Work Capacity and Health of Older Canadians

Tammy Schirle (Wilfrid Laurier University)
with Kevin Milligan (University of British Columbia)

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The authors

Kevin Milligan,
Vancouver School of Economics, UBC

Tammy Schirle,
Economics, Wilfrid Laurier University
Motivation

Life expectancy at birth

- Female
- Male

Allowance (60)
- 1975: 77.2
- 2011: 83.7

OAS (65) 1967
- 1951: 70.9
- 2011: 79.5

OAS (70,65)
- 1927: 60.0
- 1951: 66.4

OAP (70)
- 1921: 57.4

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Motivation

News Release

Budget 2016 announces restoring the age of eligibility for the Old Age Security pension from 67 to 65

April 19, 2016 Ottawa, ON Employment and Social Development Canada

The Honourable Jean-Yves Duclos, Minister of Families, Children and Social Development, today reaffirmed the Government of Canada’s commitment to help improve the quality of life for seniors through new investments announced in Budget 2016.

Budget 2016 makes the goal of a comfortable and dignified retirement more attainable for seniors and working Canadians through various measures, such as restoring the age of eligibility for the Old Age Security (OAS) pension and the Guaranteed Income Supplement (GIS) from 67 to 65. This change will put up to $17,000 into the pockets of the lowest income Canadians each year, as they become seniors.
Overview

What we see:
- Improvements in life expectancy, healthy life expectancy

What we ask:
- Is there capability to work longer?

What we do:
- Describe the capacity to work among older individuals
- Use mortality risk, health conditions, employment
Overview

Some findings:

- If working at same rate per unit of mortality risk as 1976, men (women) could work 5 (2) more years.
- Employment rate of men 60-64 could ↑ 29 pts.
Data for Analysis

Labour Force Survey (RDC)
- Age & sex specific employment rates
- Women - subsample worked since age 45
- Average usual hours worked

Canadian Human Mortality Database & StatCan lifetables
- Age & sex specific mortality rates 1976-2012

Canadian Community Health Survey
- 2001-2014 RDC files
- Employment status (worked or absent in week)
- Prevalence of health conditions, self-reported health, obesity, smoking
Employment Rates

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Mortality Rates
Mortality Rates

Life Expectancy

- Since 1965 life expectancy at 65 increased by 5 years
- OAS eligibility moved from age 70 to age 65
  ⇒ 10 more year of OAS

Discussion

- Trends - no slowdown
  - Driving past trends: smoking cessation, heart health
  - Future: obesity vs. medical technology
- Socioeconomic status
  - Evidence of SES gradients to mortality (Wolfson et al. 1993; Mustard et al. 2013)
- Health life expectancy?
Mortality Rates

Mortality as an indicator of health?

Disadvantages:
- Very coarse measure of health.
- Takes extreme view on health lifespan debate.

Advantages:
- Easy to measure
  - centuries of data available—not true for health surveys.
- Internationally comparable.
- Not subjective.
The Employment-Mortality Relationship

Map the evolution of the employment-mortality relationship
- Scatterplot - Age specific employment and mortality rates
- Relationship changes over time
- Compare employment rates for a given level of mortality risk

Sum of gaps = 5 years
Employment-Mortality, Female, 1976 & 2012

Sum of gaps = 2 years

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Hours-Mortality, Female, Male, 1976 & 2012

Men 85%, Women 35% higher hours
Potential years of work

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Potential years of work

- Through 1970s and 1980s, men’s mortality was improving and men were working less at older ages
  ⇒ Large rise to unused work capacity.
- Since 1995, men’s employment increases have offset mortality improvements
  ⇒ No further deterioration in unused work capacity.
- For women, since 1990 the work gains have offset the mortality gains.
Potential years of work (Male, ON, 2000s)
Empirical Strategy

Canadian Community Health Survey 2001-2014

- Estimate relationship between employment and health indicators
- Sample: 50-54 year old men or women
- What if older groups had the same employment-health relationship?
- Simulate older group’s employment
Empirical Strategy

Sample: 50-54 year olds

Employed_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \epsilon_{it}

1. prevalence of health conditions, smoking, obesity, number of conditions
2. self-assessed health (poor-excellent)
3. education, marital status, race, immigrant, region, year indicators

Predict employment rates of men and women at older ages
Simulation results: capacity to work

A. Men (Men Reference)

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<th>Age Group</th>
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<td>55-59</td>
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21/24
Simulation: Ontario Men reference group

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Used capacity

Unused capacity

Atlantic

Quebec

Ontario

Prairies

BC

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Work Capacity and Health of Older Canadians 22/24
Key Results

Substantial health capacity to work among older men and women in Canada

- Men 55-69 could work 5 more years
- Women 55-69 could work 2-5 more years
- Employment rates of men 60-64 could be 29 ppts higher, women 43 ppts.
Key Results

Caveats:

- True ability to work unobservable
- Health measures may understate severity of health conditions
- Estimates of capacity depend on reference group
- Estimates do not speak to opportunities for employment, heterogeneity, or whether people *should* work more