One in six Americans suffers from arthritis, and the CDC projects that number will grow to one in five by 2020.
One in six Americans suffer the pain and joint stiffness associated with arthritis, and the CDC projects that number will grow to almost one in five by 2020. Arthritis is one of the most prevalent chronic health problems and the leading cause of disability among Americans over the age of 15. Seven million Americans experience limits on everyday activities like walking, dressing, and bathing due to arthritis. Contrary to common belief, arthritis is not simply a disease of the elderly. More than half of those with arthritis are under age 65; nearly 300,000 American children have a form of juvenile arthritis.7

There are more than 100 different types of arthritis that affect areas in or around joints, but the disease can also affect other parts of the body. The two most common types of arthritis are rheumatoid arthritis (RA) and osteoarthritis (OA). RA is a chronic disease affecting approximately 2.1 million individuals in the United States, 1.5 million of whom are women.23 In fact, women suffer from arthritis almost twice as often as men, particularly rheumatoid arthritis and fibromyalgia.1 RA is a progressively destructive disease leading to irreversible joint damage, permanent deformity and functional disability.4 Although the cause is not known, it is an autoimmune disease in which the immune system attacks otherwise healthy joint tissue resulting in inflammation of the membrane lining the joint.5,6 OA, the most common form of arthritis, affects 21 million Americans with symptoms generally more common among the middle-aged and elderly.3,4 OA is a progressive disease characterized by the breakdown of cartilage in the joints, most commonly the hands, spine, knees, and hips, leading to pain, restricted movement, and functional limitations.3,20

The direct medical costs for treating arthritis and the lost wages that result from the disease currently total more than $82 billion annually.7 Earlier estimates of the cost of arthritis found that the employment-related economic costs are estimated at more than three times the direct medical costs.6,12 This is not surprising since 60 to 70 percent of RA patients who had been working at the onset of the disease reported work disability after five years.15 OA is second only to chronic heart disease as the principal reason why adults receive Social Security Disability payments and has a greater effect among older Americans.7 As the baby boom generation enters the prime years for arthritis, the number of people affected will surge and the impact on individuals and the nation’s health will grow dramatically.7 Lifetime direct costs of RA are estimated at up to $14 billion per year, comparable to the costs of coronary heart disease.16,17 One study estimates that medications alone may account for as much as 17 percent of the costs of treating RA.18 And because of the clinical complexities of RA drug therapy, monitoring drug effects and treating drug side effects can be as much as 40 to 70 percent of drug costs in some cases.17 The impact of new therapies and their potential to prevent costly hospitalizations and surgeries has yet to be determined.

The Arthritis Foundation currently estimates that OA results in more than 7 million physician visits annually.7 In addition, 80 percent of those with OA report at least some disease-related limitation of movement or activities.17 One study suggests that under a managed care plan, OA added between $1,963 and $2,827 annually in costs per patient, accounting for five percent of total health plan charges.18 Hospitalizations account for about 46 percent of total spending for OA, with medications accounting for nearly one-third of the costs and ambulatory care contributing the remaining 22 percent.19

Unfortunately, half of all Americans who suffer from arthritis are under the mistaken impression that nothing can be done to help them when in fact there are a number of effective treatments to help relieve the pain and inflammation of arthritis.1 In 2000, the American College of Rheumatology (ACR) published updated guidelines for treatment of OA of the hip and knee. The outlined therapy begins with a variety of non-drug components, with drug therapy introduced if these methods alone fail to relieve symptoms.20 The recommended non-drug components in RA management are similar to those described for OA, including support groups, physical activity and weight management, and even surgery.21 However, the timing of diagnosis is a more important factor in management of RA than it is for OA. There is evidence that joint damage or destruction can both occur and be detected early in the RA disease process. Therefore, optimal management requires early diagnosis and timely adoption of treatment strategies that have the potential to reduce, delay or prevent joint damage.21 New evidence and the availability of new therapies, such as biologic response modifiers that actually neutralize a key factor in RA disease progression, have shifted the emphasis for treatment of RA to the use of drug therapies.21

Initial drug treatment of RA commonly involves the use of nonsteroidal anti-inflammatory drugs (NSAIDs), many of which are available over the counter, to reduce joint pain and swelling. However, these drugs do not have an effect on the underlying disease process or progression of joint destruction, and are often associated with gastrointestinal complications including upset stomach, ulcers, and elevated blood pressure.22,22 Studies of the gastrointestinal (GI) effects of traditional or “non-selective” NSAIDs suggest the following:23,24,25

- NSAID users have approximately three times greater relative risk of developing GI complications compared to non-users.
- The relative risk of GI side effects is greatest during the first three months of therapy.
**M**ore than half of those with arthritis are under age 65.

**The Benefits of Physical Activity in Managing Arthritis**

If you think that physical activity and arthritis don’t go hand in hand, you’re wrong. Research has shown that physical activity is an essential tool in managing arthritis. It can:

- Reduce joint pain and stiffness;
- Build strong muscle around the joints;
- Increase flexibility and endurance;
- Give you more energy;
- Help you sleep better;
- Control your weight;
- Decrease depression;
- Improve self-esteem; and
- Stave off other health problems such as osteoporosis and heart disease.

