How can primary care impact healthcare trajectories of older persons with dementia ?

Isabelle Vedel, Claire Godard-Sebillotte, Nadia Sourial

and all ROSA team's members

Grand round– February 22nd, 2022

Research Team on
Organization of Healthcare
Services for **A**lzheimer's

Équipe de **R**echerche en
Organisation des **S**ervices sur
l'**A**lzheimer

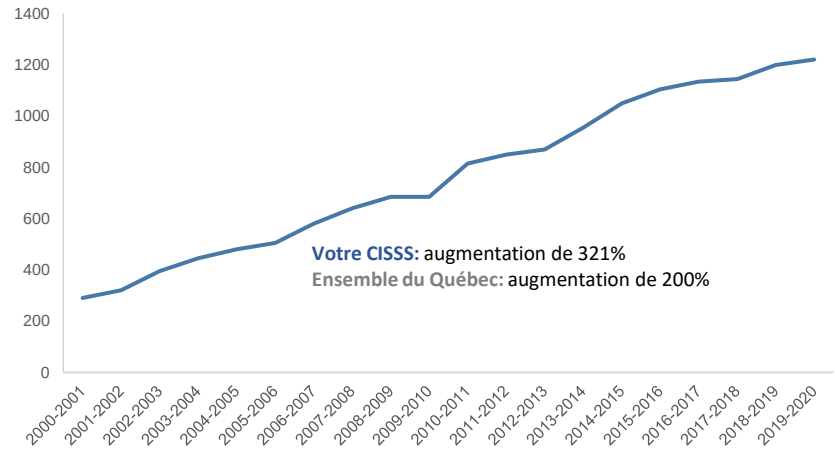
Outline

- Background
  - Challenges in health and social care for persons living with dementia and their caregivers
  - ROSA team
- Part 1: Continuity of care with a family doctor
- Part 2: Interprofessional primary care
- Conclusion and future work

Context

- In 15 years, 1 in 4 Canadians will be 65 years or older
- Health and social care systems, need to adapt
  - to be able to provide adequate services and meet the care needs of older adults in a patient-centred, appropriate, efficient, and equitable way.

- Example: persons living with dementia
  - Growing prevalence
  - 1 out of 5 baby boomer



What is Dementia?

- Dementia is a group of conditions that share a common set of symptoms (e.g., changes in memory, judgment, behaviour)

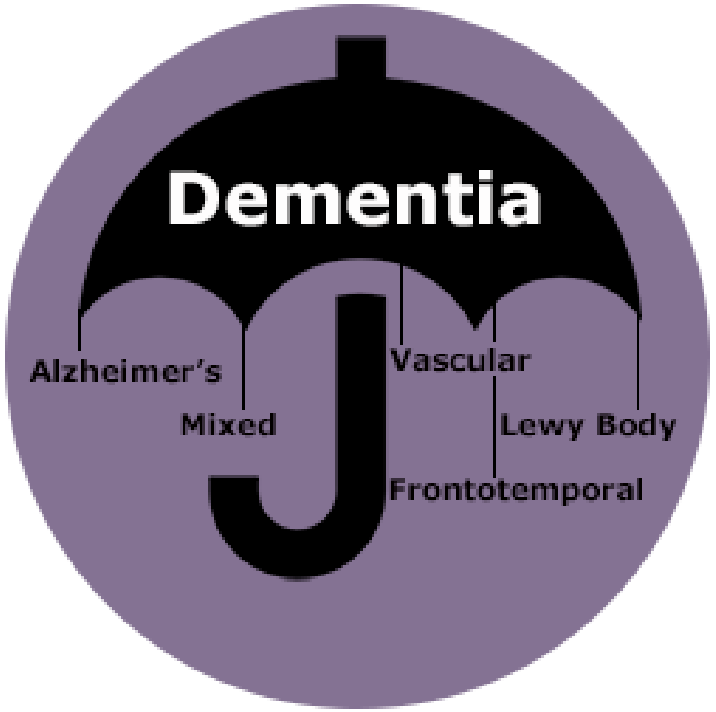


Image from the Government of Canada

- Alzheimer's disease is the most common type of dementia; examples of other types include: vascular dementia, Lewy-body dementia, and mixed dementia

What is Dementia?

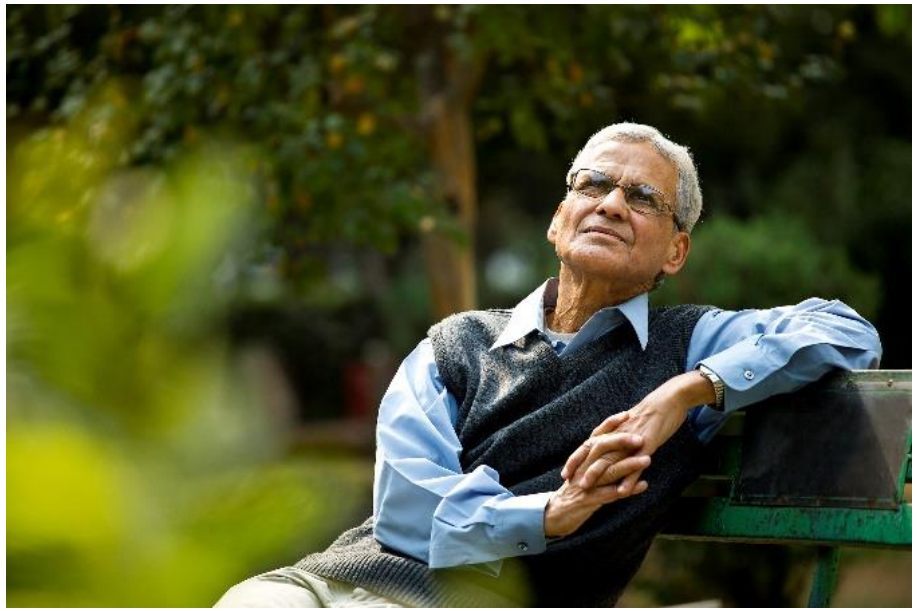
- While there is no cure, there are things that can be done to support a person with dementia to access appropriate services on time and to live well

Challenges in health and social care for persons living with dementia and their caregiver (1)

- Detection, diagnosis, treatment are sub-optimal
- When a diagnosis of dementia is made, people living with dementia & family care partners have shared:
  - Not often given a sense of hope about living with dementia
  - More supports are needed following diagnosis
- It can be difficult for health care providers to share a diagnosis of dementia, to refer to appropriate services

Challenges in health and social care for persons living with dementia and their caregiver (2)

- Fragmented care, frequent transitions and inadequate quality of care
- PLWD use twice the hospital services as other – many ED visits and hospitalization could be avoided / prevented



Optimal organization of health care systems for people living with dementia is a priority (WHO, ADI)

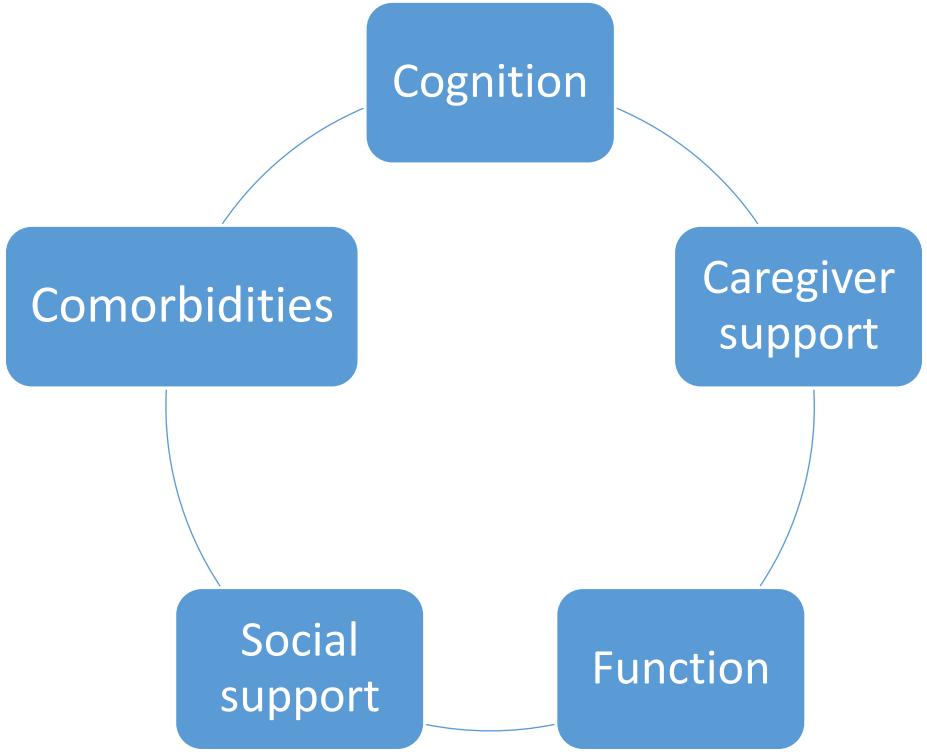
How can primary care help ?

Why primary care is seen as the way forward

- Point of first contact
- >90% of patient-MD contacts occur in primary care
- Longitudinal experience with patient and family
- Person-centered rather than disease-centered
- Best trained and equipped to deal with chronic disease and complex patients in the community
- Will never be enough specialists

Primary as the way forward for persons living with dementia

- Persons with dementia present with a **wide range of needs - 3+ co-morbidities**
- Management of dementia relies less on medication and more on the **integration of non-pharmacologic therapies** from a wide range of healthcare providers
- Ideally positioned for the **early detection, diagnosis and person-centered management** of dementia



Équipe de Recherche
ROSA
Research Team

Research Team on
Organization of
Healthcare **S**ervices for
Alzheimer's

Équipe de **R**echerche
en **O**rganisation des
Services sur l'**A**lzheimer

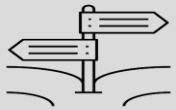
Our team’s general objectives

- Evaluate the implementation and effects of **public policies** and the **organization** of health services for people living with dementia (in Quebec, en Ontario, New-Brunswick, Alberta, Saskatchewan) and internationaly.

