Population aging and fiscal sustainability

– The intersection of retirement income adequacy and health care costs associated with disability –

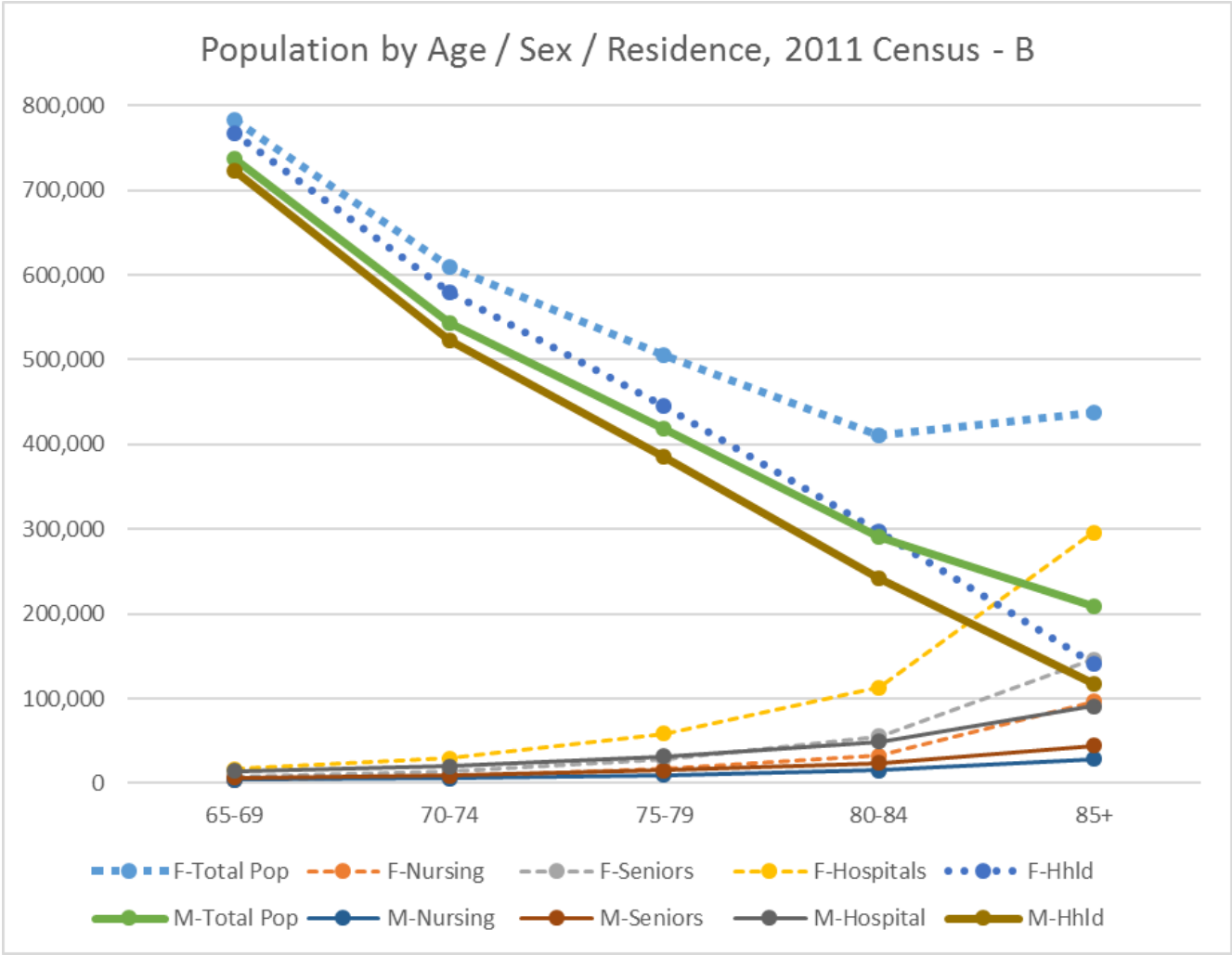**By Michael Wolfson and Bonnie-Jeanne MacDonald**

