Medicare Cost Effects of Recent U.S. Disability Trends in the Elderly: Future Implications*

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Overview of presentation:

- Background
- Purpose of this presentation
- Data and methodologies
- Results
- Discussion
- Conclusions
Background:

- Disability rates are declining for the US elderly population
  - This trend has been supported using a number of different U.S. data sets

- Further analyses of the NLTCS from 1982-1999 indicate significant declines in more serious ADLs and institutional care, as well as IADL declines.
Trend of declines in disability and chronic diseases has been documented since the end of the US Civil War (1860s). (Fogel, Costa)

Declines in disability & chronic disease are partly due to improvements in nutrition, reductions in infections, and improvements in sanitation and health care over time.

However, this has lead to an increase in BMI (body mass index) over time.
Medicare Expenditures

Medicare is the health care system that covers practically all persons age 65+

- Part A: Covers hospitalization
- Part B: Covers MD visits and outpatient care
- Part C: Managed Care (HMOs)
- Part D: [New] will cover prescription drug costs.
Disability declines and Medicare expenditures:

- Manton and Gu (2005) found between 1982 and 1999:
  - disability declined
  - non-disabled group increased
  - Medicare costs (after inflation adjustment):
    - decreased per capita for non-disabled group
    - increased for the severely disabled and institutionalized groups
  - Net effect was a $26 billion savings in Medicare costs
Purpose of this presentation:

- To forecast Medicare costs for 2004 and 2009 based on past and current disability trends and Medicare costs.
Data: NLTCS files

- National Long Term Care Survey data
  - Respondents followed until death

- Based on list samples drawn from Medicare enrollment files
  - Nationally representative
  - Includes both community-dwelling and institutionalized elderly
Data: NLTCS additions

- Each wave includes a new sample of persons aged 65-69.

- Persons 95+ are oversampled to study health status changes in the oldest old:
  - 1994 (N=540)
  - 1999 (N=600)
  - 2004 (N=1,584)
Data: Medicare cost data


- Files include:
  - Exact date and costs of Medicare service use
  - ICD-9 diagnoses for service use and costs
27 Disability measures:

- Needing help with 6 ADLs
  - for health conditions lasting at least 90 days
- Needing help with 10 IADLs
  - for health conditions lasting at least 90 days
- 7 “Nagi” physical functioning limitations
- 4 Other physical and sensory limitations
ADL Disabilities:

- Eating
- Getting in/out of bed
- Inside mobility
- Dressing
- Bathing
- Using toilet
IADL Disabilities:

- Heavy housework
- Light housework
- Laundry
- Cooking
- Grocery shopping
- Outside mobility
- Traveling
- Managing money
- Taking medications
- Using telephone
Nagi physical limitations:

- Level of difficulty performing:
  - climbing one flight of stairs
  - bending to put on socks
  - holding 10 lb package
  - reaching over head
  - combing hair
  - washing hair
  - grasping small objects
Other disability measures:

- Bedfast
- No inside activity
- Uses wheelchair
- Seeing well enough to read a newspaper
Grade of Membership model:

- GoM model is used to estimate levels of disability
- GoM is a multidimensional clustering technique that is used to distinguish multiple latent classes
- It is based on fuzzy mathematics that allows disability measures to be associated with more than one latent class
GoM Results:

- 7 dimensions of disability:
  - Active (no disability problems)
  - Modest impairment (some difficulty with Nagi items)
  - Moderate impairment (greater difficulties with Nagi items)
  - IADL (no ADLs, needs help with most all IADLs)
  - ADL (needs help transferring, inside mobility, bathing and toileting)
  - Frail (serious problems with all 27 disabilities)
  - Institutionalized (in long term care facilities)
Projection of Medicare expenditures, 2004 & 2009:

- First, disability statuses in 2004 and 2009 were projected assuming the 1982 rate of disability.

- Second, disability statuses in 2004 and 2009 were projected assuming the 1982-1999 decline in rates of disability.
Projection of Medicare expenditures, 2004 & 2009 (cont.):

- For both sets of disability measures we projected Medicare expenditures for the disability groups based upon projected age and sex composition of the older population.
Results: Projected Medicare costs (Billions of US Dollars)

- 2004: 300.3 billion
- 2009: 431.2 billion

- 1982 disability rates held constant
- 1982-99 disability decline
Conclusions:

- If there had been no changes in 1982 disability rates:
  - 2004 Medicare costs are predicted to be $40 Billion higher
  - 2009 Medicare costs are predicted to be $63 Billion higher
Discussion:

- Factors that have affected disability trends
  - risk factors
  - changes in prevalence and management of chronic conditions
Discussion (cont):

- Factors that may affect future Medicare expenditures:
  - risk factors, e.g., obesity
  - changes in prevalence and management of chronic conditions
For more information and a copy of the paper:

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Thank You!