- Produce quick and relevant results for **action**

Our objectives for next 3 years

DECISION



- Understand how primary care help

ACCESS AND CONTINUITY

- Assess direct and indirect impact of COVID-19

COVID

- Learning Health and Social care System

EVALUATION

- Develop practical tools for PLWD, care partners, and health and social care providers

FORWARD WITH DEMENTIA

- Develop and evaluate multi-domain intervention

DELIGHT

Researchers with links to decision-makers and managers, clinicians, persons living with dementia (PLWD) and caregivers/care partners

11 principal investigators

- **50** researchers total

16 PLWD and care partners (co-researchers)

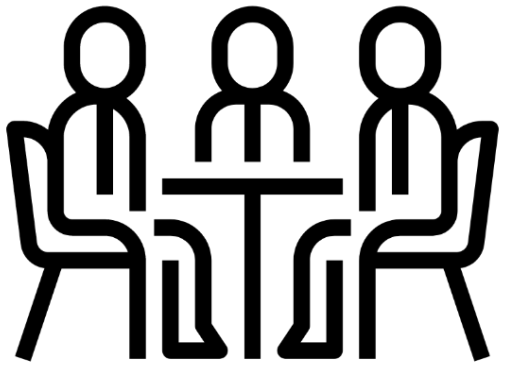
22 students (**9** PhD candidates)

22 highly qualified professionels

Partners including

- PLWD and care partners
- Alzheimer Societies
- Ministries of Health and Social Services
- Dementia Advocacy Canada
- College of Family Physicians of Canada

Engaging PLWD and care partners



- **From development of research questions to writing articles**
- **Our partners:**
  - 3 PLWD
  - 13 care partners
- **Diversity:**
  - Rural/urban
  - Racialized
  - Provinces: anglophone/francophone
  - Living and the community/in long-term care facilities
- **Individual and group orientation sessions**
- **Participate in all research meetings**

Our Network

International comittee
- 9 countries

International Research Project
- Australia, Canada, UK, Netherlands, Poland

JPND research
EU Joint Programme – Neurodegenerative Disease Research

National Strategy
- Health Science Academy

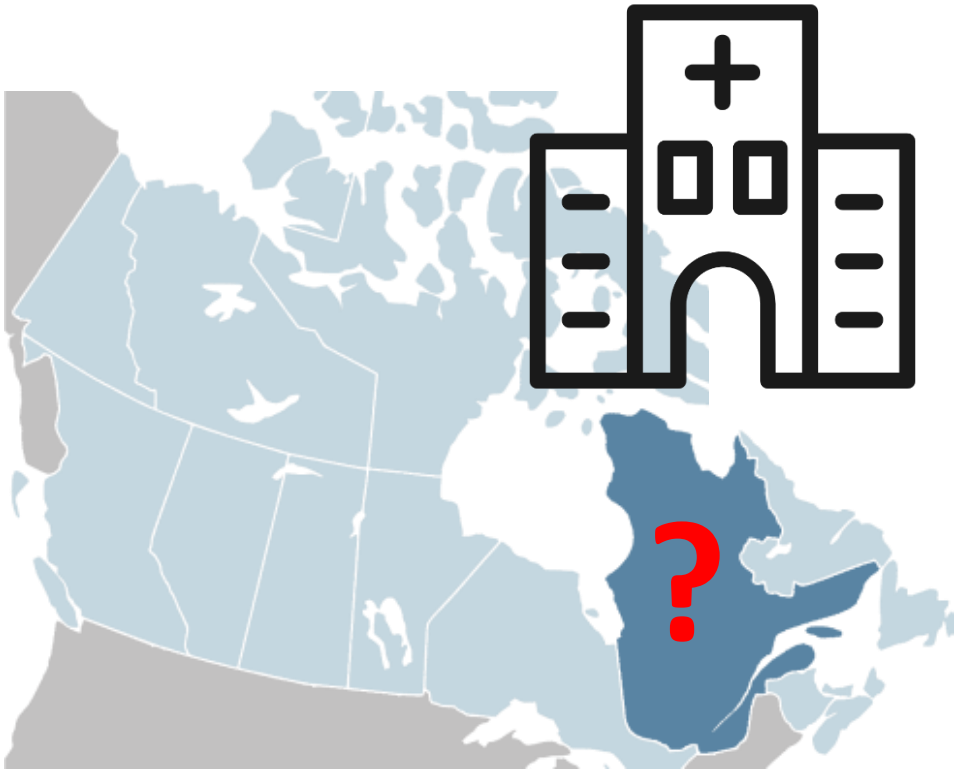
Canadian Consensus Conference
on the diagnosis and treatment of dementia


Juliette Champoux-Pellegrin
Genevieve
Mary Henein
Hao
Claire Godard-Sebillotte
Laura Rojas-Rozo
Eva
Marine Hardoun
Melanie
Understanding barriers and facilitators to case management in primary care
A systematic review and thematic synthesis
Matthew Hacker Tegart BA MSc
MACIO Annual Meeting
17 November 2019
Primary Health Care Management of Dementia in Ontario
INTRODUCTION
RESULTS
CONCLUSIONS
NEXT STEPS
Genevieve Arsenault-Lapierre
Family Medicine Groups:
Quebec Alzheimer's Plan
McGill
Department of Family Medicine
Département de médecine de famille
4. Preliminary Results
Eva Margo-Dermer
TEAM VEDEL
Key Primary Care Organizational Factors of Dementia Initiatives in Three Canadian Provinces
INTRODUCTION
CONCLUSION
McGill
Workshop
Isabelle Vedel, Dr.
Juliette
Vladimir
Zigue
Laura Rojas-Rozo
Anais Payen
Isabelle Dufour
Marwa Ilali
Geneviève Arsenault-L...
Georgia Hacker
Claire Godard-Sebillotte
Maxime Guillette
CATHERINE RICHER
Tammy
Howard Bergman, Dr.
Mary Henein

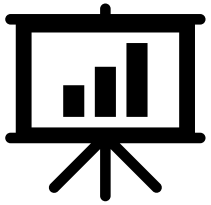
Hospital use

High hospital use

- 2 x hospital use
- 20% avoidable



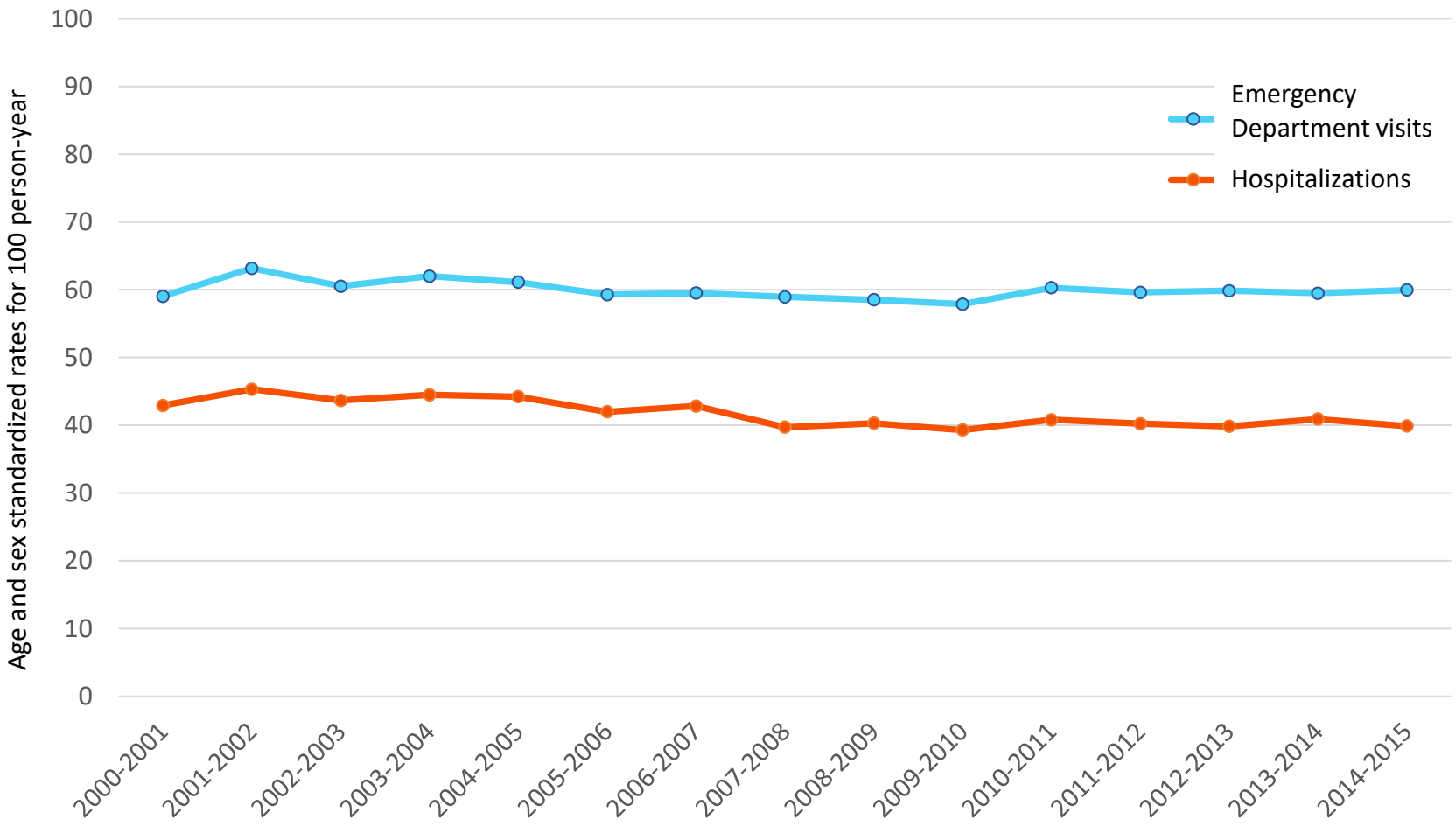
Avoidable hospital use in Quebec?



