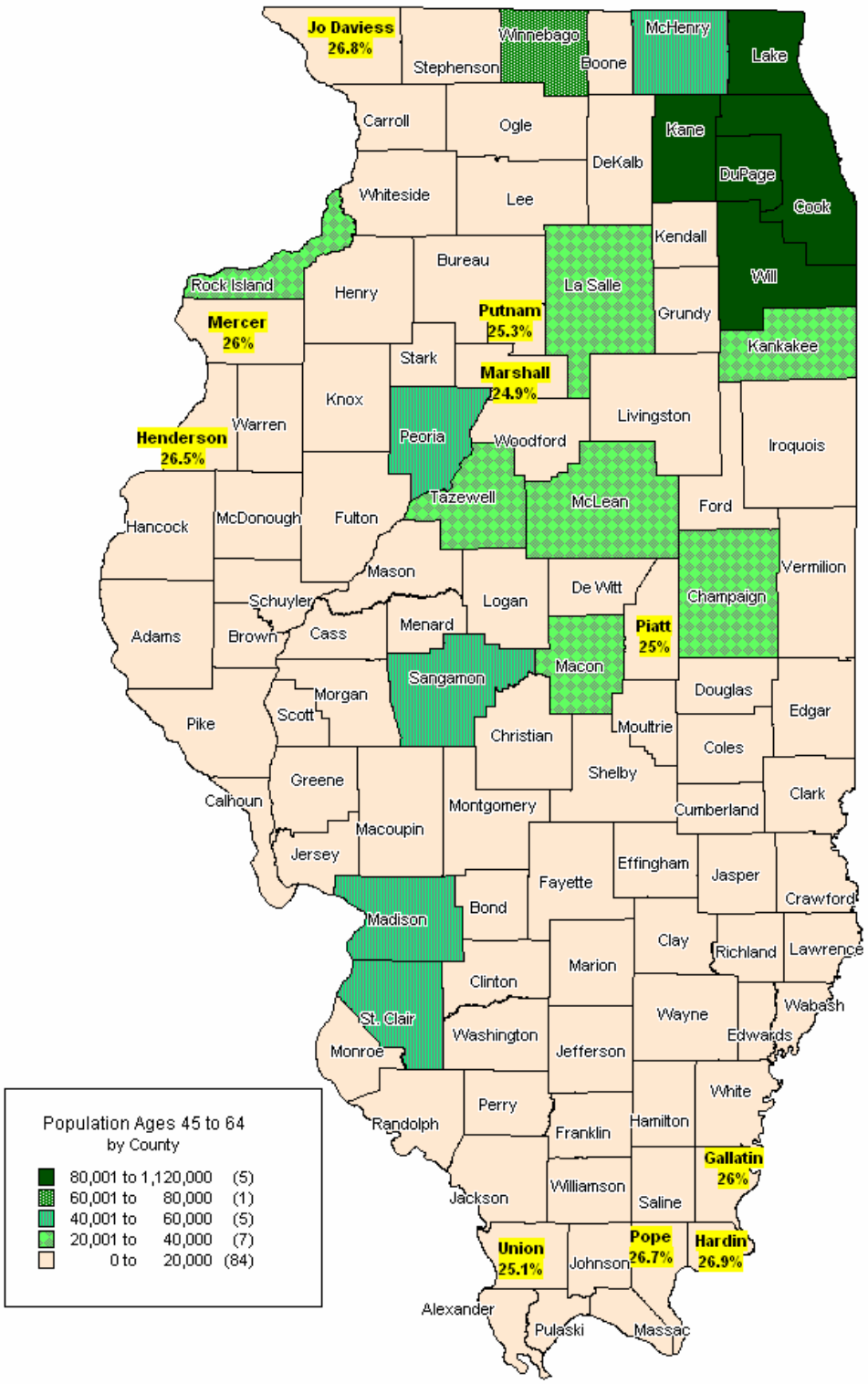
Resources

- Make arthritis resources, including lists of rheumatologists and caregivers and evidence-based program offerings, available to health care providers, educators, local health agencies and the public.
- Develop a list of financial resources for medications.

Partnerships

- Partner with new groups (major employers, unions, fitness centers, physician offices, senior centers, park districts, educational institutions, and local health department programs such as WIC, immunizations, women's health groups, blood pressure clinics, home health, etc.) to increase awareness, to promote and support programs, to provide resource materials, to promote injury prevention, etc.

Map C
Illinois Population Ages 45 to 64 by County



NOTE: Top 10 counties with the highest *percentage* of the population ages 45 to 64 are highlighted in yellow.

Ages 65 and Over

Twelve Illinois counties have populations of 20,000 persons ages 65 and over; two of these counties have more than 80,000 adults (See Map D).

Implications

The prevalence rate for doctor-diagnosed arthritis is 53.1 percent among Illinoisans ages 65 and over. An additional 6.9 percent of those in this age group have possible arthritis. Between 2005-2030, the percentage of the U.S. population ages 65 and over is expected to increase from 12.9 percent to 20 percent. If arthritis prevalence rates remain stable, the number of affected persons ages 65 and over will nearly double by 2030 (*MMWR* 52[21]:489-491).

An important focus is to increase arthritis awareness to assure that more persons with possible arthritis do receive proper diagnosis in order to obtain appropriate treatment and management.

One component of a successful arthritis treatment plan is *self-management*. It is important for patients to learn about their disease and to take part in their own care. Working with a health care professional allows a person to share in decision-making and gain a sense of control. Weight control, physical activity and fall prevention are extremely important to prevent further joint damage and to maintain quality of life in persons with arthritis, especially seniors.

In response to the high prevalence rate of doctor-diagnosed arthritis in this age group, an emphasis will be placed on increasing the number of program leaders available geographically in order to provide increased self-management opportunities.

Although additional programs and services are needed to reach underserved areas, facilities and services for persons in this age group do exist in many communities. Services may include the Arthritis Foundation (AF) Self-Help Course, AF Aquatics, P.A.C.E. (People with Arthritis Can Exercise), Tai Chi for Arthritis and others. However, persons with arthritis, as well as health professionals, are often not aware of the existence of such programs and services.

Persons with arthritis in this age group may use alternative medicine. They need to be aware of the effects of such treatment and the potential interactions it may have with their other medications.

Persons ages 65 and older are eligible for Medicare benefits and may have health insurance supplements as well. Arthritis contributes to increasing medical costs for these health care plans. Because many seniors have multiple health problems and are on multiple medications, medical costs may still be a burden. Appropriate arthritis management may lessen the need for joint replacements and more costly treatments later in life and could benefit both the person with arthritis as well as reduce the burden on government-sponsored health plans and insurance supplements.

Arthritis medications often tend to be very costly. Persons with arthritis who lack prescription benefits may need assistance locating financial resources to help pay for medications. In addition, persons with arthritis may need assistance locating rheumatologists and caregivers in their community.

Much collaboration is needed to increase awareness; to promote and support programs and prevention strategies; and to provide resources. Partnering with new groups in creative ways to reach this diverse population is very important.

Aged 65 and Over Focus

Awareness

- Increase awareness about arthritis signs and symptoms, the importance of early diagnosis and self-management opportunities and treatment options.
- Increase awareness about complementary and alternative medicine (CAM) use and potential cautions.
- Increase awareness about the use/availability of assistive devices.

Prevention

- Promote weight control and physical activity for persons in this group to lessen the severity or onset of arthritis.
- Promote injury prevention (especially occupational injuries and fall prevention) to avoid further joint damage by partnering with injury prevention groups.

Programs

- Increase the geographic availability and delivery of evidence-based self-management programs, including physical activity programs, for persons with arthritis.

Referral to Self-Management

- Promote self-management programs that assist those with arthritis to health care providers and local health departments/agencies.