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Prepared for the IARIW General Conference – August 2016
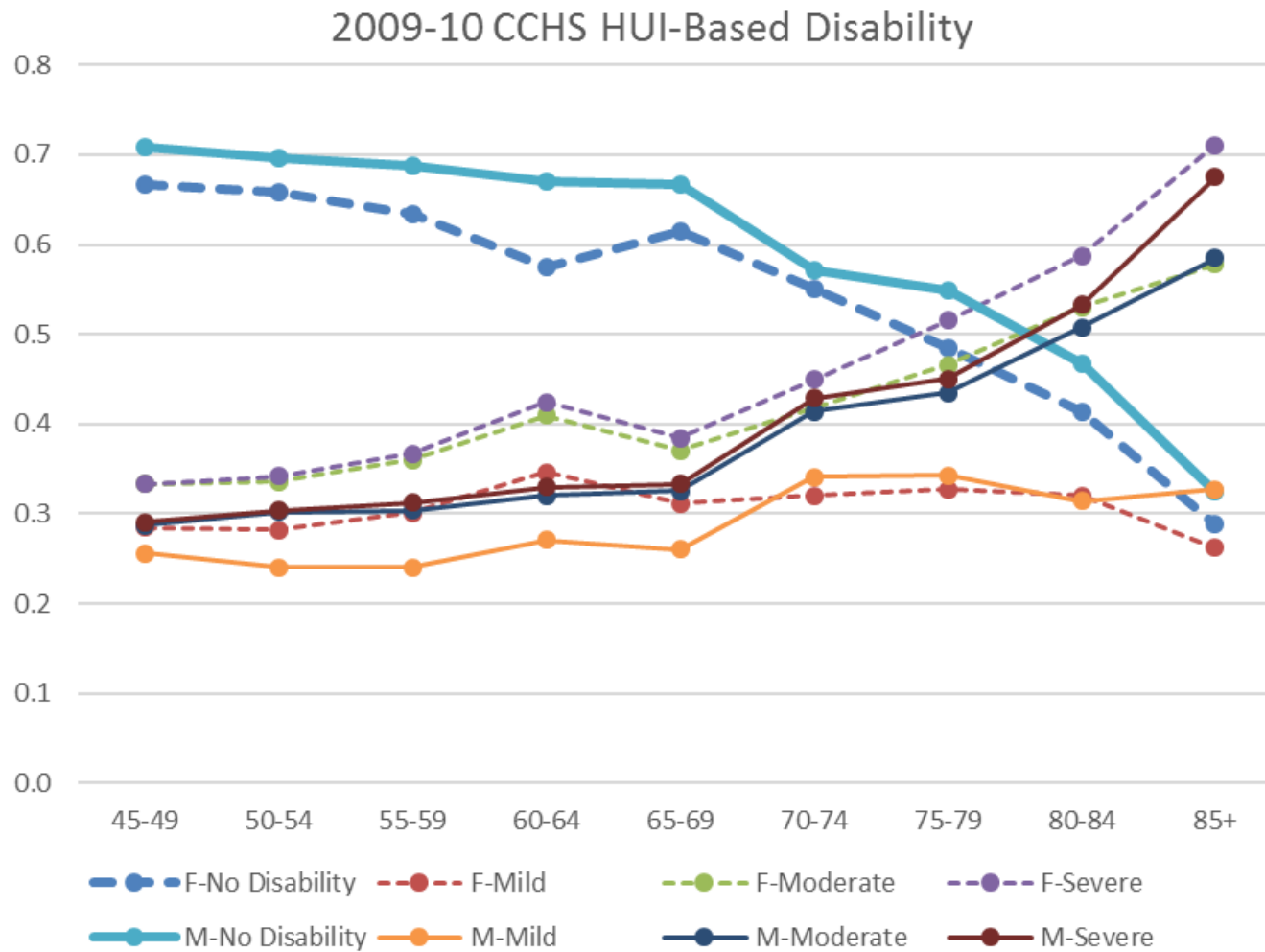
Introduction

- Debates in Canada focus on adequacy of pensions and fiscal sustainability of pension and health care costs
  - Yet, long term care (LTC) costs are currently not systematically covered under a public insurance scheme and they are expected to increase in the future => increasing burdens for informal caregivers and larger out of pocket costs
- This paper projects the effects of LTC costs on the adequacy of retirement income and discusses options for reform
  - Microsimulation
  - Disclaimer authors: first draft!