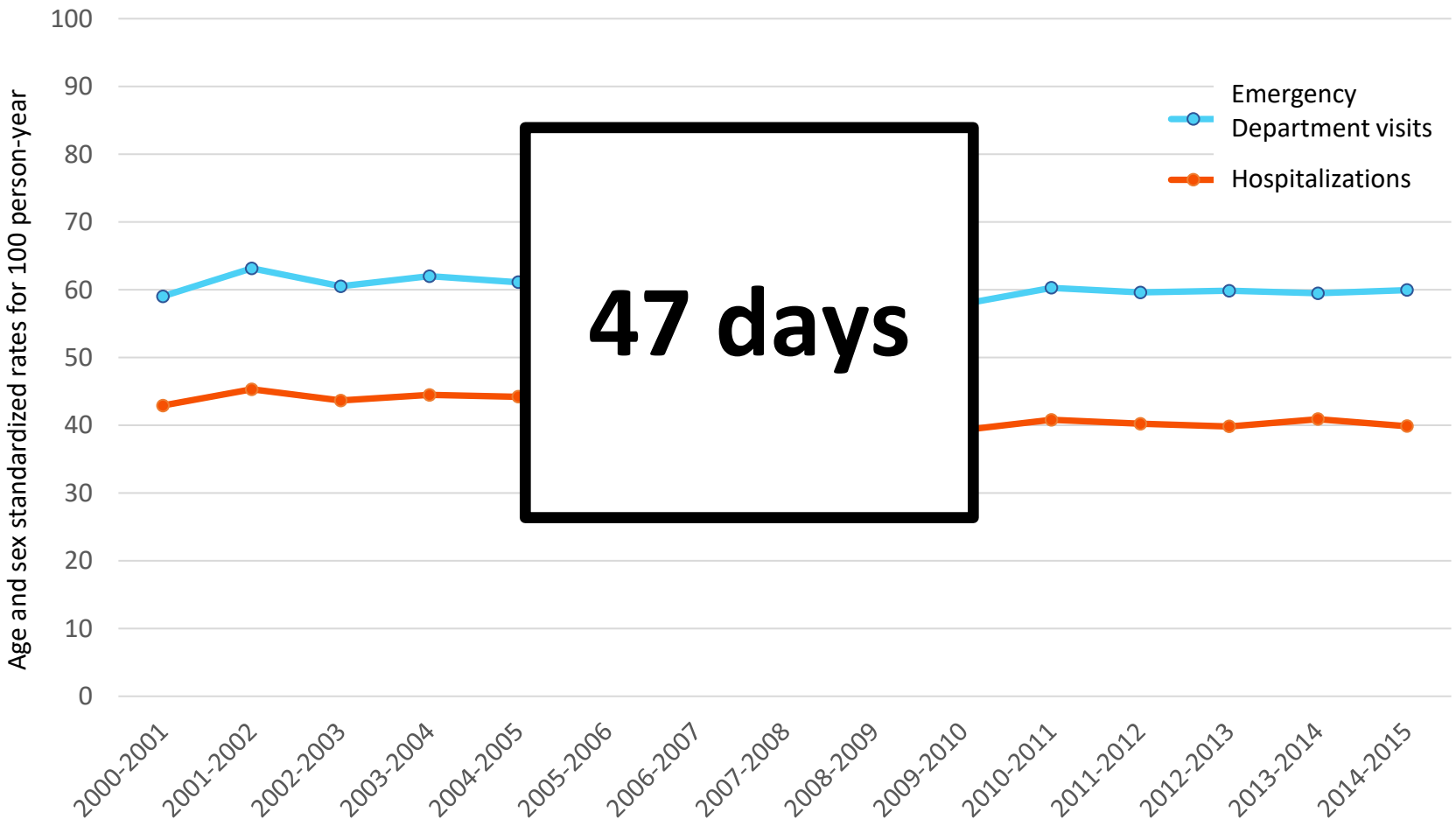
Methods & Results

- *Design*: Repeated yearly cohort (2000-2015)
- *Population*: 192,144 community-dwelling persons with incident dementia Quebec
- Outcomes: Avoidable hospitalization
  - Ambulatory Care Sensitive Condition (ACSC)
    - General population definition
    - Older population definition
  - Alternate Level of Care hospitalization
  - 30-day readmission

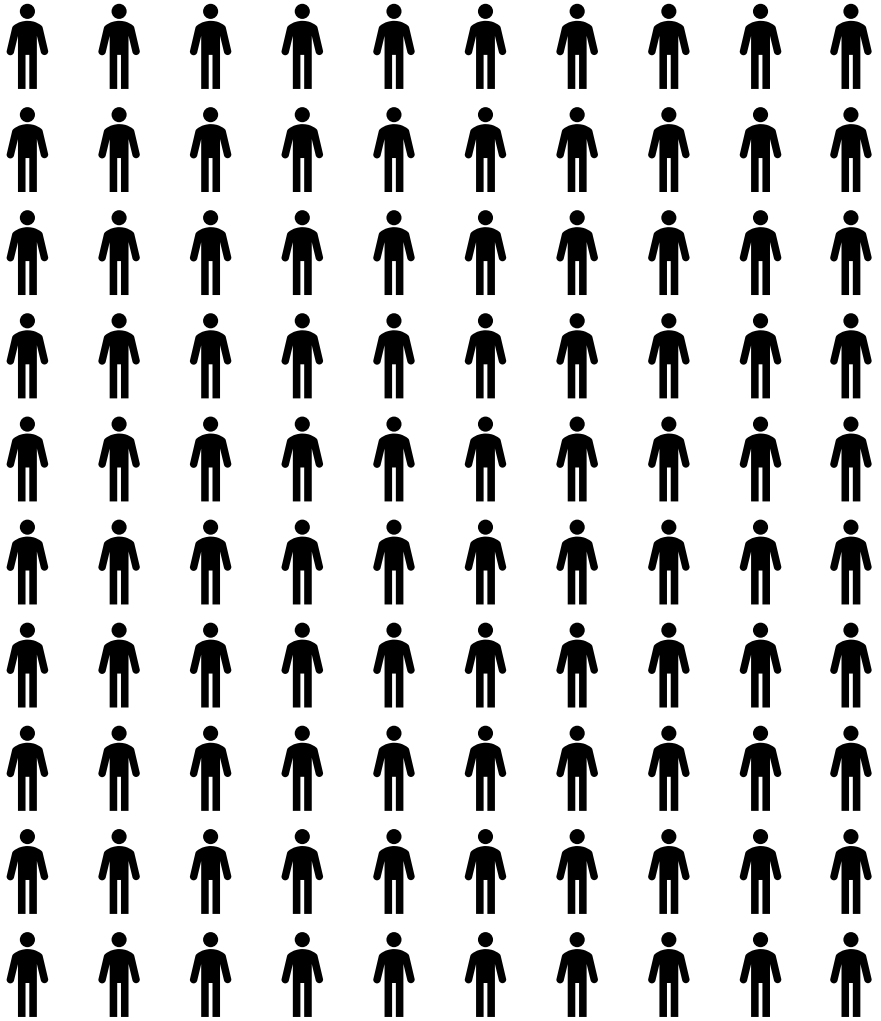
At least one hospital use



At least one hospital use

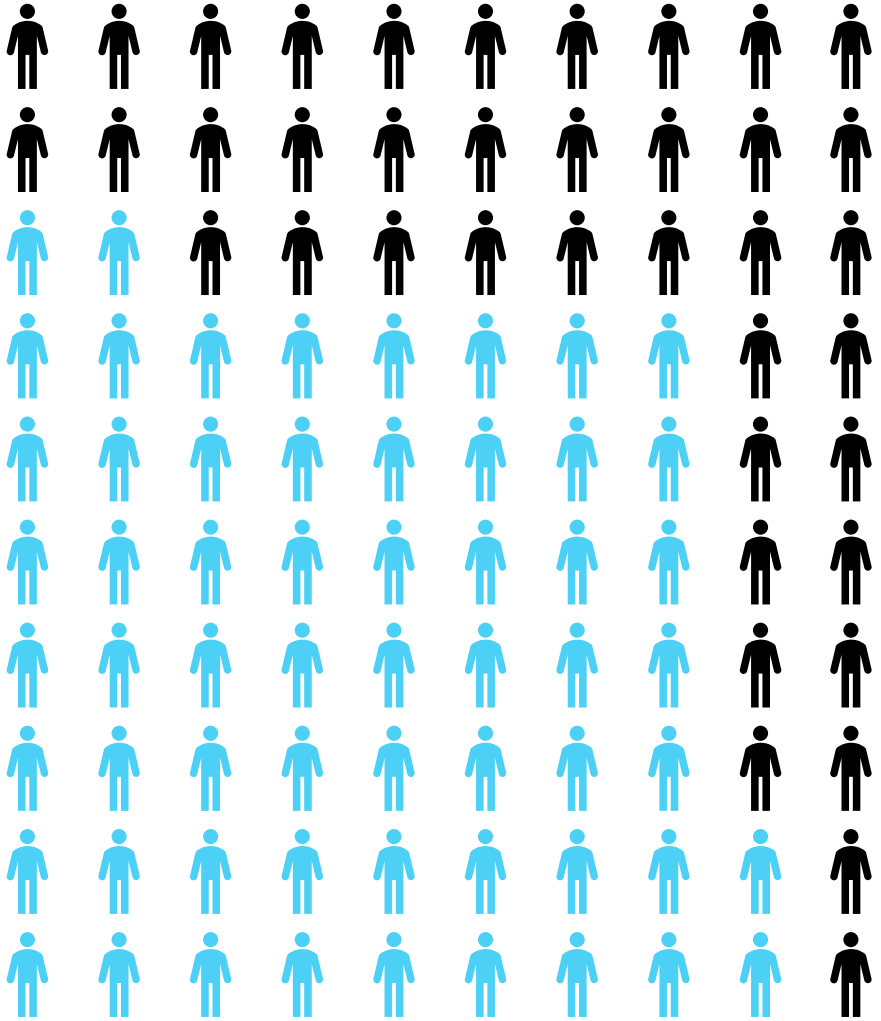


At least one hospital use



At least one ED visit

60/100



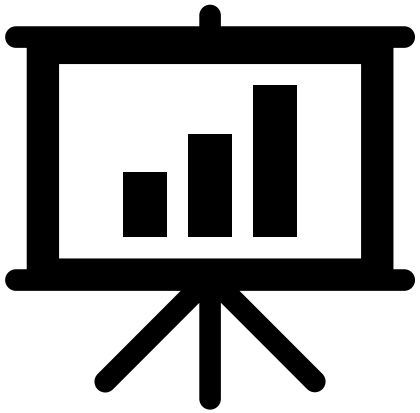
At least one hospitalization

40/100

At least one avoidable hospitalization

25%

Key points

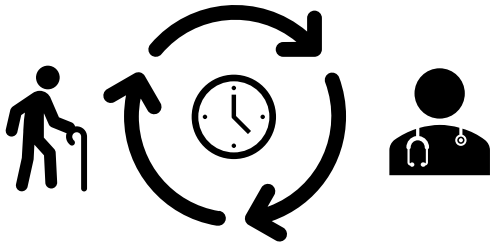


Conclusion

- High hospital use
- High avoidable hospital use
- Lack of improvement over the years

