



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.

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- 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
 - True longitudinal study: 1982, 1984, 1989, 1994, and 1999 (2004 is almost completed)
 - 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

- Linked Medicare cost data for NLTCS respondents from 1982-2001.
- 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:

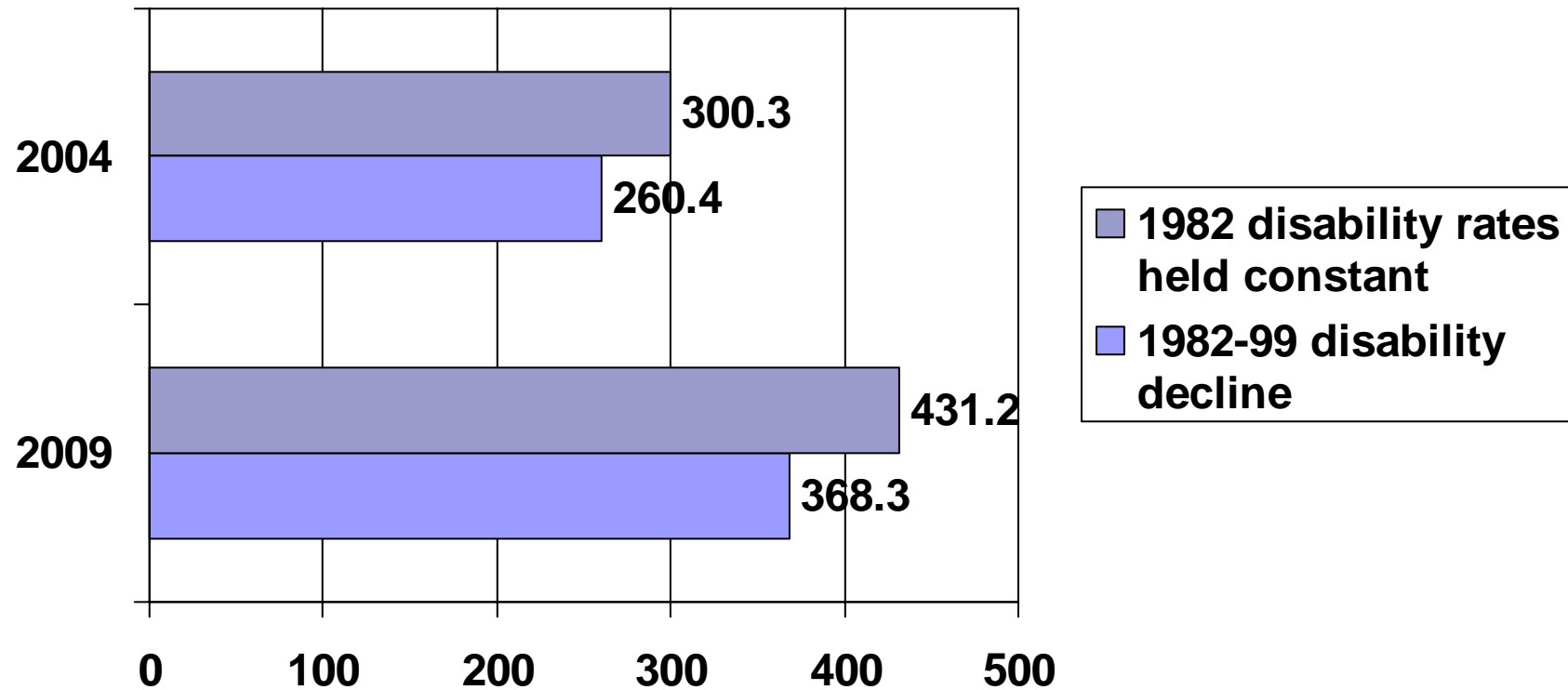
- First, disability statuses in 2004 and 2009 were projected assuming the **1982 rate** of disability.
- Second, disability statuses in 2004 and 2009 were projected assuming the **1982-1999 decline in rates** of disability.



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)





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
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Thank You!