Using interRAI data to understand the prevalence of sensory impairments & risk factors for long-term care admission

Presented by: Dawn Guthrie, PhD
Professor, Wilfrid Laurier University and interRAI Fellow

brainXchange webinar
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interRAI

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CIHR IRSC
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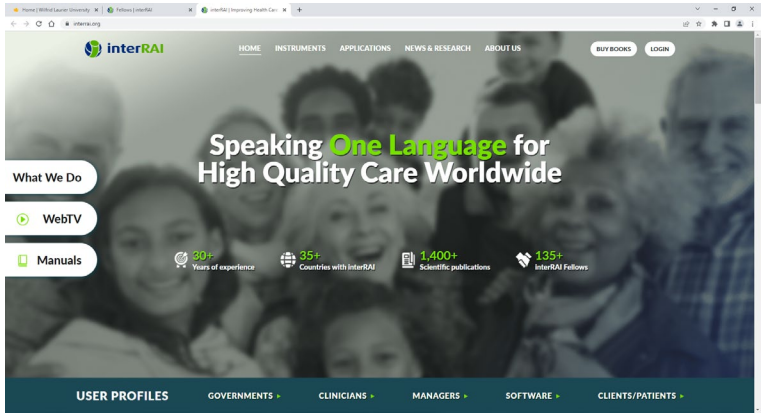
Who is CCNA Team 17?

What is interRAI?

- What is it?
  - International, not-for-profit network of roughly 140 researchers, clinicians and policy makers from just over 35 countries

- What does it do?
  - Conducts multinational collaborative research to develop, implement and evaluate clinical assessment tool and their related applications



www.interrai.org

interRAI Web TV

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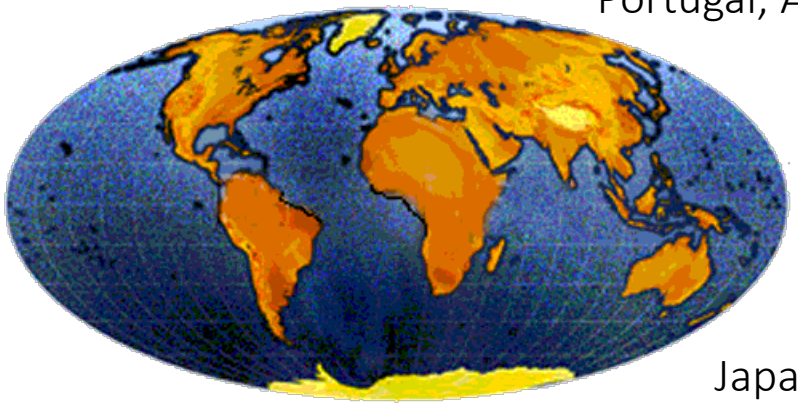
interRAI Members

Europe
Iceland, Norway, Sweden, Denmark, Finland, Netherlands, France, Germany, Switzerland, UK, Italy, Spain, Czech Republic, Poland, Estonia, Belgium, Lithuania, Russia Portugal, Austria, Ireland

North America
Canada
USA



Central/ South America
Brazil, Chile

Pacific Rim
Japan, China, Taiwan, Hong Kong, South Korea, Australia, New Zealand, Singapore

South Asia, Middle East & Africa
India, Israel, Lebanon, Qatar
South Africa, Ghana, Egypt

The interRAI "Family" of Instruments

Wellness, Checkup

Community Health

Home Care

Assisted Living

Nursing Home/Long-term Care Facility

Post-acute Care

Acute Care

Palliative Care

Inpatient Mental Health

Community Mental Health

Correctional Facilities

Intellectual Disability

Pediatric, Pediatric Mental Health, Pediatric DD, 0-3

Self-report Quality of Life

Caregiver

…and many more

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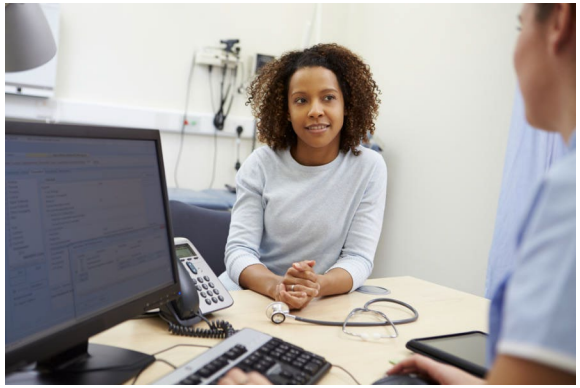
Completing the interRAI Assessment

- These are clinical assessment tools…**NOT** "surveys"
  - Assessor has a conversation with the person and caregivers
  - Uses interview skills
  - Uses all sources of information
  - Assessor make notes as necessary



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Summary of interRAI Data in Canada

Yukon (3,354)

Newfoundland & Labrador (60,732)

Nova Scotia (109,637)

Manitoba (120,619)

Alberta (336,413)

British Columbia (526,847)

Ontario (3,571,768)

Total of 4.9 million records

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How are the interRAI data collected and shared?