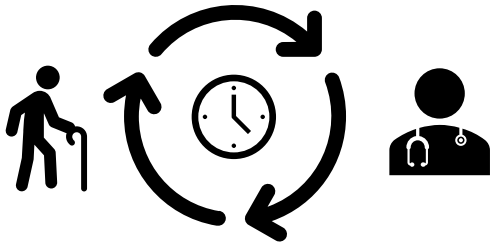
Original contribution

- Comprehensive measure of prevalence and trends of avoidable hospital use in community-dwelling persons with dementia in Quebec
- Development of the Qc surveillance system of dementia(4 new indicators)



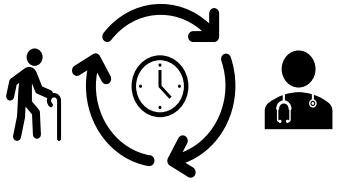
Impact of primary care continuity

Primary care continuity



To see one's Family Physician regularly and when needed

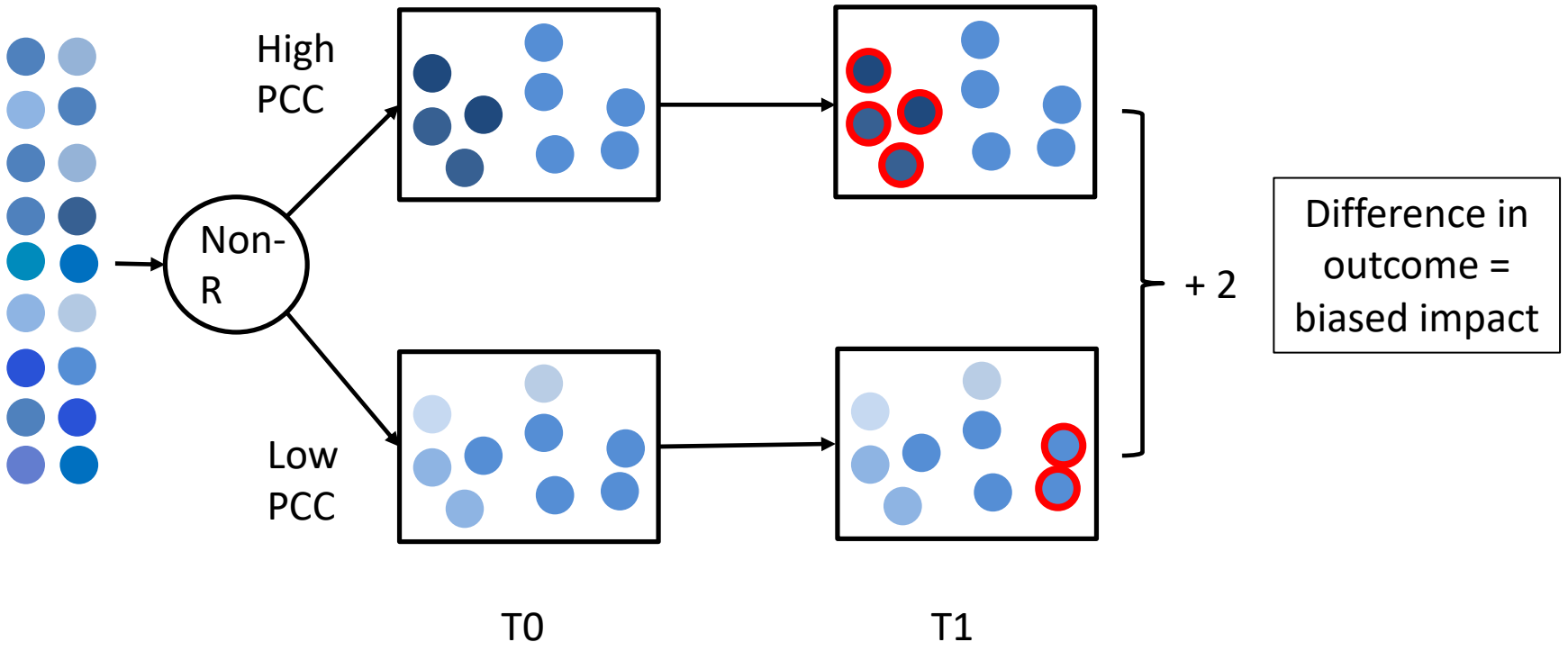
Primary care continuity impact?



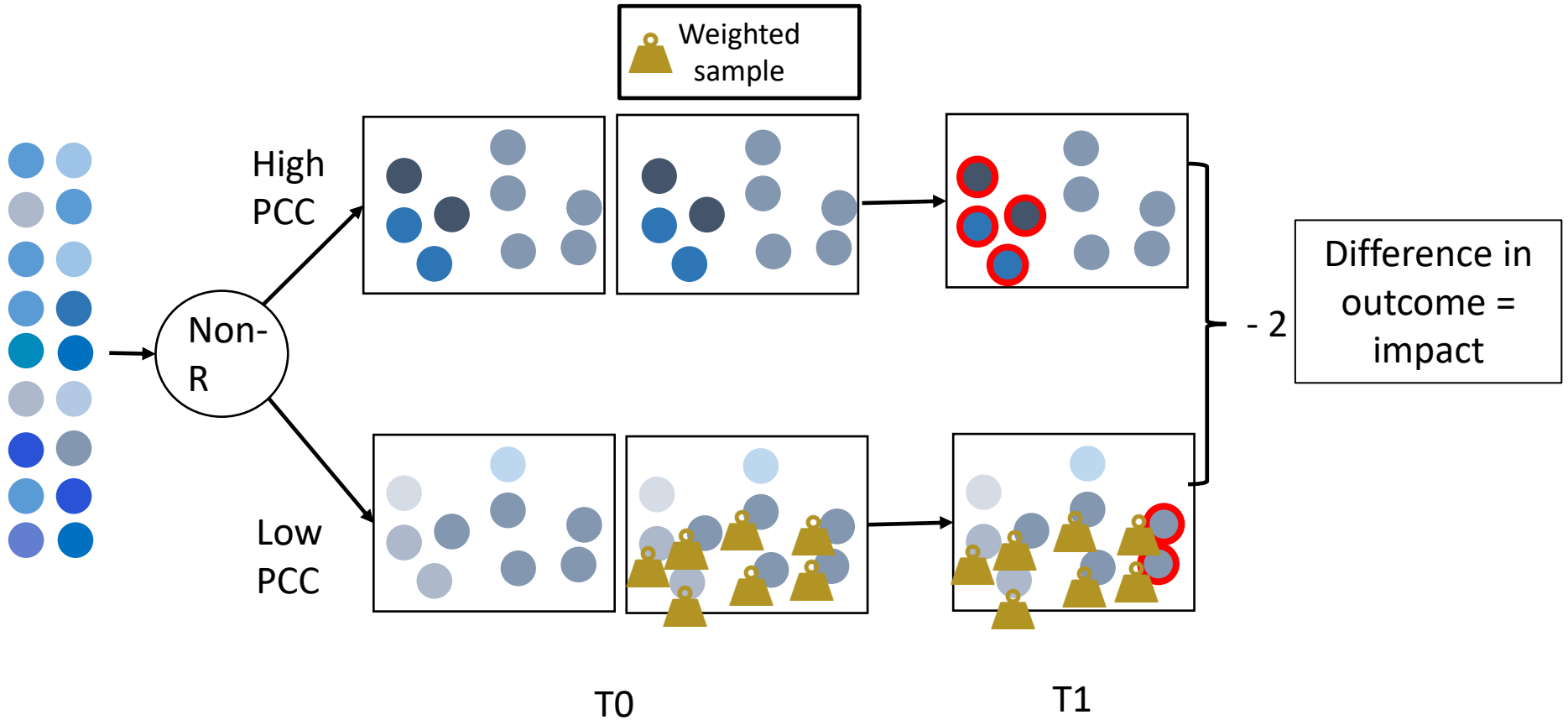
Methods

- Observational cohort (2012-2016) using inverse probability of treatment weighting using the propensity score
- 22,060 persons
- 66% high primary care continuity
- Outcomes: Avoidable hospitalization
  - Ambulatory Care Sensitive Condition (ACSC)
    - General population definition
    - Older population definition
  - 30-day readmission

Non-randomized intervention



Non-randomized intervention



Number needed to treat

23

Number needed to treat

23

Number needed to treat

23 

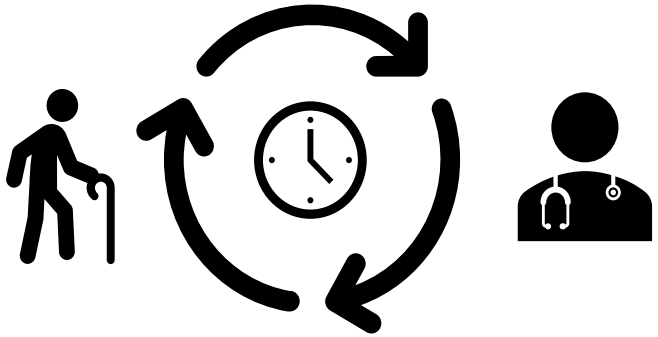
30 

Number needed to treat

23

30

Key points



Conclusion

- Negative, large, and statistically significant association between primary care continuity and hospital use

Original contribution

- Robust estimation of an association between high primary care continuity and potentially avoidable hospital use
- Use of methods allowing strengthening causal inference (causal inference, target trial, quantitative bias analysis)

Impact of interprofessional primary care

Objective

- Compare interdisciplinary versus non-interdisciplinary primary care on health service use for persons with dementia in Ontario

Interdisciplinary primary care (IPC) group

vs

Non-interdisciplinary primary care (Non-IPC) group

Methods

- Health administrative data from ICES
- Repeated, yearly, independent cohorts, from 2002 to 2014
- > 318,000 community-dwelling persons newly identified with dementia
  - ~ 60% women in each cohort
- Comparison of two primary care models:
  - IPC = Family Health Teams