As of age 70, residence in senior residences, nursing homes & hospitals rises

Census (2011)

As of age 65-69, the prevalence of moderate & severe disability rises

2009-10 CCHS HUI-Based Disability

Legend: F-No Disability, F-Mild, F-Moderate, F-Severe, M-No Disability, M-Mild, M-Moderate, M-Severe

Canadian Community Health Survey (CCHS), 2009/10

Methodology

- Definitions
  - Residence can be home, senior residence, nursing home, hospital
  - Disability scores based on 4 functional health domains (none, mild, moderate, severe)
  - Long term care (LTC) comprises both health and social services, simulations based on # of bed days of institutional care & hours of home care
  - Income adequacy: net replacement rates (net RR) using consumable income, prime age earnings (age 40-65), retirement income (at age 70 & 85), middle 50% earners
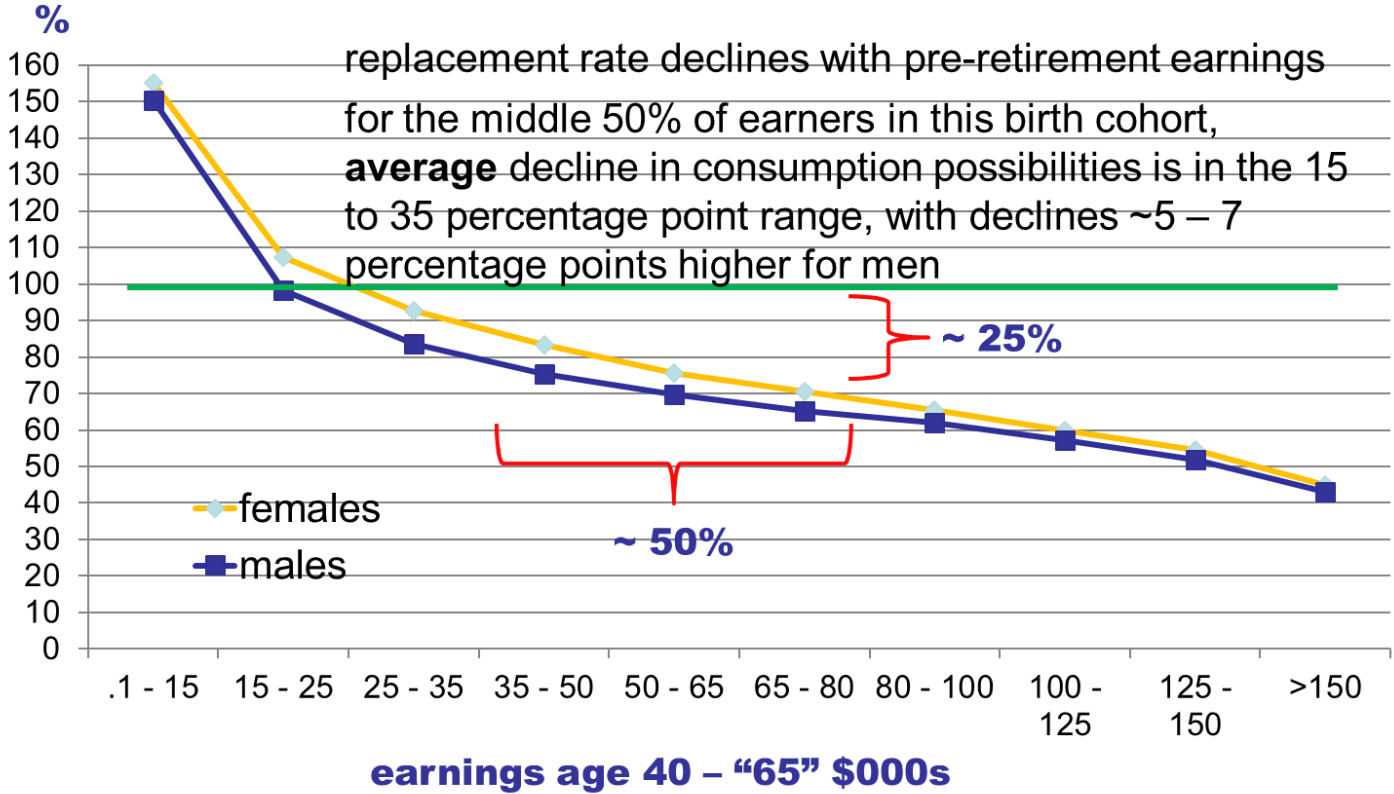- Data & models
  - Census data to construct scenarios for current residence distributions
  - CCHS data to project disability by severity
  - Ontario inter-RAI data (administrative) on home care use to construct LTC needs
  - Statistics Canada LifePaths model to simulate adequacy of retirement income