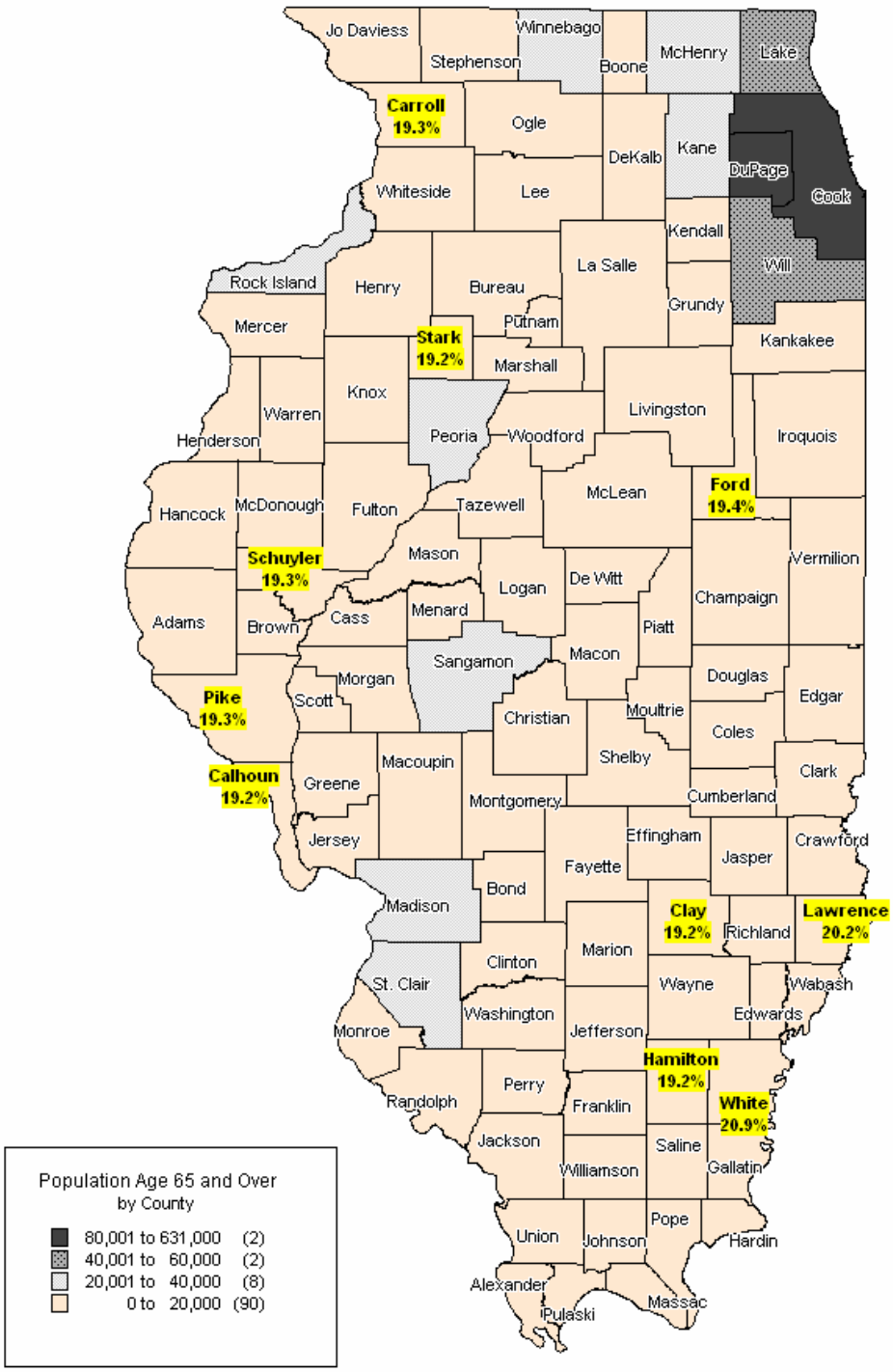
Resources

- Make arthritis resources, including lists of rheumatologists and caregivers and evidence-based program offerings, available to health care providers, educators, local health agencies and the public.
- Develop a list of financial resources for medications.
- Develop a list of financial and social support resources for caregivers.

Partnerships

- Partner with new groups (e.g., senior and community centers, retirement facilities, meal sites, senior high rises, Area Agencies on Aging [AAA] senior centers, senior clubs, AARP, physician offices, fitness centers, malls that have walking groups, churches, educational institutes [life-long learning programs] and local health department programs [women's health, immunizations, blood pressure clinics, home health, etc.]) to increase awareness; to promote and support programs; to provide resource materials; to promote injury prevention, etc.

Map D
Illinois Population Age 65 and Over by County



NOTE: Top 10 counties with the highest *percentage* of the population ages 65 and older are highlighted in yellow.

Race and Ethnicity

African-American

The 2000 U.S. Census Bureau data showed that blacks or African-Americans are the largest minority group in Illinois, making up approximately 15.1 percent of the population. Fourteen Illinois counties have a black or African-American population greater than 10,000; five of these counties have more than 40,000 (See Map E). These counties include Champaign, Cook, DuPage, Kane, Kankakee Lake, Macon Madison, Peoria, Rock Island, Sangamon, St. Clair, Will and Winnebago.

Implications

There is not a significant difference in arthritis prevalence among whites (23.2 percent) and blacks (24.4 percent). However, certain types of arthritis occur more frequently in African-Americans. Lupus is three times more common in black women than in white women. Black and Hispanic/Latina women tend to develop symptoms at an earlier age than other women. (CDC Office of Minority Health Web site). A CDC study reported that death rates from SLE among black women increased by approximately 70 percent from 1979 to 1998 (*MMWR* 51[17]: 371-4). The prevalence of gout is higher in blacks (especially males) ages 45 and older than in whites in this age group. (Lawrence, et al. *Arthritis and Rheumatism*, Vol. 41 [778-9], 1998). If diagnosed early, the disabiling effects of gout may be prevented with medications, proper diet and weight loss.

While a significant difference in arthritis prevalence between whites and blacks does not exist, research shows that blacks have more activity limitation due to arthritis than those of other racial groups. Based on the 1989-1991 NHIS data estimates, the proportion of persons with arthritis who had activity limitation attributable to arthritis was higher among blacks, at 24.5 percent, than among whites, at 17.6 percent (Lawrence, et al., *Arthritis and Rheumatism*, Vol. 41 [778-9], 1998).

One possible explanation for the disparity includes lack of awareness of and participation in self-management programs. Data from the Illinois Arthritis Initaitive pre/post evaluations suggest that very few minorities have participated in self-management programs offered by local health departments. There is a need for greater availability and delivery of self-management in minority communities. In addition, culturally appropriate messages, materials and venues are needed.

Arthritis contributes to increasing medical costs for health insurance plans. Arthritis management programs could benefit both the person with arthritis as well as insurance providers. Arthritis medications often tend to be very costly. Persons with arthritis who lack medical and/or prescription benefits may need assistance locating financial resources to help pay for arthritis care and treatment.

Much collaboration is needed to increase awareness; to promote and support programs and prevention strategies; and to provide resources. Partnering with new groups in creative ways to reach this diverse population is very important.

African-American Focus

Awareness

- Increase awareness about arthritis signs and symptoms, the importance of early diagnosis, and availability of self-management opportunities and treatment options, especially for lupus and gout.
- Identify culturally appropriate messages, materials and venues to reach minority groups.

Prevention

- Promote weight control and physical activity for persons in this group to lessen the severity or onset of arthritis.
- Promote injury prevention (especially occupational injuries) to avoid further joint damage.

Programs

- Increase the geographic availability and delivery of evidence-based self-management programs, including physical activity programs, for persons with arthritis.
- Determine barriers to participation in self-management programs.

Referral to Self-Management

- Promote self-management programs that assist those with arthritis to health care providers and local health departments/agencies.