  VS
  - Non-IPC = Family Health Organizations

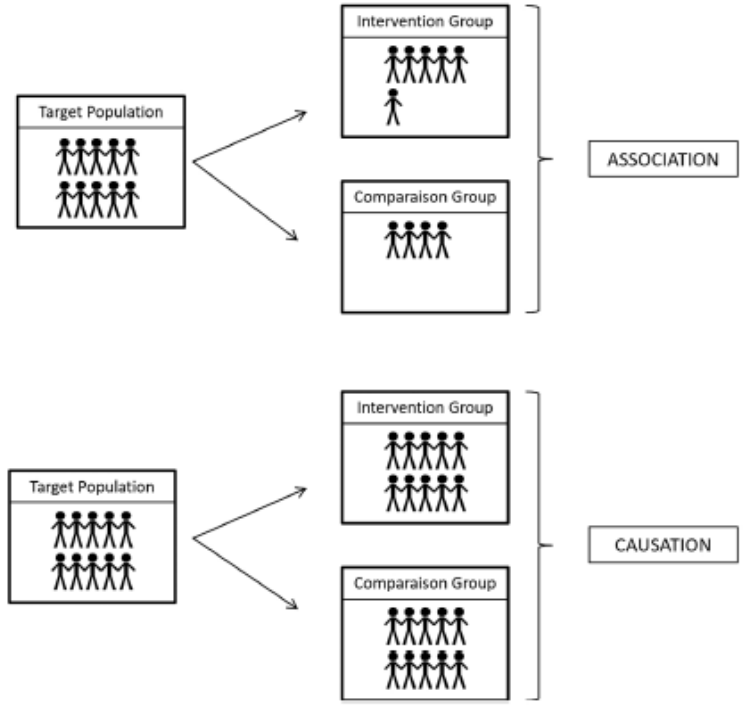
Outcomes

- **Primary outcome**: At least 1 emergency department (ED) visit in the year following the index date of dementia

- Secondary outcomes:
  - Non-urgent ED visit
  - Hospitalization
  - Potentially avoidable hospitalization
  - 30-day readmission

Analysis

- Inverse-probability weighting to balance confounders



Sourial et al, Family Practice 2018

Analysis

- Inverse-probability weighting to balance confounders
- Sensitivity analyses:
  - Stratification by rurality
    - Moderating effect
  - Propensity-score calibration
    - Augmented set of confounders
  - E-value
    - Sensitivity to unmeasured confounding

Sourial et al, Family Practice 2018

Comparison of interdisciplinary (IPC) vs non-interdisciplinary primary care (non-IPC) on ED and hospital use

Outcomes	IPC group (N=46,829)	Non-IPC group (N=48,499)	Risk difference (IPC vs non-IPC) [95% CI]	Relative risk (IPC vs non-IPC) (95% CI)
Any ED visit	32.9%	31.9%	+1.0% [+0.4%, +1.6%]	1.03 [1.01, 1.05]
Non-urgent ED	9.0%	7.3%	+1.7% [+1.3%, +2.0%]	1.22 [1.18, 1.28]
Hospitalization	16.9%	16.4%	+0.5% [0%, +1.0%]	1.03 [1.00, 1.06]
Avoidable hospitalization	1.3%	1.2%	+0.1% [0%, +0.3%]	1.09 [0.97, 1.22]
30-day readmission	13.2%	13.3%	-0.1% [-1.1%, +1.0%]	0.99 [0.92, 1.08]

Conclusions:

- No decrease in overall ED visits
- Potential increase in non-urgent ED visits
- Why?
  - May point to need for **more targeted efforts** to affect change and curb avoidable health service use
  - A **better understanding of reasons and pathways to health service use** is needed
    - Could interprofessional primary care lead to **better awareness** of symptoms or **worsening fragmentation** of care?

Conclusion (1)

- Pan candian and international team dedicated to health and social services research
  - Engagement of PLWD and care partner, decision-makers, clinicians to improve the research impact
  - Produce evidence
  - Develop recommendations and tools for PLWD, care partners, providers and decision-makers

Conclusion (2)

- PLWD use twice the hospital services as other – many ED visits and hospitalization could be avoided / prevented
- Role of the regular family physician is key if education, interdiscplinary care, appropriate financial support
- Continuity of care with a family physician is more effective than many medications

- … still a lot of work to do
- COVID
- Inequities: sex/gender, rural/urban, SES, racialized
- Learning healthcare systems

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Funders

CCNA
Canadian Consortium on Neurodegeneration in Aging

CCNV
Consortium canadien en neurodégénérescence associée au vieillissement

Fonds de recherche Santé Québec

CIHR IRSC
Canadian Institutes of Health Research
Instituts de recherche en santé du Canada

Réseau Québécois de Recherche sur le Vieillissement

Highlights of our knowledge transfer activities

Montreal · CBC Investigates

People with dementia among hardest hit by COVID-19 health restrictions

MONTREAL | News

Dementia patients hit hard in isolated Quebec care homes

Rencontre des experts

Lundi 10 mai
à 17h

Posez vos questions à

Dre Isabelle Vedel

Professeure agrégée - Département de médecine de famille - Université McGill
Responsable du projet Cognisance

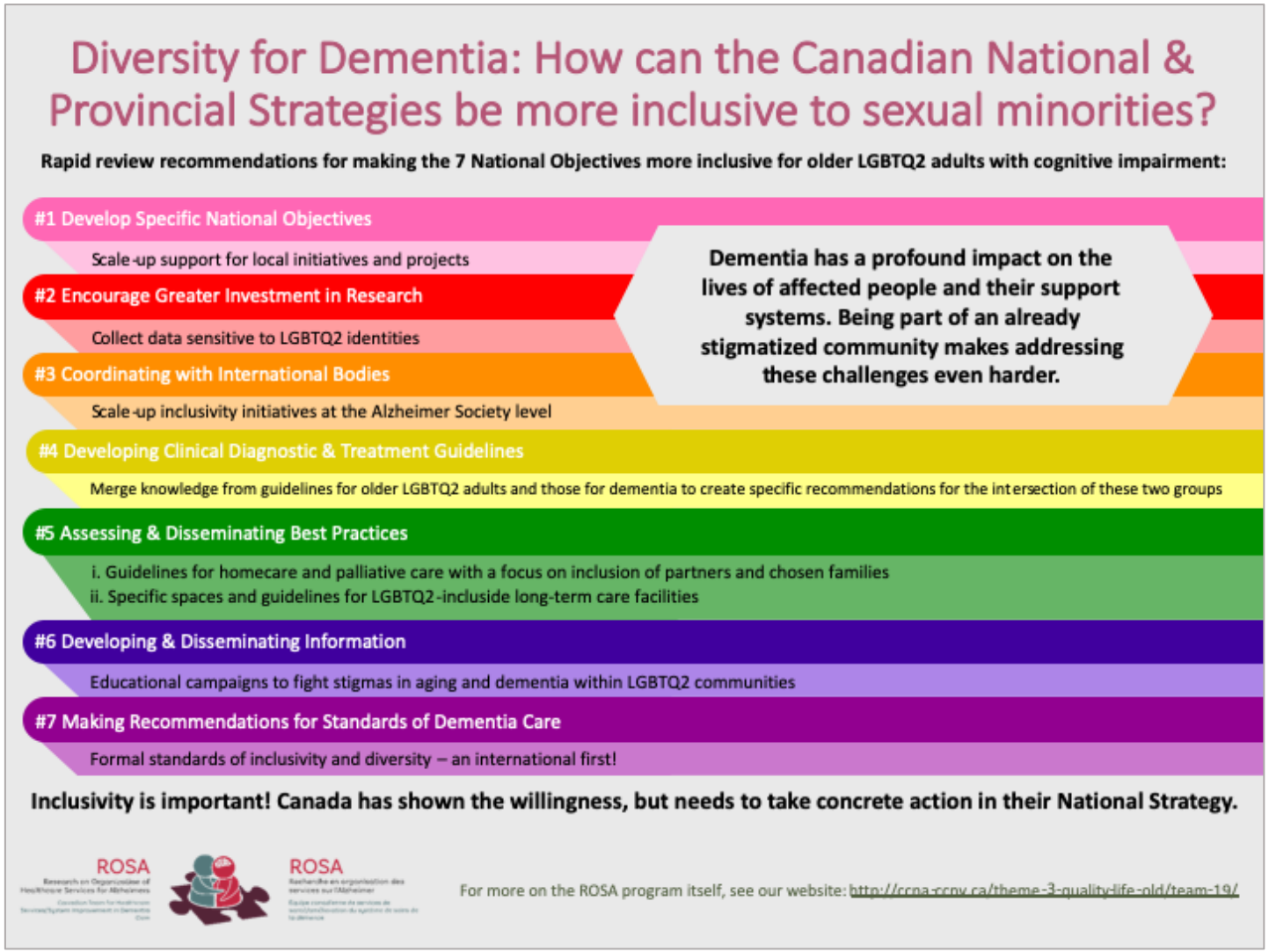
FÉDÉRATION QUÉBÉCOISE DES Sociétés Alzheimer