Projecting Net RR's – lots of consequential choices…

Sex, birth cohort, indexation, age range for pre & post retirement earnings, depletion home equity, pre-retirement earnings group

Average Net Replacement Rates by Prime Age Earnings – Main Result (1960-65 cohort)

replacement rate declines with pre-retirement earnings for the middle 50% of earners in this birth cohort, **average** decline in consumption possibilities is in the 15 to 35 percentage point range, with declines ~5 – 7 percentage points higher for men

~ 25%

~ 50%

females

males

earnings age 40 – "65" $000s

Statistics Canada, LifePaths model

Projecting disability prevalence – lots of consequential choices...

Future morbidity trends, distribution over residences, disability & residence transition dynamics

Table 2 – Estimated Overall Population Distribution of Disability

		none	mild	moderate	severe
65-69	Female	66.3	28.2	4.8	0.7
70-74	Female	65.1	27.5	5.3	2.1
75-79	Female	61.9	28.4	5.6	4.1
80-84	Female	54.9	29.9	5.5	9.7
85+	Female	50.7	20.7	4.1	24.5
65-69	Male	70.5	25.4	3.2	1.0
70-74	Male	68.9	23.6	6.0	1.4
75-79	Male	67.3	23.2	6.1	3.4
80-84	Male	64.2	24.8	4.6	6.3
85+	Male	58.9	20.4	5.3	15.4

Statistics Canada, LifePaths model

Projecting LTC resource use – lots of consequential choices…
Assumptions distribution home care hours, costs of services

Table 5 – Home Care Services Utilization Distributions

| | | Middle 50% | | | |
| | | seniors | home | seniors | home |
age group	disability level	females	females	males	males
65-70	severe	5.1	4.9	4.9	5.8
	moderate	2.3	2.9	2.3	3.2
	mild	2.0	2.1	2.1	1.8
70-75	severe	5.9	5.5	6.1	6.1
	moderate	3.9	2.9	4.6	2.8
	mild	1.7	1.9	2.2	1.6
75-80	severe	6.7	5.8	9.0	6.7
	moderate	2.8	2.8	3.5	2.9
	mild	2.3	1.8	5.7	1.8

Results – Net replacement rates before and after including projected LTC

Net RR	M-before LTC 70	M-after LTC 70	F-before LTC 70	F-after LTC 70
<.5	8.6	11.4	10.5	17.4
.5 - .8	51.4	48.6	47.7	44.2
.8 - 1.0	27.1	27.1	19.8	17.4
>1.0	12.9	12.9	22.1	20.9

Net RR	M-before LTC 85	M-after LTC 85	F-before LTC 85	F-after LTC 85
<.5	26.5	34.7	25.0	44.1
.5 - .8	57.1	59.2	51.5	38.2
.8 - 1.0	16.3	6.1	14.7	13.2
>1.0	0.0	0.0	8.8	4.4

Very scary

Conclusion

- Inclusion of LTC costs significantly affects adequacy of retirement income but those needing it are nowhere near a majority of the population

- Social insurance can thus play an important role in dealing with the risk of high LTC costs

- Many more analyses planned….

Discussion

Discussion

- To do list authors is long & makes sense. Some additions…
- Pension adequacy
  - Alternative benchmark: pre-retirement income ⇔ poverty line
  - Distribution: middle 50% ⇔ other quantiles
- "We describe several reform options"
  - Too much?
  - i.e. Germany's long term care insurance
- Connection to academic literature / international practices
  - Conceptual & methodological choices? Innovations?
- Small stuff