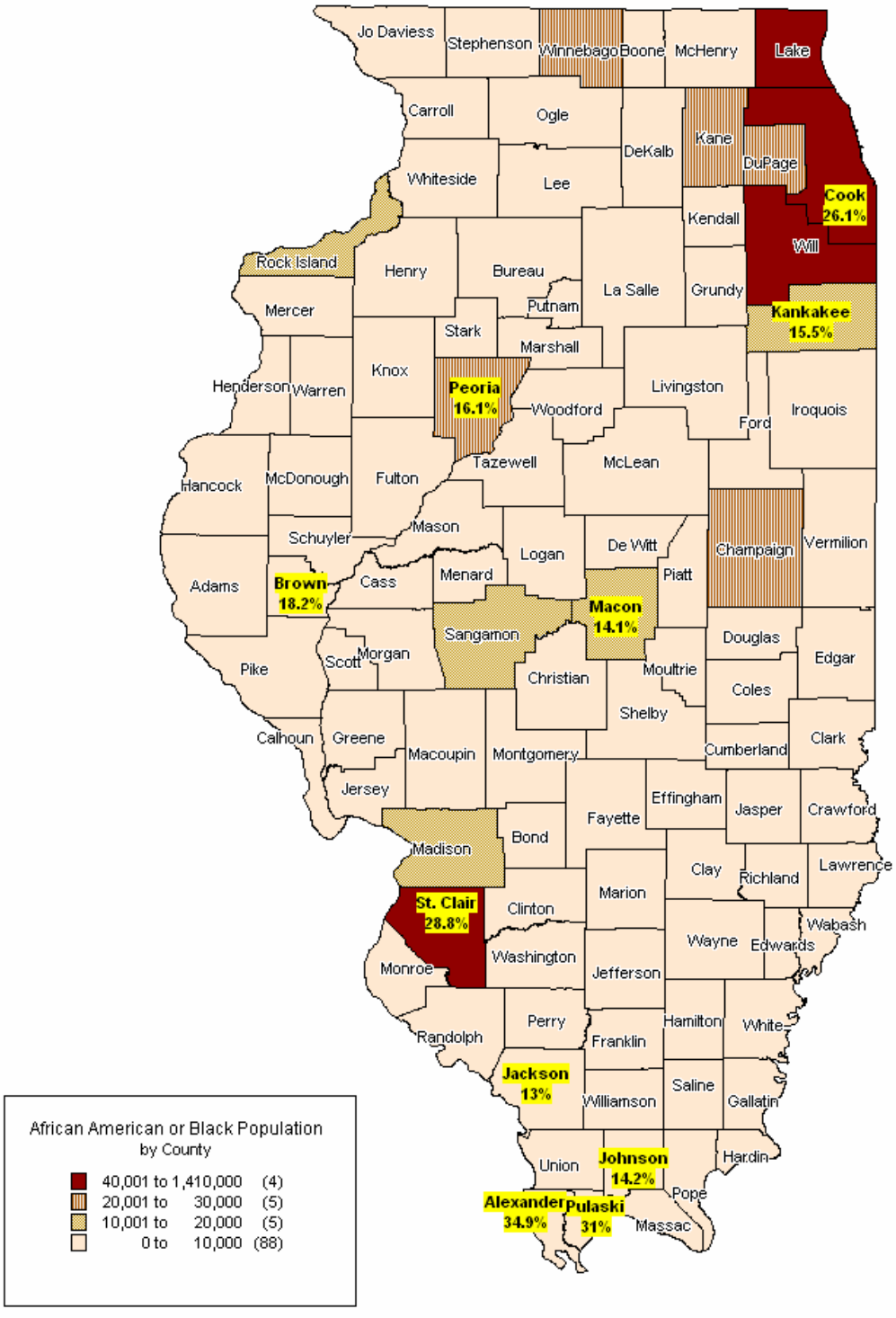
Resources

- Make arthritis resources, including lists of rheumatologists and caregivers and evidence-based program offerings, available to health care providers, educators, local health agencies and the public.
- Develop a list of financial resources for medications.

Partnerships

- Partner with new groups (churches, community centers, and culturally specific organizations) to increase awareness; to promote and support programs; to provide resource materials; to promote injury prevention, etc.

Map E
African American or Black Population by County



NOTE: Top 10 counties with the highest *percentage* of the African-American or black population are highlighted in yellow.

Hispanic

Hispanics or Latinos are the second largest minority group in Illinois, making up 12.3 percent of the population. Eight Illinois counties have a population of more than 10,000 Hispanics; five of those counties have more than 40,000 (See Map F).

Implications

Data regarding arthritis prevalence among Hispanics is limited. As with African-Americans, activity limitation is greater among Hispanics compared to whites. Activity limitation for Hispanics with arthritis is 22.2 percent vs. 17.6 percent for whites (and 24.5 percent for blacks). (Lawrence, et al., *Arthritis and Rheumatism*, Vol. 41 [778-9], 1998). Language barriers often hinder awareness efforts.

Data from the Illinois Arthritis Initiative pre/post evaluations suggest that very few minorities have participated in self-management programs offered by local health departments. Possible explanations for the disparities between Hispanics and non-Hispanics are limited availability of arthritis literature and programming in Spanish and limitations in access to health care. More arthritis awareness materials, prevention messages including weight control and physical activity messages, and other resources in Spanish are needed.

Access to health care providers is also limited at times because of language barriers. Access to lists of Spanish-speaking rheumatologists or translators would be beneficial to the Spanish-speaking population. Availability of self-management courses in Spanish is limited. Even in areas where resources do exist, health care providers may not be aware of existing arthritis resources in Spanish.

Arthritis contributes to increasing medical costs for health insurance plans. Appropriate arthritis management programs could benefit both the person with arthritis as well as insurance providers. Arthritis medications often tend to be very costly. Persons with arthritis who lack medical and/or prescription benefits may need assistance locating financial resources to help pay for arthritis care and treatment.

Much collaboration is needed to increase awareness; to promote and support programs and prevention strategies; and to provide resources. Partnering with new groups in creative ways to reach this diverse population is very important.

Hispanic Focus

Awareness

- Increase awareness about arthritis signs and symptoms, the importance of early diagnosis and the availability of self-management opportunities and treatment options.

Prevention

- Promote weight control and physical activity for persons in this group to lessen the severity or onset of arthritis.

Programs

- Increase the geographic availability and delivery of evidence-based self-management, including physical activity programs, for persons with arthritis.

- Determine barriers to participation in self-management programs, including physical activity programs.

Referral to Self-Management

- Promote self-management programs that assist those with arthritis to health care providers and local health departments/agencies.

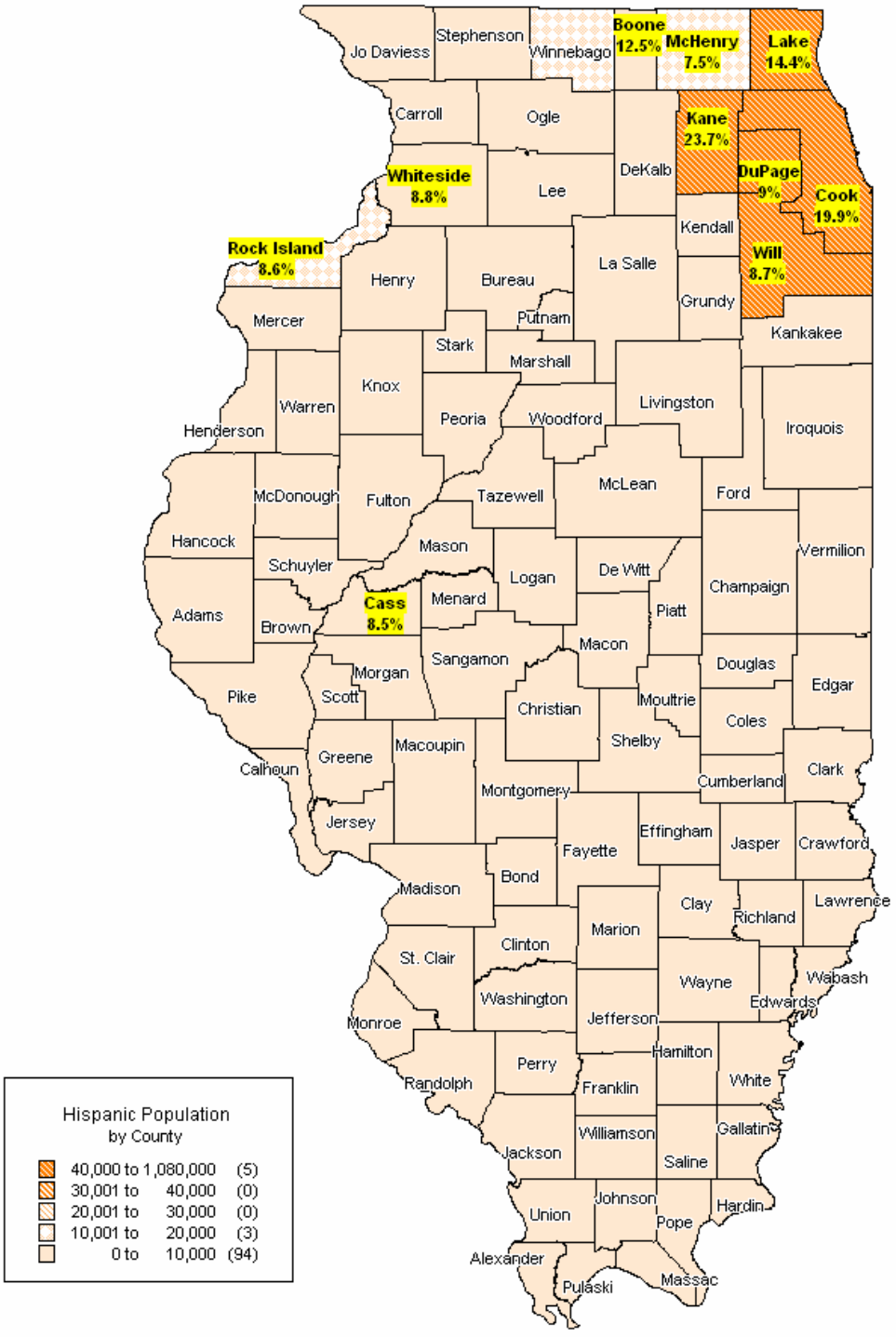
Resources

- Make arthritis resources, including lists of rheumatologists, Spanish-speaking health care providers and caregivers and evidence-based program offerings, available to health care providers, educators, local health agencies and the public.
- Address language barriers by promoting literature and programs in Spanish and recruiting Spanish-speaking peer leaders and volunteers.
- Utilize Spanish cable television channels and newspapers to reach Hispanic residents.
- Develop a list of financial resources for medications.