Assessment completed with individual & caregiver

Data stored for many people on assessor's laptop

UNIVERSITY OF WATERLOO

Data from across Canada stored University of Waterloo

Researchers who are part of interRAI in Canada can access the data at the University of Waterloo

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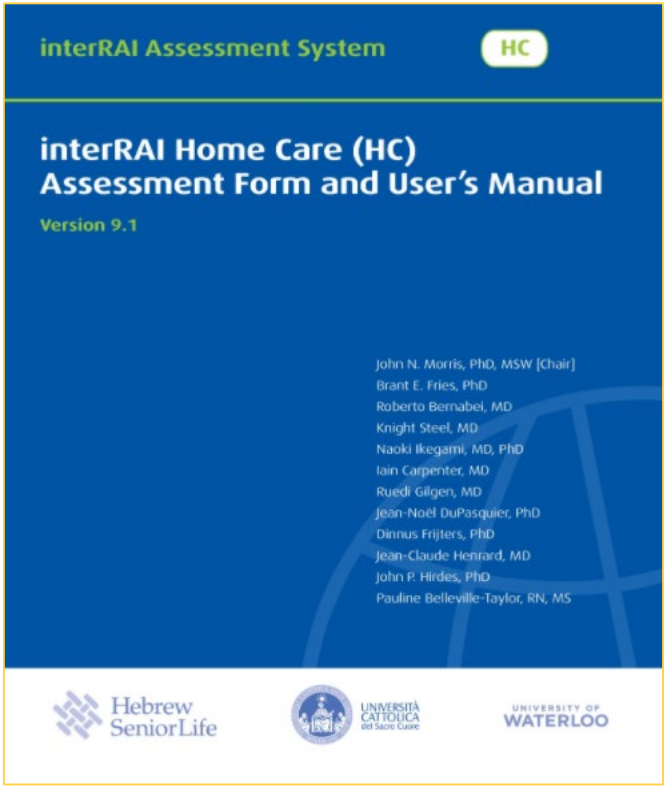
The interRAI Home Care Assessment

- Standardized assessment with roughly 300 items
- Key domain areas:
  - Cognitive status
  - Mood/psychosocial well-being
  - Physical functioning
  - Health conditions
  - Social functioning
  - Pain
  - Social supports



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Scoring of Vision Item

SECTION D. VISION PATTERNS		
1	VISION	***(Ability to see in adequate light and with glasses if used)*** 0. *ADEQUATE*—Sees fine detail, including regular print in newspapers/books 1. *IMPAIRED*—Sees large print, but no regular print in newspapers/books 2. *MODERATELY IMPAIRED*—Limited vision; not able to see newspaper headlines, but can identify objects 3. *HIGHLY IMPAIRED*—Object identification in question, but eyes appear to follow objects 4. *SEVERELY IMPAIRED*—No vision or sees only light, colours, or shapes; eyes do not appear to follow objects

Vision loss (VL) =score of 1+ on this item

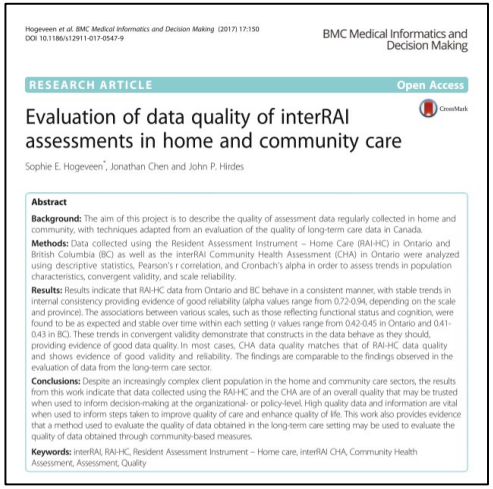
Scoring of Hearing Item

SECTION C. COMMUNICATION/HEARING PATTERNS		
1	HEARING	***(With hearing appliance if used)*** **0**. *HEARS ADEQUATELY*—Normal talk, TV, phone, doorbell **1**. *MINIMAL DIFFICULTY*—When not in quiet setting **2**. *HEARS IN SPECIAL SITUATIONS ONLY*—Speaker has to adjust tonal quality and speak distinctly **3**. *HIGHLY IMPAIRED*—Absence of useful hearing

Hearing loss (HL)=score of 1+ on this item

Dual Sensory Loss (DSL)=score of 1+ on ***both*** items

Research on Validity & Reliability



Hogeveen et al. BMC Medical Informatics and Decision Making (2017) 17:150
DOI 10.1186/s12911-017-0547-9

BMC Medical Informatics and Decision Making

RESEARCH ARTICLE Open Access

Evaluation of data quality of interRAI assessments in home and community care

Sophie E. Hogeveen*, Jonathan Chen and John P. Hirdes

Abstract

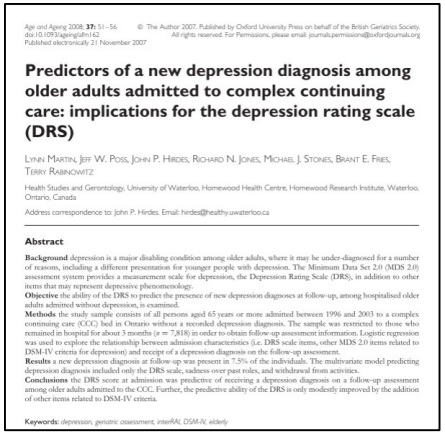
Background: The aim of this project is to describe the quality of assessment data regularly collected in home and community, with techniques adapted from an evaluation of the quality of long-term care data in Canada.