Physical activity can include anything from walking around the block to taking a yoga or tai chi class or playing a round of golf. If you are reluctant to exercise because of pain, you may want to start with a water exercise program because your body’s buoyancy in the water reduces stress on your hips, knees, and spine. Whatever physical activity you decide on, you should always consult with your doctor before starting out.
Lifetime direct costs of rheumatoid arthritis are comparable to those of coronary heart disease.

**Methodology**

This study separately analyzed prescription drug spending growth for two large national claims databases, one representing managed care plan enrollees and the other representing those covered by large employer-provided health benefit plans. The study defined and assessed several factors affecting the price per day of therapy and the volume of therapy — the number of days of therapy received and the number of patients receiving drug therapy. The analysis also examined the effects of price and volume changes for established drugs on the market during the entire period of analysis and for new drugs that were first marketed during this period.

**Factors Influencing Drug Spending for Arthritis 1997-1999**

1997 and 1999 pharmaceutical expenditures were analyzed for individuals in private managed care plans. The sample included individuals who had at least two arthritis diagnoses during the calendar year. The diagnoses did not have to be the same, but this method ensured a better focus on patients with confirmed arthritis diagnoses.

Overall, drug expenditures per health plan member for arthritis patients rose 87 percent during the two-year period from 1997 to 1999. Volume factors were responsible for 78 percentage points of the total 87 percent increase in spending. The increase in the percentage of people in the covered population being treated for arthritis accounted for 56 percentage points of the overall 87 percent expenditure growth. Price factors had only a small influence on total expenditure growth. Together, the three factors contributed nine percentage points of the 87 percent growth.

<table>
<thead>
<tr>
<th>Factors Influencing Growth in Rx Expenditures:</th>
<th>% Positive Impact</th>
<th>% Negative Impact</th>
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<tr>
<td><strong>Total Growth in Expenditures</strong></td>
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<tr>
<td><strong>Growth Due to Volume Factors</strong></td>
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<td>Changes in the Number of Prescriptions per Person for Established Drugs</td>
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<td>Changes in the Number of Prescriptions per Person for New Entrants</td>
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<td>Changes in Days of Therapy for Established Drugs</td>
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<td>Changes in Days of Therapy for New Entrants</td>
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<tr>
<td>Patients per 1000 Health Plan Enrollees</td>
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<tr>
<td><strong>Growth Due to Price Factors</strong></td>
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<td>Inflation</td>
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<td>Changes in Mix of Established Drugs</td>
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<tr>
<td>Price of New Entrants</td>
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</tbody>
</table>

Source: Protocare Sciences managed care database
Seven million Americans experience limits on everyday activities like walking, dressing, and bathing due to arthritis.

A sequencing analysis was performed for seven types of arthritis therapy to examine the order in which the various drug therapy classes were used within the arthritis population. Sequencing was based on the date the first prescription was filled for each of the classes and therefore shows the therapies and therapy combinations used. Sequencing was performed for the calendar year 1999 using data from the 1997-1999 analysis, and separately for the first six months of 2000 using additional data.

In 1999:
• More than 34 percent of arthritis patients received non-selective NSAIDs as their initial therapy, and 30 percent of that group received no other arthritis-related therapy during the year.
• Only 1.6 percent of arthritis patients received COX-2s as initial therapy, and 40 percent of this group received no other arthritis-related therapy during the year.
• Seventy-three percent of arthritis patients received more than one type of arthritis-related therapy over the course of the calendar year.

During the first six months of 2000:
• Almost 39 percent of arthritis patients received non-selective NSAIDS as their initial therapy, and 56 percent of that group received no other arthritis-related therapy during the next six months.
• Only 5.1 percent of arthritis patients received COX-2s as initial therapy, and 53 percent of this group received no other arthritis-related therapy over the next six months.
• Seventy percent of arthritis patients received more than one type of arthritis-related therapy over the course of the six months.

References:


(continued on back panel)
The National Pharmaceutical Council (NPC) has sponsored and conducted scientific, evidence-based analyses of the appropriate use of pharmaceuticals and the clinical and economic value of pharmaceutical innovation. NPC provides educational resources to a variety of health care stakeholders, including patients, clinicians, payers and policy makers. More than 20 research-based pharmaceutical companies are members of the NPC.

Since 1953, the National Pharmaceutical Council has advocated for scientific research and for the rights of people with arthritis. To fulfill this mission, the Council publishes scientific findings, provides resources to a variety of health care professionals and the public and advocates for scientific research and for the rights of people with arthritis.

In 1993, the NPC and the Arthritis Foundation began a collaborative publication effort, "A Closer Look at Arthritis," which addressed many of the issues facing people with arthritis. The project was designed to provide health care professionals with up-to-date information on the most common and serious joint conditions, the latest research and treatments, and issues related to living with arthritis.

The NPC and the Foundation continue to work together to improve the lives of people with arthritis and to advance arthritis research. The NPC regularly shares information about arthritis with its members, including pharmaceutical companies, researchers, health care professionals and policy makers.

For more information about NPC or for additional resources, please contact:

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**REFERENCES**