Partnerships

- Partner with new groups (churches, community centers, culturally specific organizations, YMCA, YWCA, housing complexes, major employers, unions, agencies that work with Hispanic populations such as the Coalition for Limited English Speaking Elderly [CLESE], and local health department programs such as WIC, well-baby clinics, immunizations, women's health, minority health, etc.) to increase awareness; to promote and support programs; to provide resource materials; and to promote injury prevention, etc.

Map F
Hispanic Population by County



NOTE: Top 10 counties with the highest *percentage* of the Hispanic population are highlighted in yellow.

Gender

Twenty-six Illinois counties have female and male populations 18 years of age and older of more than 20,000 (See Map G and Map H).

Implications

Females

Arthritis is the most prevalent chronic condition among women (*MMWR* 44[17]: 329). According to the 2002 BRFSS, more Illinois adult females (26.3 percent) have doctor-diagnosed arthritis than males (18.7 percent). There is no significant difference in prevalence of possible arthritis between males and females.

Rheumatoid arthritis occurs 2.5 times more frequently in women than in men and may be more severe. *Fibromyalgia* mainly affects women, especially those between the ages of 35 and 55. Women also show a higher rate of *activity limitation* than men (*MMWR*, 50[17]: 333-6). Women are approximately eight times more likely to develop *lupus* than men (Mayo Clinic). *Lupus* usually occurs during a woman's childbearing years. Girls tend to develop *juvenile rheumatoid arthritis* more frequently than boys.

The Lupus Foundation of Illinois offers information about lupus, referral services, community education, support groups and financial support to qualifying patients. However, persons with arthritis, as well as health professionals, are often not aware of the existence of such programs and services.

Some forms of arthritis can be less disabling and less severe if diagnosed and treated early. An important focus of the Illinois Arthritis Initiative is to increase awareness to assure that more persons with possible arthritis receive proper diagnosis in order to obtain appropriate treatment and management.

Males

Gout occurs more often in men past age 40. Before age 45, more men have *osteoarthritis* than women. While the prevalence of doctor-diagnosed arthritis is higher among women, one possible explanation for this disparity is that females typically seek out health care more often than males, and therefore are getting diagnosed more frequently. If diagnosed early, the disabling effects of gout may be prevented with meds, proper diet and weight control.

Although more programs and services are needed to reach underserved areas, facilities and services for persons in this age group do exist in many communities. Services may include the Arthritis Foundation (AF) Self-Help Course, AF Aquatics, P.A.C.E. (People with Arthritis Can Exercise), Tai Chi for Arthritis and others.

Data from the Illinois Arthritis Initiative pre/post evaluations suggest that very few men have participated in self-management programs offered by local health departments. Potential causes for this disparity may include the time of day programs are offered. Other barriers also need to be explored.

Gender Focus

Awareness

- Increase awareness about arthritis signs and symptoms, the importance of early diagnosis and the availability of self-management opportunities and treatment options.

Prevention

- Promote weight control and physical activity for persons in this group to lessen the severity or onset of arthritis.

Programs

- Increase the geographic availability and delivery of evidence-based self-management programs, including physical activity programs, for persons with arthritis.
- Determine barriers to participation in self-management programs (especially among males).
- Test gender-specific strategies for engaging people at different ages in appropriate health education and prevention/self-management programs.

Referral to Self-Management

- Promote self-management programs that assist those with arthritis to health care providers and local health departments/agencies.

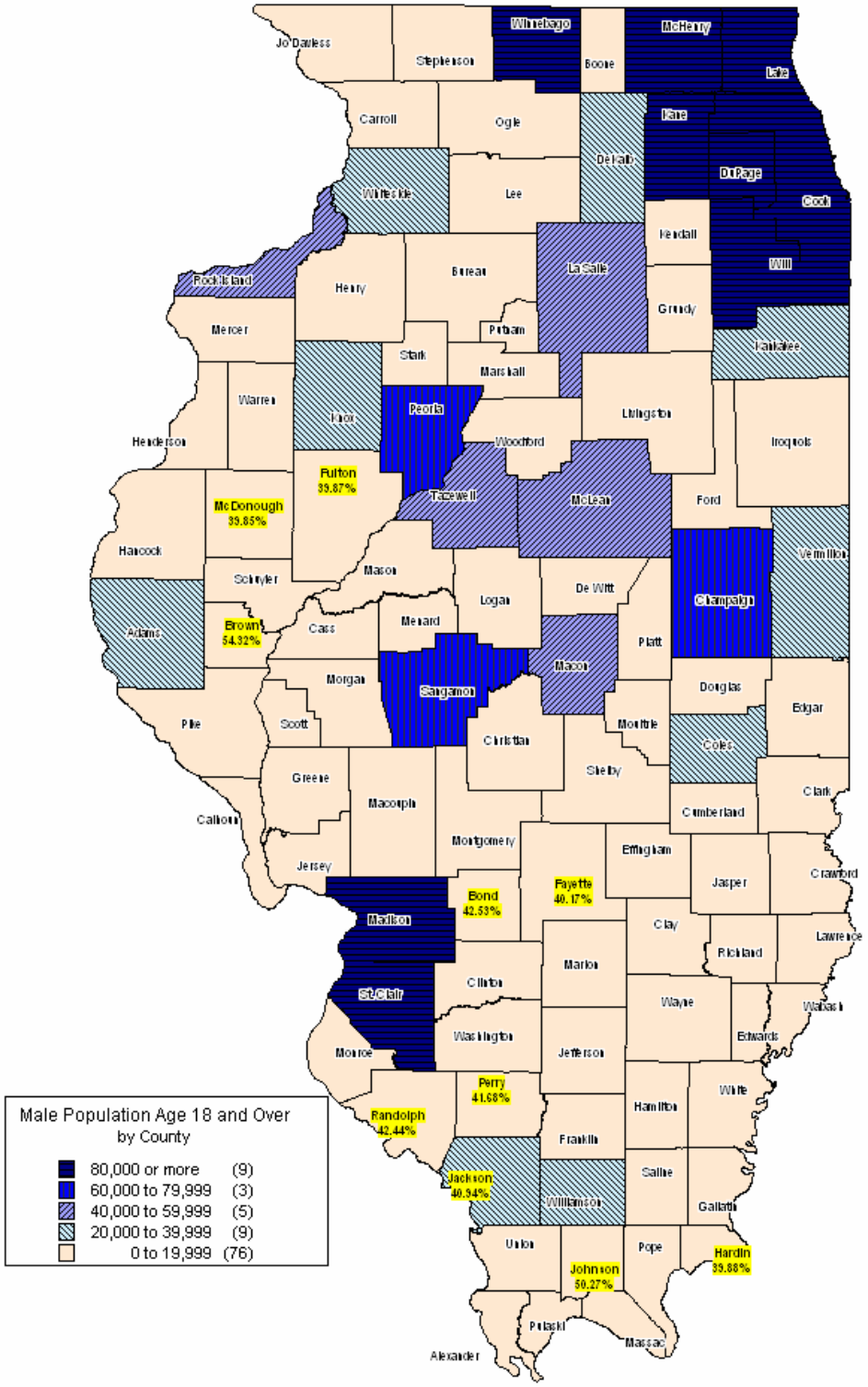
Resources

- Make arthritis resources, including lists of rheumatologists and caregivers and evidence-based program offerings, available to health care providers, educators, local health agencies and the public.