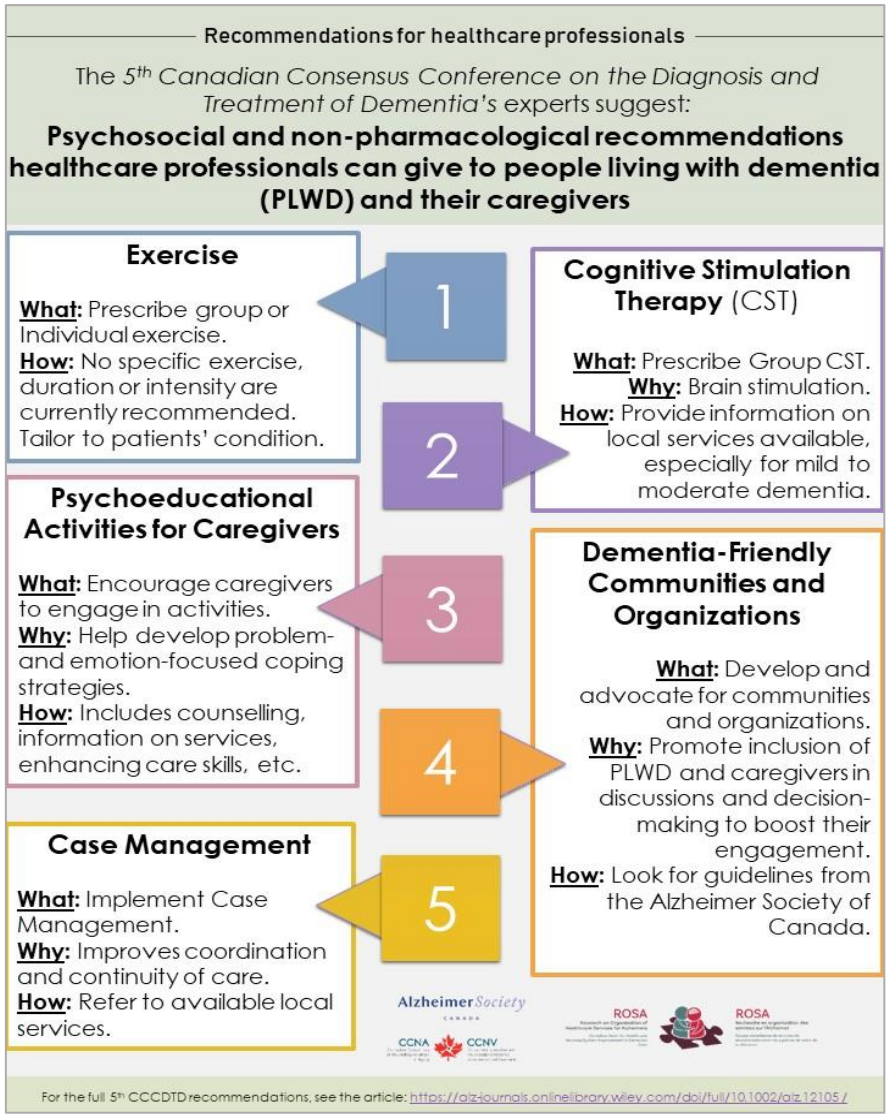
LIVE

2e Colloque annuel de la famille Barclay

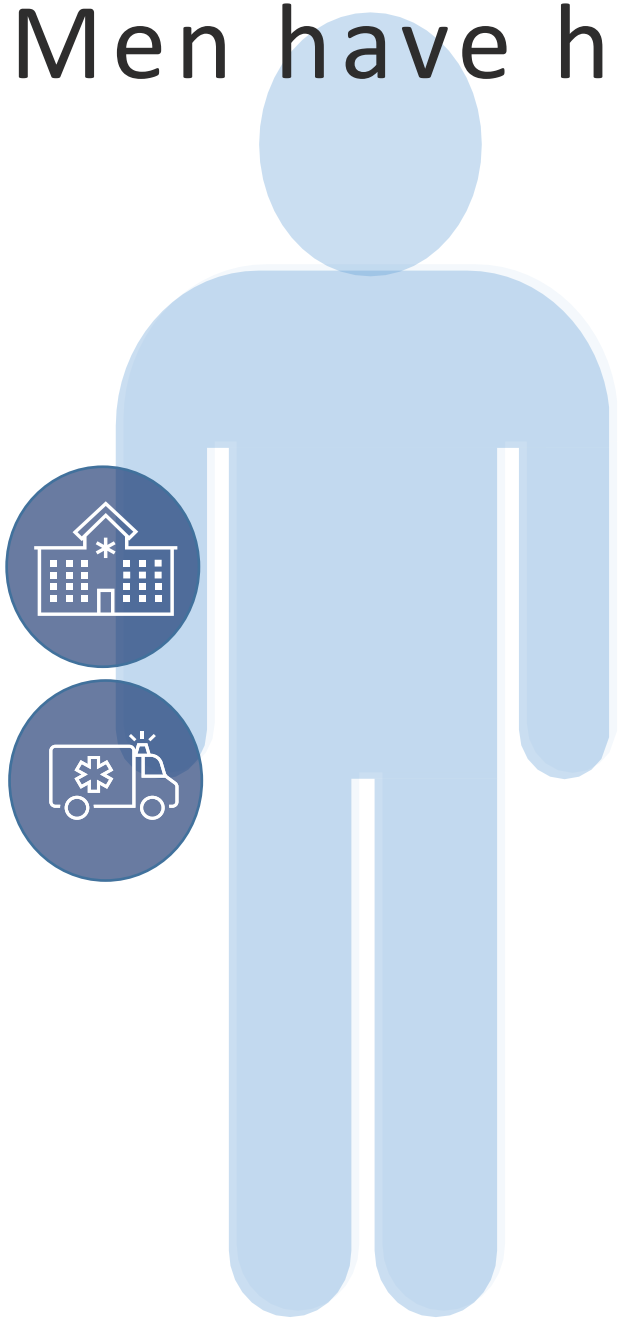
TROUBLES NEUROCOGNITIFS AUX TEMPS DE LA COVID-19 : INITIATIVES ET IMPACTS

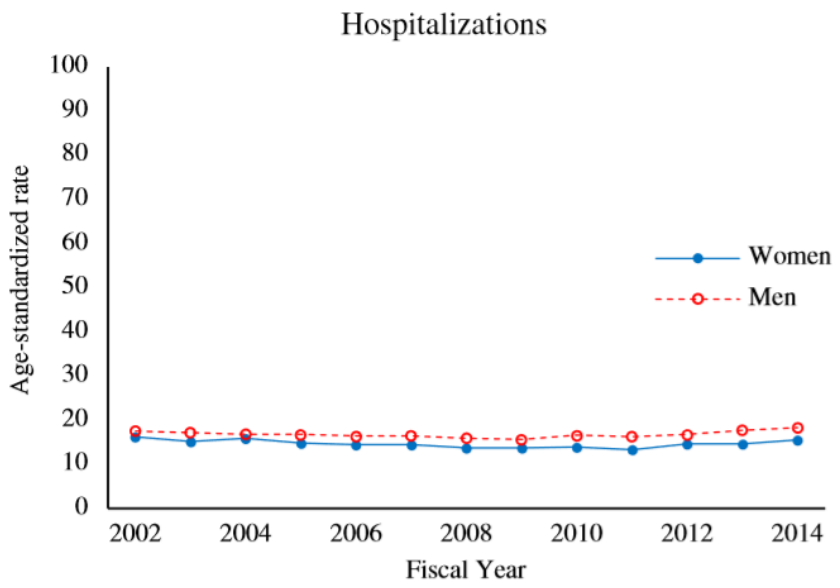
Examples of our visual briefs

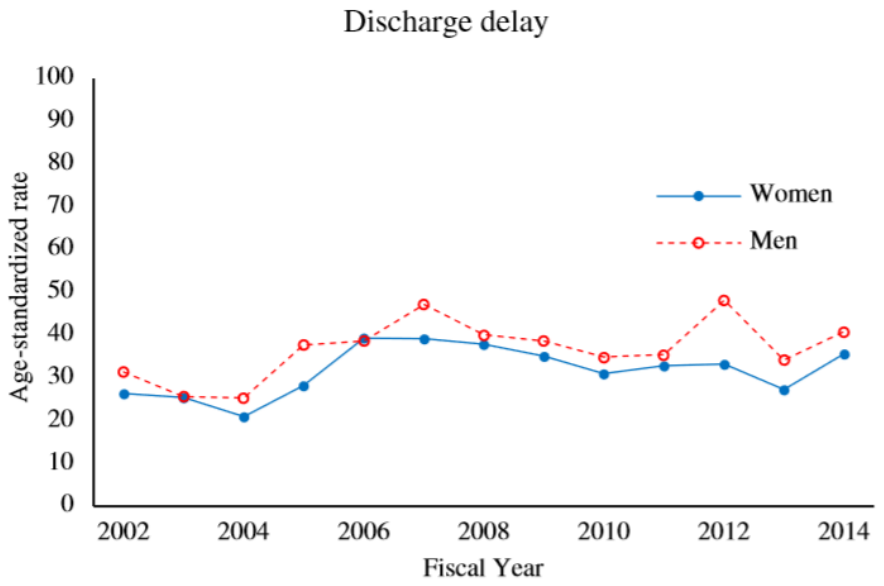


