CDC’s Chronic Disease Cost Calculator

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Presentation

- Background
- How CDCC generates costs
- How do I interpret results?
- Examples of how to use results
- Resources
  - Includes recording of CDCC software demonstration
What is the CDCC?

- **State-specific estimates of economic burden of chronic diseases**
  - Consistent and rigorous statistical methods
  - Costs attributable to specific chronic diseases

- **Chronic diseases**
  - Arthritis
  - Asthma
  - Cancer
  - Cardiovascular diseases: congestive heart failure, coronary heart disease, hypertension, stroke, and other heart diseases
  - Depression
  - Diabetes

What does the CDCC report?

For each state:

- **Medical expenditures**
  - Total and for three payers (Medicaid, Medicare, and private insurers)
  - 10 year projected total expenditures

- **Absenteeism**
  - Work loss
    - Costs and number of days
Who developed the CDCC?

NCCDPHP Divisions:
- Cancer Prevention and Control — Florence Tangka and Don Ekwueme
- Community Health — Diane Orenstein (formerly DHDSP)
- Diabetes Translation — Rui Li
- Heart Disease and Stroke Prevention — Isaac Nwaise
- Population Health — Louise Murphy (Arthritis) and Dan Chapman (Depression)

National Center for Environmental Health
- Asthma: Tursynbek Nurmagambetov

External partners

- RTI
  - Olga Khavjou
  - Justin Trogdon (formerly)

- Agency for Healthcare Research and Quality
  - Steven Cohen and Trena Ezzati-Rice

- National Association of Chronic Disease Directors
  - John Robitscher and Chris Maylahn
Why was the CDCC developed?

• To inform program, policy, and budgets decisions

• Consistent data and methodology

• Opportunities for increased collaboration
  – Disease management, prevention, and wellness initiatives

• Appropriate tools to support CDC’s strategic priorities:
  – “Strengthening support for state, tribal, local, and territorial public health”
  – Surveillance portfolio using scientifically rigorous and consistent methods

How it generates costs

• Data
  – Medical Expenditure Panel Survey (MEPS) (2004-2008)
  – National Nursing Home Survey (NNHS)
    • Long term care population
  – Reported in 2010 dollars

• Regression models
  – Annual costs DUE to a specific condition
  – Methods were developed by national experts
  – Adjusts for variation in price across states
How it generates costs -- 2

**Step 1:**
Average cost per person due to condition

**Step 2:**
Number of people undergoing treatment for condition

**Step 3:**
Total costs = average cost per person X number of people undergoing treatment

Note: Number people treated ≠ BRFSS prevalence

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How do I interpret results?

**Scenario 1:**
Person has arthritis
Medical costs=$$$$

**Scenario 2:**
What if the same person didn’t have arthritis? or didn’t have symptoms?
Medical costs=$
How do I interpret results?

What are costs due to arthritis?

= scenario 1 costs - scenario 2 costs

= $$$$ - $

= $$$

Cost calculator output

8,173 million or 8.2 billion
1,122 million or 1.1 billion
Accessing the Cost Calculator

- Download the software:
  http://www.cdc.gov/chronicdisease/resources/calculator/

Your IT department...

- Needs more information
  - Specifications are at Cost Calculator home page

- Just says no
  - Request tables from Louise Murphy (alx2@cdc.gov) at CDC or Mari Brick at NACDD
Other Cost Calculator features

- State specific inputs
  - Medicaid and Medicare data for your state

- Costs if we reduced the disease prevalence?
  - Changing the cost curve
  - May be more realistic

Use 1: Fact sheets

- To demonstrate the high medical costs of arthritis
  - Medicaid and Medicare directors
  - Potential partners
    - Health systems
      - Private payer costs
  - Decision makers – NCSL
    - Total state costs
    - Absenteeism
Use 1: Fact sheet -- continued

- Complement data from CDC Arthritis Program standard tables
  - Includes: arthritis prevalence, activity limitations, work limitations

- Example from Kansas
Use 2: Building system partners

- **Entrée to discussion with potential partners**
  - Impact of absenteeism
    - Costs and days of work loss

- **Retaining employees**
  - People with arthritis comprise a sizeable proportion of workforce
  - Strategies to keep them in the workforce
    - For example, Walk with Ease
Use 3: Discussions with chronic disease partners

- Shared interest
  - Increase physical activity and weight management/reduction

- How can we work together to change the cost curve?

Examples from your state...

Questions?
Additional resources

- **Cost Calculator website**
  - Frequently asked questions
  - Technical Guide
  - User’s manual

- **Slides from this call**

- **Council of State and Territorial Epidemiologists’ webinar**
  http://www.cste.org/?page=WebinarLibrary