Partnerships

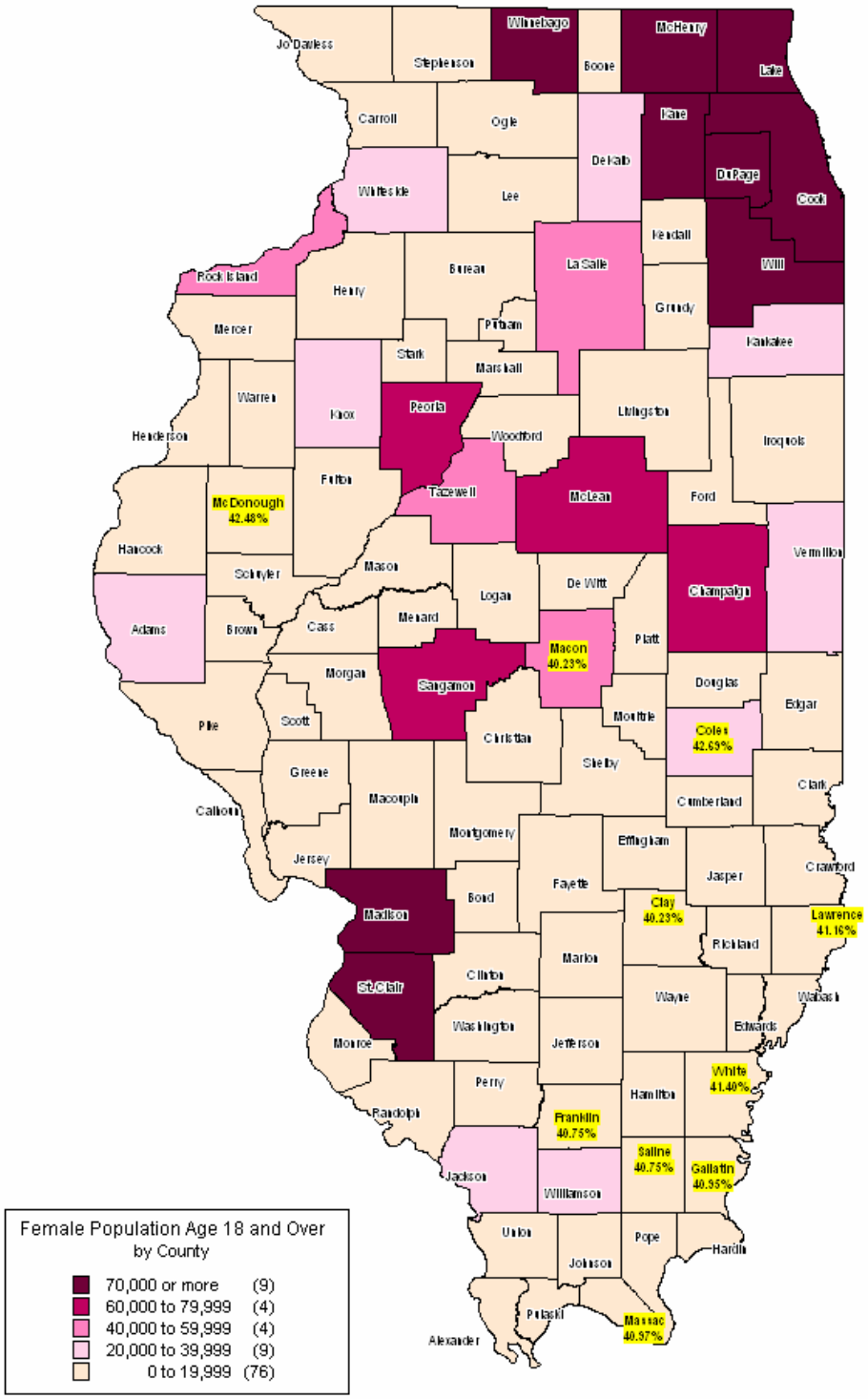
- Partner with new groups (local health department programs such as women's health, men's health, blood pressure clinics, immunizations, health screenings, health fairs, etc.) to increase awareness; to promote and support programs; to provide resource materials; to promote injury prevention, etc.

Map G
Male Population Age 18 and Over by County



NOTE: Top 10 counties with the highest *percentage* of the males ages 18 and older are highlighted in yellow.

Map H
Female Population age 18 and Over by County



NOTE: Top 10 counties with the highest *percentage* of females ages 18 and older are highlighted in yellow.

Urban and Rural

The IDPH's Center for Rural Health defines a "rural county" as one that is not part of a metropolitan statistical area, as defined by the U.S. Bureau of the Census, or one that is part of a metropolitan statistical area but has a population of less than 60,000. According to this definition, 84 of Illinois 102 counties are rural.

Implications

According to the state BRFSS, persons living in rural counties (See Map I) have a higher prevalence of doctor-diagnosed arthritis (29.6 percent) than urban residents (19.4 percent for the city of Chicago, 19 percent for suburban Cook County, 19.2 percent for collar counties combined, and 25.8 percent for other urban counties combined).

Differences in prevalence may be due to rural counties having more elderly residents. According to the 2000 census data, 16 percent of the rural population is age 65 and older compared to only 11 percent in urban populations. Differences in lifestyle among rural residents also may contribute to differences in prevalence of arthritis. According to 2002 state BRFSS data, rural residents more frequently lead sedentary lifestyles.

Another reason may be access to care, especially rheumatologists and self-management opportunities, in rural areas. Only 22 percent of primary care physicians practice in rural counties. Of the 84 rural counties, 78 have some category of a federal health professional shortage area (HPSA) indicating inadequate access to primary health care services (Illinois Department of Public Health, Center for Rural Health). Lack of transportation also may be a barrier.

Reaching residents in more isolated, rural areas may be difficult. Communication strategies for reaching rural residents have been outlined in a report by the Illinois Area Health Education Centers. Using these strategies to implement the CDC Physical Activity Campaign may be an effective way to reach residents in rural and underserved areas with arthritis messages.

Limited income is common among many rural residents, which also may contribute to disparities in health insurance coverage. Employed, rural residents with very low incomes are 24 percent less likely to have insurance than their urban counterparts, and they are 20 percent less likely to have insurance than unemployed rural residents (McNamara, P. *Insuring the Health of Rural Illinoisans: Obstacles and Opportunities*. January 2000: Illinois Rural Health Association).

Occupational injury prevention may be especially important in rural areas where many residents work in farming and mining occupations. Repetitive movement injuries may be more common in urban areas where large factories are more likely to be located.

Much collaboration is needed to increase awareness; to promote and support programs and prevention strategies; and to provide resources. Partnering with new groups in creative ways to reach this diverse population is very important.

Urban and Rural Focus

Awareness
- Increase awareness about arthritis symptoms, the importance of early diagnosis and self-management opportunities.
- Use communication strategies outlined in the Illinois Health Education Consortium/AHEC report "Health Communication Strategies to Enhance Arthritis Self-Management Among Rural Illinois Residents: A Report of the Findings" to reach rural residents.
- Use the CDC communication campaign materials to promote physical activity.

Prevention
- Promote weight control and physical activity for persons in this group to lessen the severity or onset of arthritis.
- Promote injury prevention (especially occupational injuries) to avoid further joint damage.