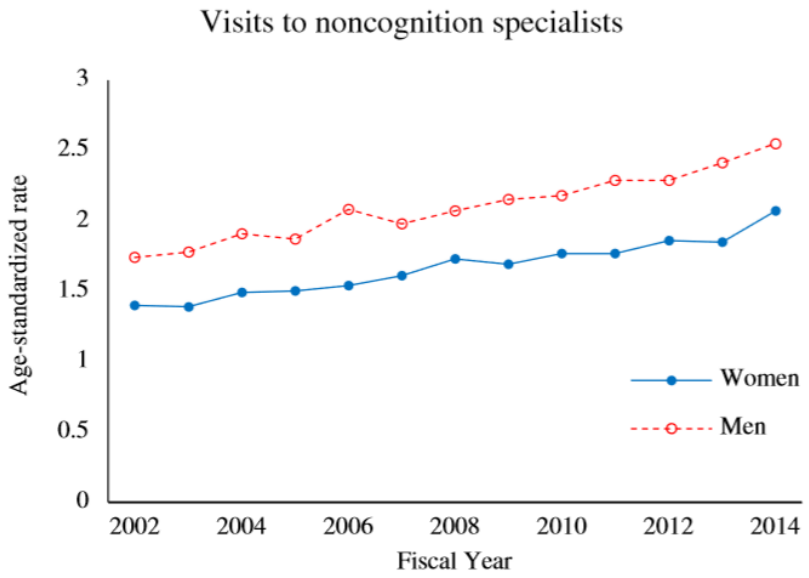


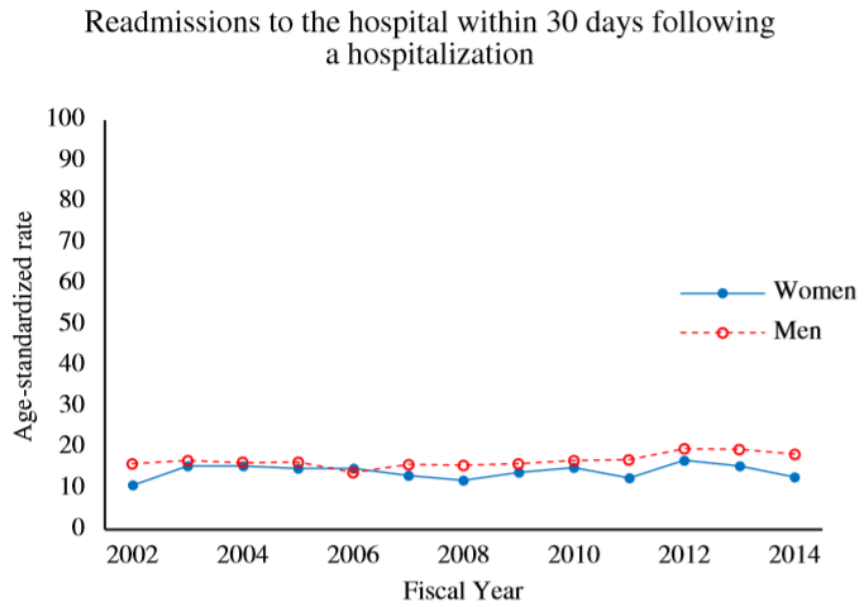
Men have higher…



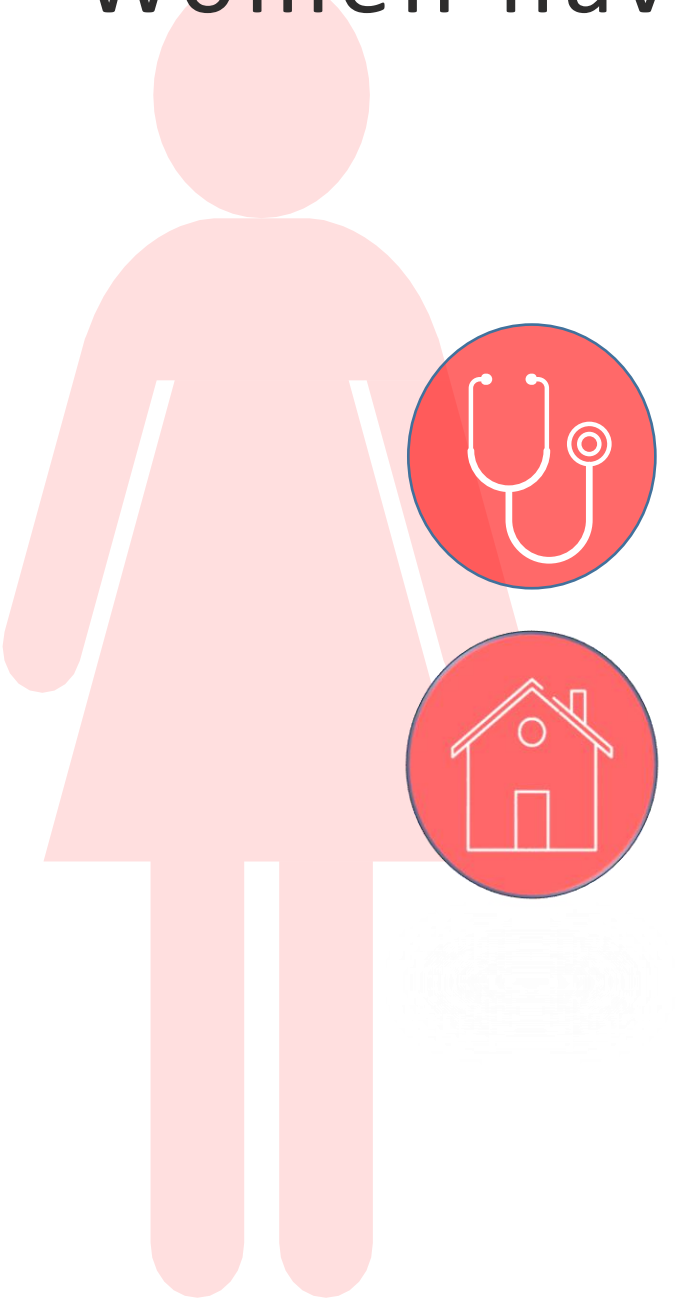




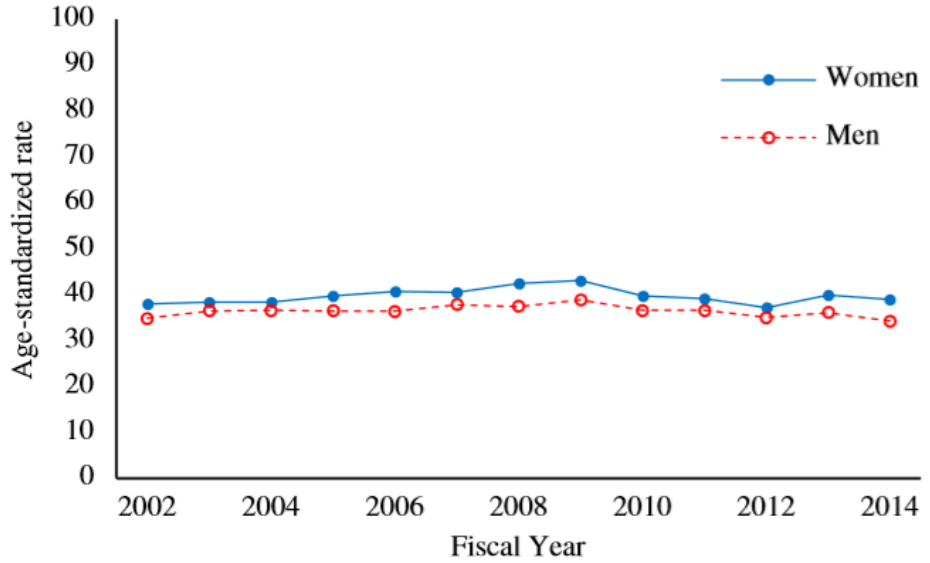




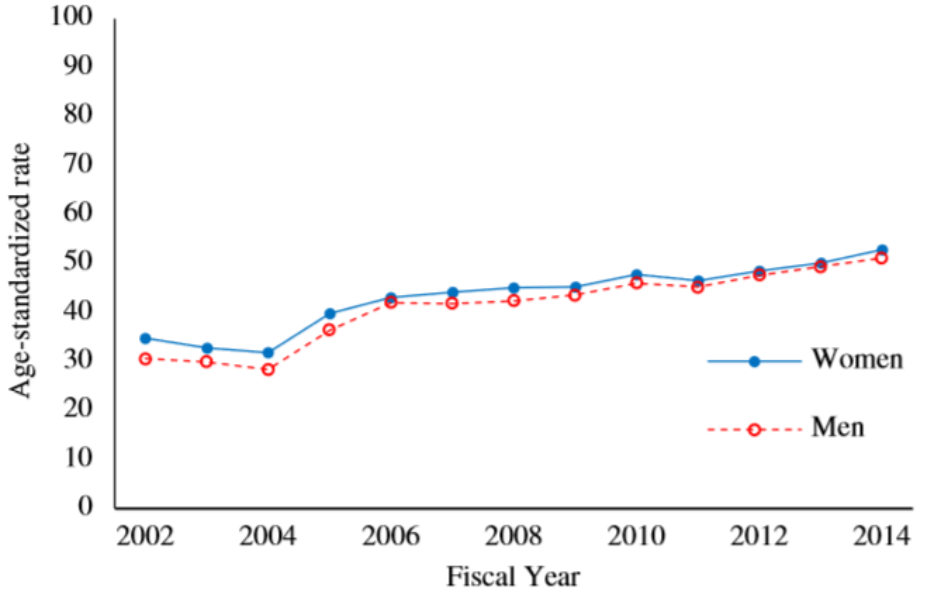
Women have higher…



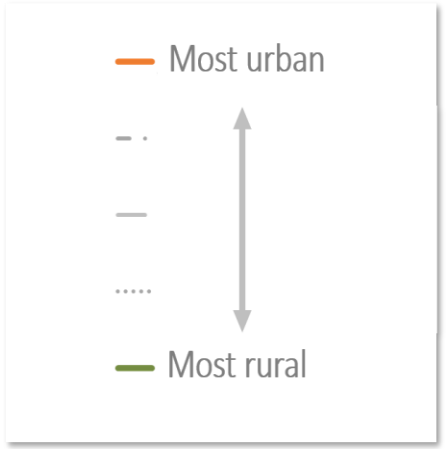
Dementia diagnosis first recorded by the regular family doctor

