The Economic Impact of Arthritis:
Medical Expenditures and Earnings Losses among US Adults with Arthritis in 2013

Louise Murphy PhD

CDC Arthritis Program
October 2, 2017

Introduction

- Economic impact demonstrates societal and personal consequences of a condition

- Last published national arthritis cost estimates - 2003
  - Numerous changes
    - Aging of population - ↑ number
    - Medical management of arthritis – for example, rheumatoid arthritis

- Study objectives
  - Calculate arthritis-attributable medical costs and earnings losses for 2013
Terms used in presentation

- Arthritis-attributable costs = costs due to arthritis
- Medical expenditures = medical costs
- Earnings losses = lost wages

Study methods

- Data source: 2013 Medical Expenditure Panel Survey (MEPS)
- Medical costs
  - All adults age 18 years and older
  - Type: ambulatory care, hospitalizations, medications, home care, emergency room visits, dental/vision, medical devices
- Lost wages
  - Adults with arthritis age 18-64 years who had ever worked
- Calculated arthritis-attributable costs using multi-stage multivariable regression models
How much were arthritis-attributable medical costs?

- In 2013, arthritis-attributable medical costs = $140 billion
  - In MEPS, 66 million US adults age ≥ 18 years reported arthritis
  - On average, medical costs per person due to arthritis = $2,117
  - Total medical costs = 66 million X $2,117 = $140 billion

What type of medical care had the highest costs?

- Ambulatory care: $65 billion
- Prescriptions: $31 billion
- Hospitalizations: $18 billion
- Other: $17 billion

Other includes emergency room visits, home health care, dental and vision care, and medical devices
What were arthritis-attributable earnings losses?

- In 2013, arthritis-attributable earnings losses = $164 billion
  - 40.5 million adults with arthritis age 18-64 years
  - On average, each adult with arthritis earned $4,040 less than an adult without arthritis
  - Total earnings losses = 40.5 million X $4,040 = $164 billion

Percentage of adults with and without arthritis working in the past year

- 77% with arthritis
- 84% without arthritis
Summary

- In 2013, total medical costs and earnings losses due to arthritis were $304 billion
  - Represented 1% of US gross domestic product in 2013

- Total earnings losses were slightly higher than medical costs
  - Personal impact of arthritis

Strategies to reduce arthritis economic impact

- Medical costs
  - Reduce pain and increase physical function
  - Interventions proven to reduce medical costs
    - CMS EnhanceFitness evaluation
      - $945 per person

- Earnings losses
  - Interventions to keep people in the work force
    - Accommodations
  - Access to medical care
  - Community-based interventions
Co-authors

- Miriam Cisternas MA, MGC Data Services
- David Pasta MS, ICON
- Chad Helmick MD, CDC Arthritis Program
- Ed Yelin PhD, University of California at San Francisco

Thank you

lmurphy1@cdc.gov
State cost estimates

- Currently available on the Chronic Disease Cost Calculator
  - Based on a slightly different definition of arthritis
    - Arthritis and other rheumatic conditions
  - Medical and absenteeism costs
  - Medical cost projections to 2020

- Arthritis program will be updating state cost estimates
  - Will use same arthritis definition as 2013 national study
  - Projected release – early 2019

Why have arthritis costs increased?

- Cannot compare directly with previous results
  - Different definition of arthritis
  - More contemporary statistical methods

- Decrease in average medical cost per person
  - Reported for many other conditions as well
  - Cost containment strategies

- Number of adults with arthritis increased from 2003 to 2013
  - Affects both medical costs and earnings losses