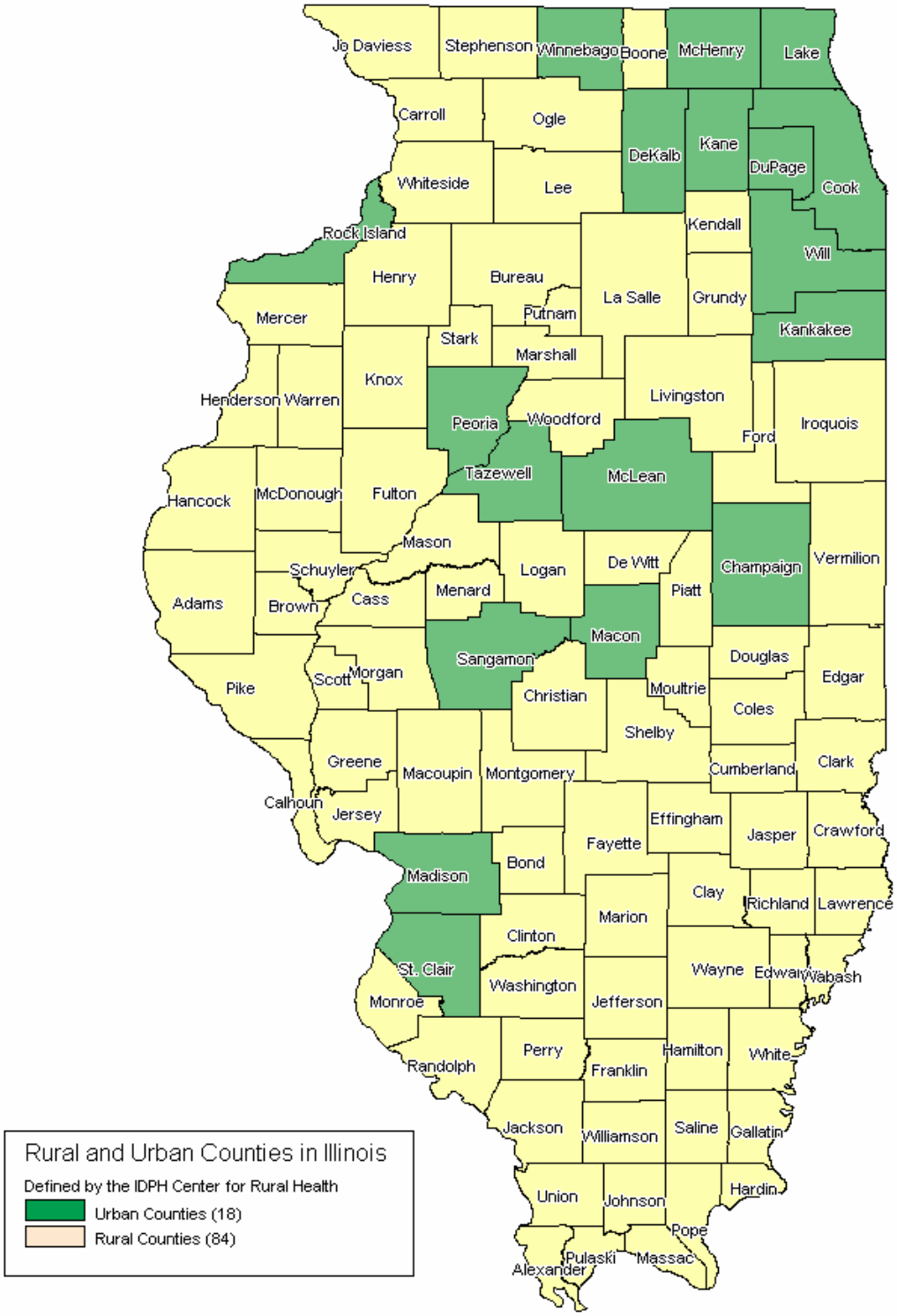
Programs
- Increase the geographic availability and delivery of evidence-based self-management programs, including physical activity programs, for persons with arthritis.
- Explore use of telehealth to increase awareness and self-management opportunities in rural communities.

Referral to Self-Management
- Promote self-management programs that assist those with arthritis to health care providers and local health departments/agencies.

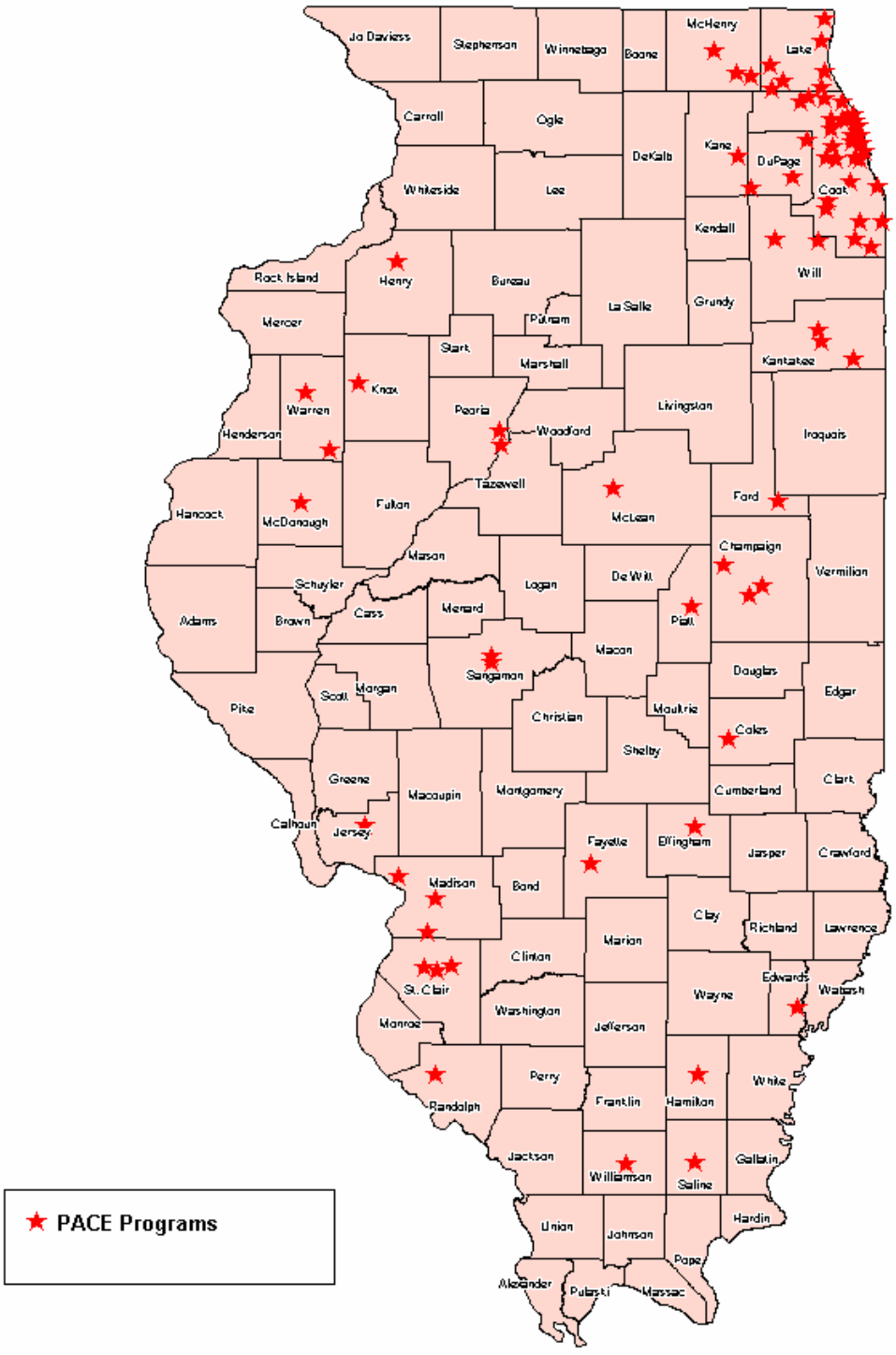
Resources
- Make arthritis resources, including lists of rheumatologists and caregivers and evidence-based program offerings, available to health care providers, educators, local health agencies and the public.
- Develop a list of financial resources for medications.

Partnerships
- Partner with new groups (such as the Illinois Rural Health Association, the Illinois Department of Public Health Center for Rural Health, farm bureaus, major employers, labor unions, churches, cooperative extension programs, rural health clinics, community centers and community based organizations, farm supply stores, local health department programs, Chicago Department on Aging, Suburban Area Agencies on Aging, rural area agencies on aging, neighborhood community groups and coalitions, etc.) to increase awareness; to promote and support programs; to provide resource materials; to promote injury prevention, etc.