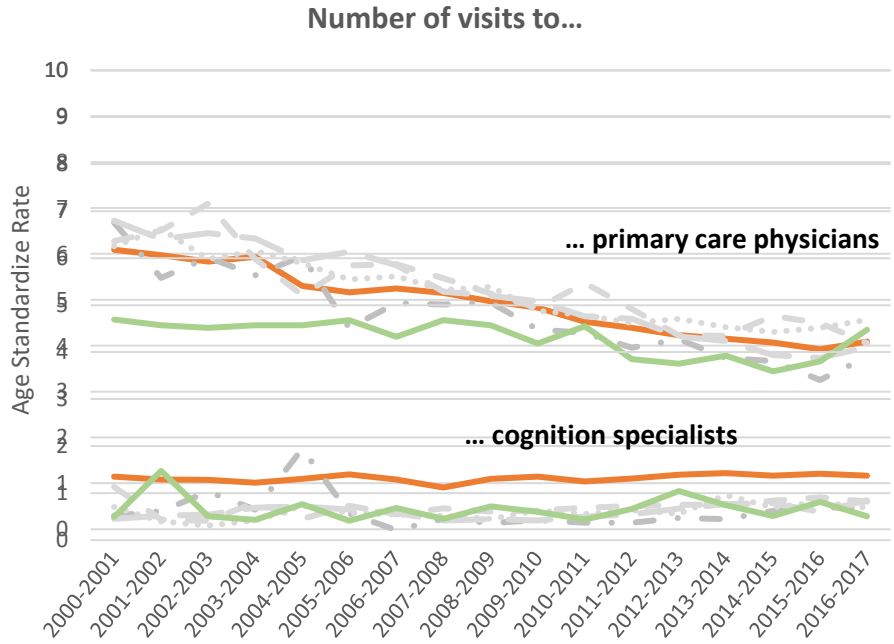


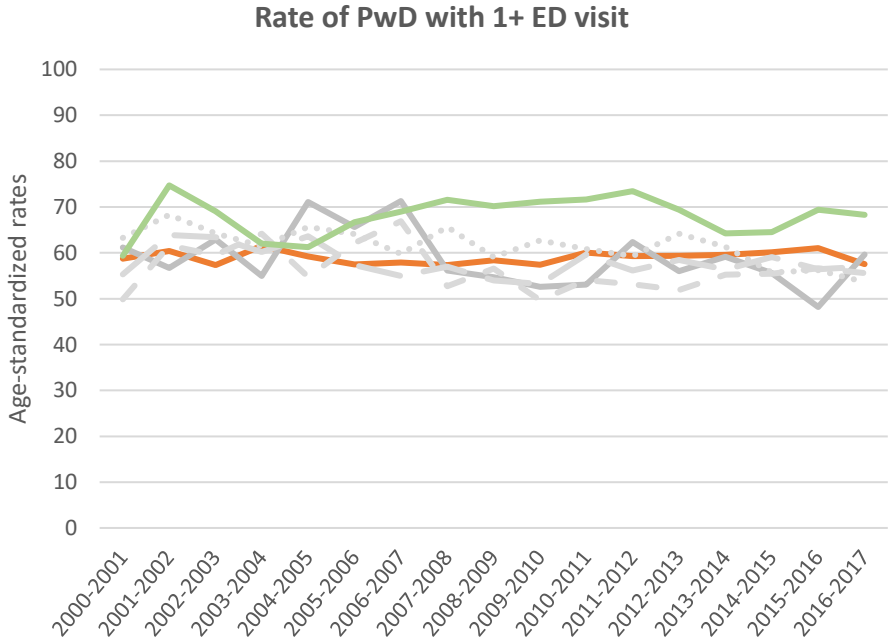
Use of home care

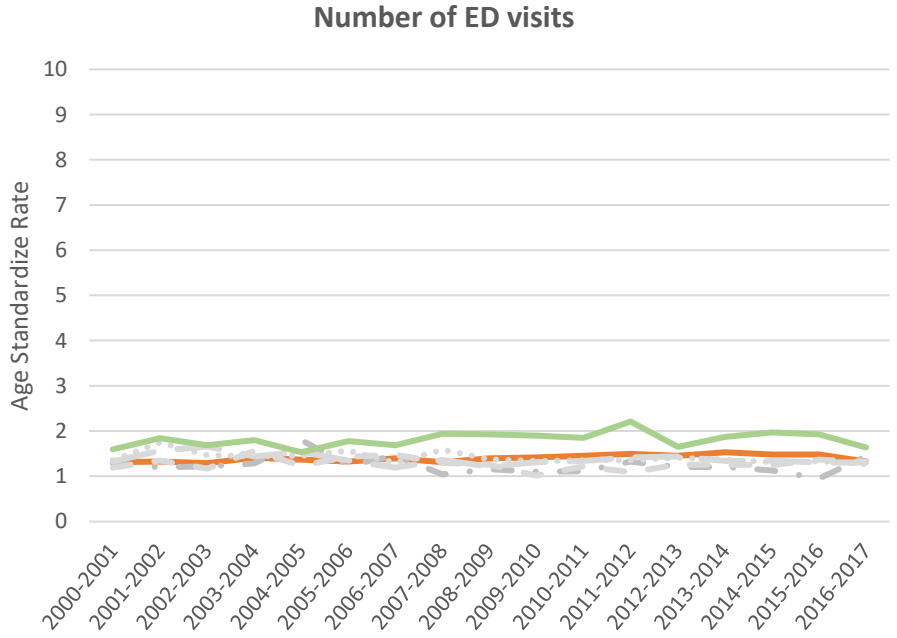


Rural-urban differences

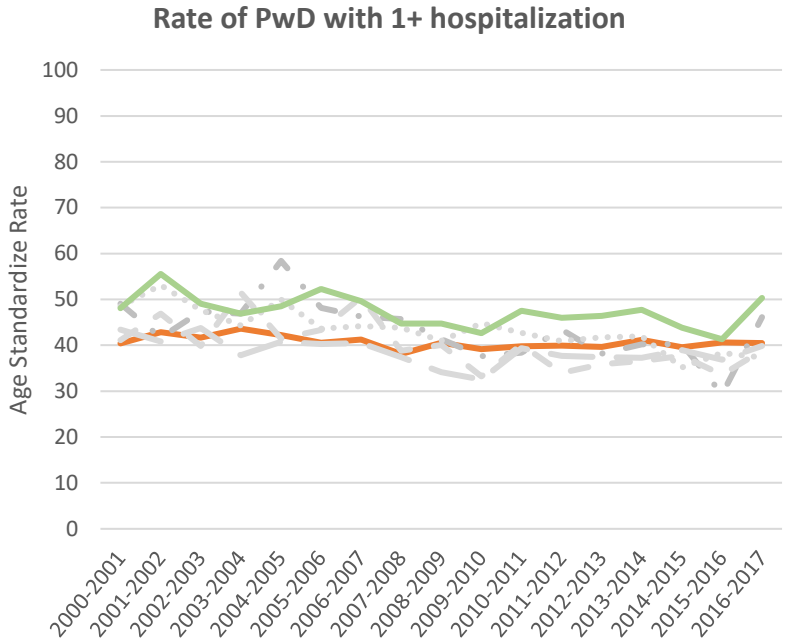


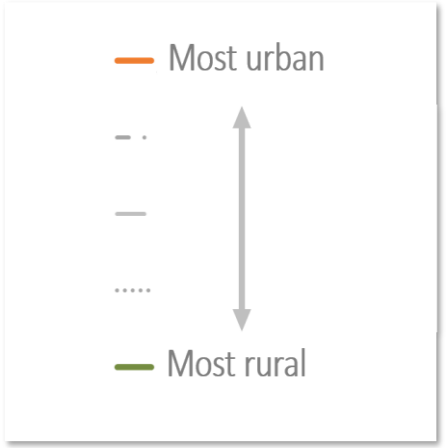


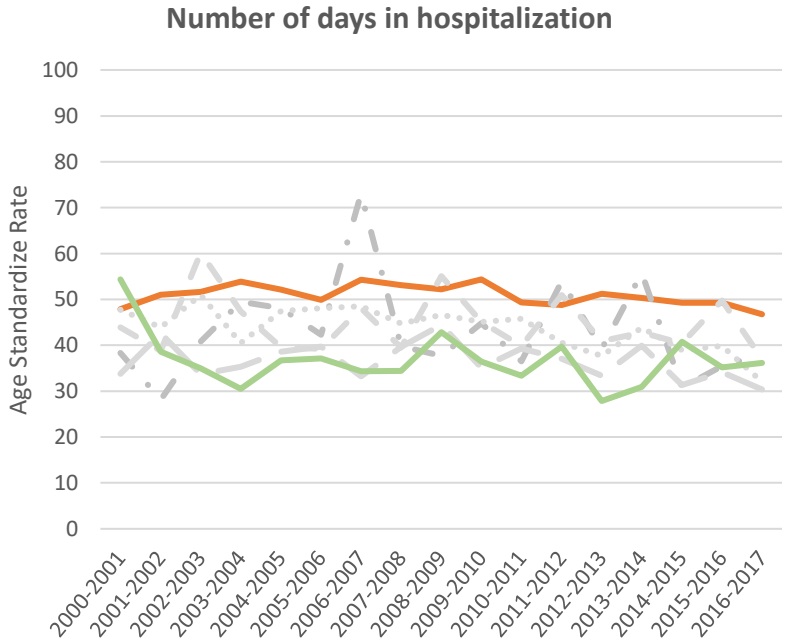


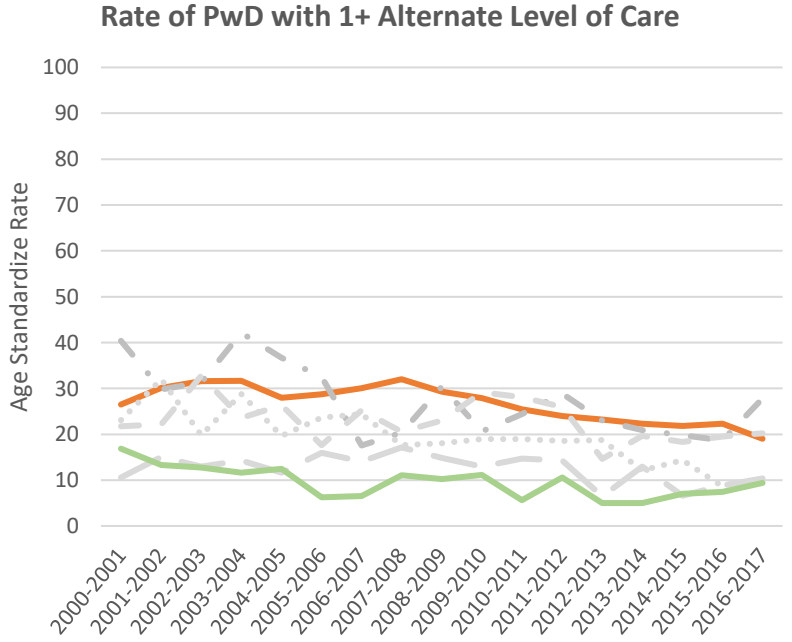


Rural-urban differences









No difference in mortality or LTC admissions

Human Rights Issues

Experiences in service use

In all settings

Home

Hospital

Residences for older persons

Long-term care facilities

Results to have impact during the pandemic and in normal circumstances

Equity and health disparities

Research questions, framework and design

Development of framework based on expectations and experience.

Recommendations using human rights framework for results analysis.

Recommendation of using human rights approach.

Overall research questions/sub-questions of objective 1 & 2.

New/additional funding application to address sex, gender, race, geographical differences, socio-economic status.

Methods for collecting data and tools

- Objective 2:
  - Modification and development of interview guide
  - Another group was involved in the survey development for patient and care givers (independent working group with the Alzheimer Society of Canada).

Results: Analysis & interpretation

- Objective 1:
  - Interpretation of analysis → contextualizing findings.
- Objective 2:
  - Piloting interview guides
  - Helping with participant recruitment for interviews
  - Interpretation of results
- Objective 3:
  - Data visualization of merged results from Obj. 1 & 2.
  - Participation in deliberative dialogue.

Dissemination: Recommendations & final report.

- Objective 3:
  - Participate in development of recommendations and final report.
- Contribution to article(s) on the results of this objective [depending on their involvement and interest] for Obj. 1, 2 and 3.

Current contributions

Expected contributions