Map I
Rural and Urban Illinois Counties

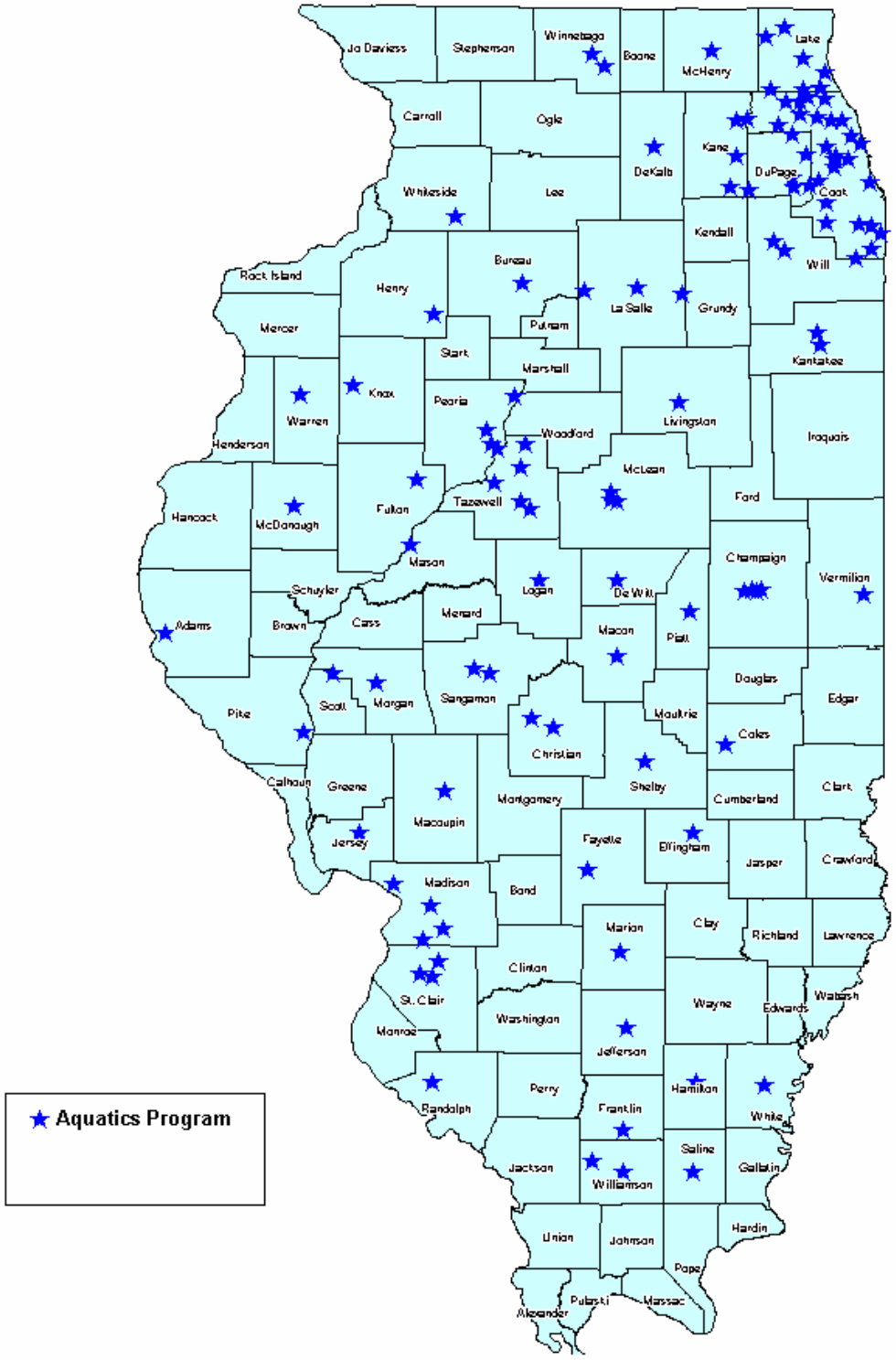


Map J
Arthritis Foundation P.A.C.E. Programs in Illinois, 2004



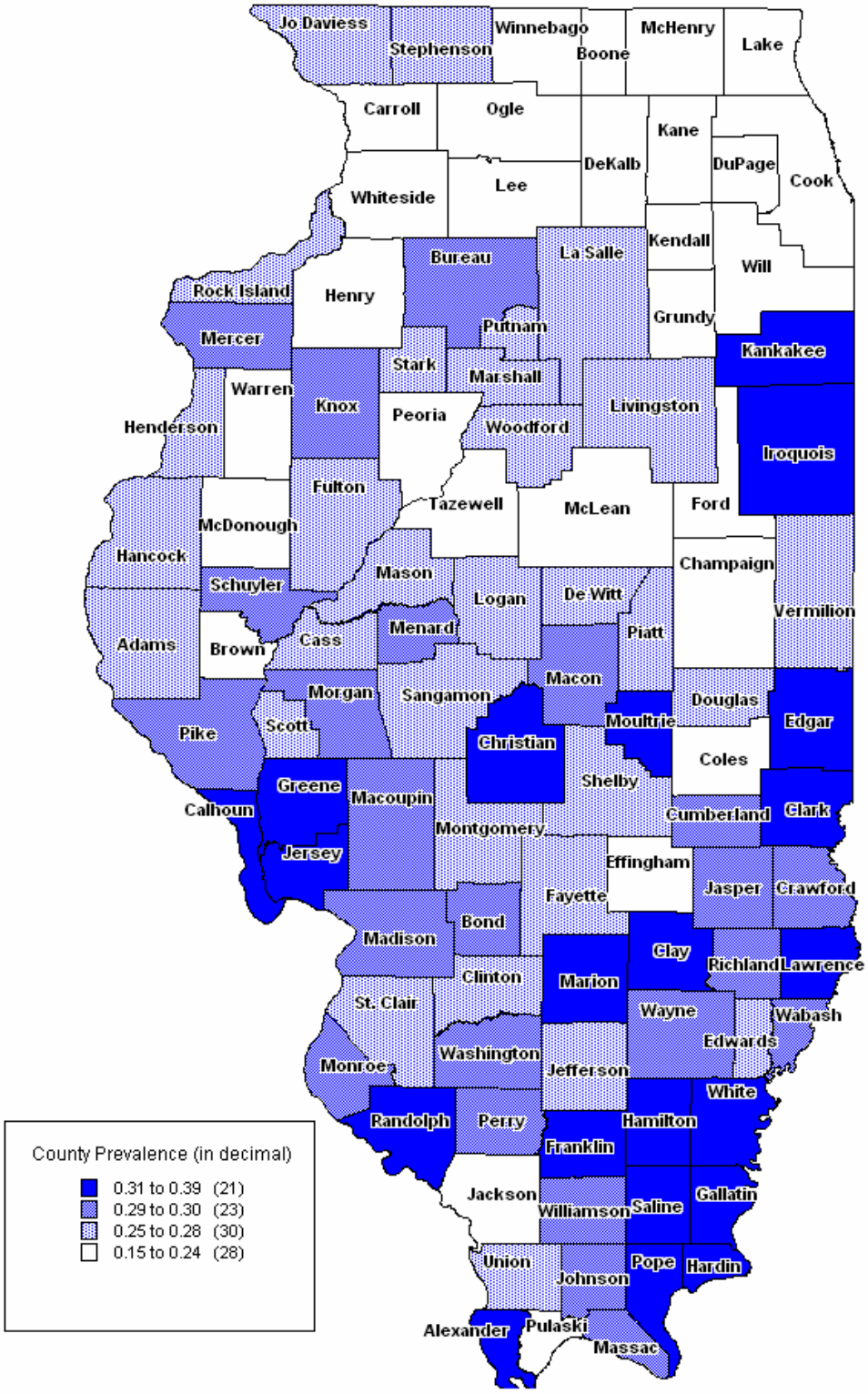
Map represents programs available in April 2004.

Map K
Arthritis Foundation Aquatics Programs in Illinois, 2004



Map represents programs available in April 2004.

Map L
Prevalence of Doctor-Diagnosed Arthritis by County
Illinois County BRFSS Round 2 (2001-2003)



APPENDICES

Appendix A is a table that shows the focus areas for the Illinois Arthritis Initiative and which groups they target.

Appendix B shows the 20 counties in Illinois that have the largest populations of the eight target groups. Seven of these counties are within the Greater Chicago Arthritis Foundation service area and are shaded in gray. The remaining 13 counties are located in the Greater Illinois Arthritis Foundation service area. Two of these counties, LaSalle and Vermillion, are classified as rural according to the Illinois Department of Public Health, Center for Rural Health, definition of rural counties.

When looking at *total* population numbers (vs. percentages), it is not surprising to see that six counties with populations greater than 275,000 have large (more than 10,000 for race and more than 20,000 for age and gender) target group populations. They are Cook, DuPage, Kane, Lake, Will, and Winnebago. Four counties with populations ranging from approximately 149,000 to approximately 259,000 have large populations in seven of the eight target groups. They are Madison, Peoria, Rock Island and St. Clair.

The developers of this report felt it was important to look not only at *total* population numbers but also *percentages* of the population falling within each target group. When looking at the *percentage* of the specific target population, a very different picture emerges. For example, while Alexander County has a total population of only 9,590, 24.9 percent of its population is black or African-American.

Appendix C shows the top 10 counties with the highest percentage of the target population. (The number in parenthesis next to the percentage denotes rank. An asterisk denotes a tie.)

Appendix A

AREAS OF FOCUS FOR THE PUBLIC EDUCATION TARGET GROUP ASSESSMENT	Under Age 18	Ages 25-44	Ages 45-64	Ages 65 and Over	African-American	Hispanic	Gender	Rural
Awareness: Increase awareness of juvenile arthritis signs and symptoms, the importance of early diagnosis, and special needs of students with arthritis among parents, school nurses, teachers, students and other school personnel.	X							
Awareness: Increase awareness of arthritis signs and symptoms, the importance of early diagnosis, availability of self-management opportunities and treatment options.		X	X	X	X	X	X	X
Awareness: Increase awareness about complementary and alternative medications (CAM).			X	X				
Awareness: Identify culturally appropriate messages, materials and venues to reach minority groups.					X	X		
Awareness: Use communication strategies outlined in the AHEC report "Health Communication Strategies to Enhance Arthritis Self-Management Among Rural Illinois Residents: A Report of the Findings" to reach rural residents.								X
Awareness: Use the CDC communication campaign materials to promote physical activity.		X	X	X	X			X
Awareness: Increase awareness about use/availability of assistive devices.	X	X	X	X				
Programs: Develop a plan for a school-based program designed to educate families of children with JA about available treatment and self-management programs.	X							
Programs: Increase the geographic availability and delivery of evidence-based self-management programs, including physical activity programs, for persons with arthritis.	X	X	X	X	X	X	X	X
Programs: Develop a process to target employed persons with arthritis in collaboration with their workplaces.		X	X					
Programs: Determine barriers to participation in self-management programs.					X	X	X	X
Programs: Test gender specific strategies for engaging people at different ages in appropriate health education and prevention/self-management programs.							X	
Programs: Explore the use of telehealth to increase self-management opportunities in rural communities.								X
Programs: Develop a process to target "early retirees."			X					
Referral to SM: Promote self-management programs that assist those with arthritis to health care providers and local health departments/agencies.	X	X	X	X	X	X	X	X
Prevention: Include arthritis/injury prevention messages in health education/healthy lifestyle programs in schools and organizations responsible for offering/coordinating youth sports.	X							
Prevention: Promote injury prevention (especially occupational injuries and fall prevention) to avoid further joint damage.		X	X	X				X
Prevention: Promote weight control and physical activity appropriate for persons with arthritis in this target group to lessen the severity or onset of arthritis.	X	X	X	X	X	X	X	X
Resources: Make arthritis resources, including lists of rheumatologists and caregivers and evidence-based program offerings, available to health care providers, educators, local health agencies and the public.	X	X	X	X	X	X	X	X
Resources: Develop a list of financial and social support resources for caregivers	X			X				X
Resources: Develop a list of financial resources for medications.	X	X	X	X	X	X		X
Resources: Promote literature and programs in Spanish and recruit Spanish-speaking peer leaders and volunteers to address language barriers.						X		
Resources: Utilize Spanish cable television channels and newspapers to reach Hispanic residents.						X		
Partnerships: Partner with new groups to increase awareness, to promote and support programs, to provide resource materials, to promote injury prevention, etc.	X	X	X	X	X	X	X	X

APPENDIX B – List of Counties with Large Populations (10,000+ for race, and 20,000+ for age and gender) of Specific Arthritis Public Education Target Groups (in order by total population)

■ Served by Greater Chicago Arthritis Foundation ☐ Served by Greater Illinois Arthritis Foundation

County	Rural or Urban	Total Pop	Arthritis Prevalence (%)	Over 10,000 AA/Black	Over 10,000 Hispanic	Over 20,000 Females	Over 20,000 Males	Over 20,000 under age 18	Over 20,000 Age 25-44	Over 20,000 Age 45-64	Over 20,000 age 65+
Cook	Urban	5,376,741	19.20%	X	X	X	X	X	X	X	X
DuPage	Urban	904,161	15.25%	X	X	X	X	X	X	X	X
Lake	Urban	644,356	17.71%	X	X	X	X	X	X	X	X
Will	Urban	502,266	23.06%	X	X	X	X	X	X	X	X
Kane	Urban	404,119	18.11%	X	X	X	X	X	X	X	X
Winnebago	Urban	278,418	24.41%	X	X	X	X	X	X	X	X
McHenry	Urban	260,077	16.31%		X	X		X	X	X	X
Madison	Urban	258,941	30.62%	X		X	X	X	X	X	X
St. Clair	Urban	256,082	28.19%	X		X	X	X	X	X	X
Sangamon	Urban	188,951	26.95%	X		X		X	X	X	X
Champaign	Urban	179,669	16.38%	X		X		X	X	X	
Peoria	Urban	183,433	23.39%	X		X	X	X	X	X	X
McLean	Urban	150,433	16.85%					X	X	X	
Rock Island	Urban	149,374	26.08%	X	X	X		X	X	X	X
Tazewell	Urban	128,485	22.68%			X		X	X	X	
Macon	Urban	114,706	30.12%	X		X		X	X	X	
LaSalle	**Rural**	111,509	27.31%			X		X	X	X	
Kankakee	Urban	103,833	31.94%	X				X	X	X	
DeKalb	Urban	88,969	22.55%					X	X		
Vermillion	**Rural**	83,919	25.19%					X	X		

APPENDIX C – Counties with Large Percentage of Populations with Specific Arthritis Public Education Target Groups
(Top 10 counties listed in each category in alphabetical order. Number in parentheses indicates rank.)

■ Served by Greater Chicago Arthritis Foundation □ Served by Greater Chicago Arthritis Foundation (* indicates tie)

County	Rural or Urban	Total Population	AA/Black	Hispanic/ Latino	Adult Females	Adult Males	Under Age 18	Age 25-44	Age 45-64	Age 65+
Alexander	Rural	9,590	34.9% (1)							
Bond	Rural	17,633				42.53% (3)				
Boone	Rural	41,786		12.49% (4)			29.79% (4)			
Brown	Rural	6,950	18.20% (5)			54.32% (1)		37.54% (1)		
Calhoun	Rural	5,084								19.18% (9*)
Carroll	Rural	16,674								19.26% (5)
Cass	Rural	13,695		8.48% (9)						
Clay	Rural	14,560			40.23% (9*)					19.18% (9*)
Coles	Rural	53,196			42.69% (1)					
Cook	Urban	5,376,741	26.14% (4)	19.93% (2)				31.72% (8)		
DuPage	Urban	904,161		9.00% (5)				32.42% (5)		
Effingham	Rural	34,264					28.55% (7)			
Fayette	Rural	21,802				40.17% (7)				
Franklin	Rural	39,018			40.75% (8)					
Ford	Rural	14,241								19.41% (3)
Fulton	Rural	38,250				39.87% (9)				
Gallatin	Rural	6,445			40.95% (6)				25.96% (5*)	
Hamilton	Rural	8,621								19.20% (7)
Hardin	Rural	4,800				39.88% (8)			26.90% (1)	
Henderson	Rural	8,213							26.53% (4)	
Jackson	Rural	59,612	13.02% (10)			40.94% (6)				
JoDaviess	Rural	22,289							26.82% (2)	
Johnson	Rural	12,878	14.17% (8)			50.27% (2)		34.03% (2)		
Kane	Urban	404,119		23.74% (1)			30.26% (1)	31.89% (7)		
Kankakee	Urban	103,833	15.47% (7)							
Kendall	Rural	54,544					29.49% (5)	32.41% (6)		

County	Rural or Urban	Total Pop	AA/Black	Hispanic/ Latino	Adult Females	Adult Males	Under Age 18	Age 25-44	Age 45-64	Age 65+
Lake	Urban	644,356		14.39% (3)			29.39% (6)	31.58% (9)		
Lawrence	Rural	15,452			41.16% (4)					20.15% (2)
Macon	Urban	114,706	14.06% (9)		40.23% (9*)					
Marshall	Rural	13,180							24.94% (10)	
Massac	Rural	15,161			40.97% (5)					
McDonough	Rural	32,913			42.48% (2)	39.85% (10)				
McHenry	Urban	260,077		7.54% (10)			30.18% (2)	33.45% (3)		
Mercer	Rural	16,957							25.96% (5*)	
Monroe	Rural	27,619						30.60% (10)		
Ogle	Rural	51,032					27.48% (9)			
Peoria	Urban	183,433	16.10% (6)							
Perry	Rural	23,094				41.68% (5)				
Piatt	Rural	16,365							24.97% (9)	
Pike	Rural	17,384								19.25% (6)
Pope	Rural	4,413							26.72% (3)	
Pulaski	Rural	7,348	31.00% (2)				27.16% (10)			
Putnam	Rural	6,086							25.25% (7)	
Randolph	Rural	33,893				42.44% (4)				
Rock Island	Urban	149,374		8.56% (8)						
Saline	Rural	26,733			40.75% (7)					
Schuyler	Rural	7,189								19.32% (4)
St. Clair	Urban	256,082	28.77% (3)				27.70% (8)			
Stark	Rural	6,332								19.19% (8)
Union	Rural	18,293							25.14% (8)	
White	Rural	15,371			41.40% (3)					20.85% (1)
Whiteside	Rural	60,653		8.82% (6)						
Will	Urban	502,266		8.71% (7)			30.01% (3)	32.93% (4)		