Methods: Data collected using the Resident Assessment Instrument – Home Care (RAI-HC) in Ontario and British Columbia (BC) as well as the interRAI Community Health Assessment (CHA) in Ontario were analyzed using descriptive statistics, Pearson's r correlation, and Cronbach's alpha in order to assess trends in population characteristics, convergent validity, and scale reliability.

Results: Results indicate that RAI-HC data from Ontario and BC behave in a consistent manner, with stable trends in internal consistency providing evidence of good reliability (alpha values range from 0.72-0.94, depending on the scale and province). The associations between various scales, such as those reflecting functional status and cognition, were found to be as expected and stable over time within each setting (r values range from 0.42-0.45 in Ontario and 0.41-0.43 in BC). These trends in convergent validity demonstrate that constructs in the data behave as they should, providing evidence of good data quality. In most cases, CHA data quality matches that of RAI-HC data quality and shows evidence of good validity and reliability. The findings are comparable to the findings observed in the evaluation of data from the long-term care sector.

Conclusions: Despite an increasingly complex client population in the home and community care sectors, the results from this work indicate that data collected using the RAI-HC and the CHA are of an overall quality that may be trusted when used to inform decision-making at the organizational- or policy-level. High quality data and information are vital when used to inform steps taken to improve quality of care and enhance quality of life. This work also provides evidence that a method used to evaluate the quality of data obtained in the long-term care setting may be used to evaluate the quality of data obtained through community-based measures.

Keywords: interRAI, RAI-HC, Resident Assessment Instrument – Home care, interRAI CHA, Community Health Assessment, Assessment, Quality



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Predictors of a new depression diagnosis among older adults admitted to complex continuing care: implications for the depression rating scale (DRS)

Lynn Martin, Jeff W. Poss, John P. Hirdes, Richard N. Jones, Michael J. Stones, Brant E. Fries, Terry Rabinowitz

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Abstract

Background depression is a major disabling condition among older adults, where it may be under-diagnosed for a number of reasons, including a different presentation for younger people with depression. The Minimum Data Set 2.0 (MDS 2.0) assessment system provides a measurement scale for depression, the Depression Rating Scale (DRS), in addition to other items that may represent depressive phenomenology.

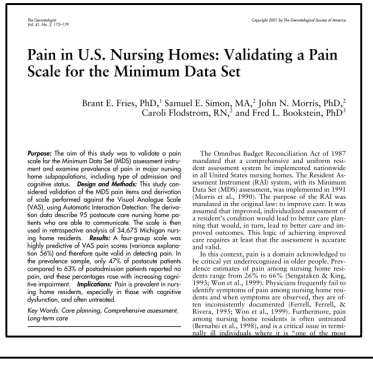
Objective the ability of the DRS to predict the presence of new depression diagnoses at follow-up, among hospitalised older adults admitted without depression, is examined.

Methods the study sample consists of all persons aged 65 years or more admitted between 1996 and 2003 to a complex continuing care (CCC) bed in Ontario without a recorded depression diagnosis. The sample was restricted to those who remained in hospital for about 3 months ($n = 7,818$) in order to obtain follow-up assessment information. Logistic regression was used to explore the relationship between admission characteristics (i.e. DRS scale items, other MDS 2.0 items related to DSM-IV criteria for depression) and receipt of a depression diagnosis on the follow-up assessment.

Results a new depression diagnosis at follow-up was present in 7.5% of the individuals. The multivariate model predicting depression diagnosis included only the DRS scale, sadness over past roles, and withdrawal from activities.

Conclusions the DRS score at admission was predictive of receiving a depression diagnosis on a follow-up assessment among older adults admitted to the CCC. Further, the predictive ability of the DRS is only modestly improved by the addition of other items related to DSM-IV criteria.

Keywords: *depression, geriatric assessment, interRAI, DSM-IV, elderly*



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Pain in U.S. Nursing Homes: Validating a Pain Scale for the Minimum Data Set

Brant E. Fries, PhD,[1] Samuel E. Simon, MA,[2] John N. Morris, PhD,[2] Carol Flodstrom, RN,[1] and Fred L. Bookstein, PhD[3]

Purpose: The aim of this study was to validate a pain scale for the Minimum Data Set (MDS) assessment instrument and examine prevalence of pain in major nursing home subpopulations, including type of admission and cognitive status. *Design and Methods:* This study considered validation of the MDS pain items and derivation of scale performed against the Visual Analogue Scale (VAS), using Automatic Interaction Detection. The derivation data describe 95 postacute care nursing home patients who are able to communicate. The scale is then used in retrospective analysis of 34,675 Michigan nursing home residents. *Results:* A four-group scale was highly predictive of VAS pain scores (variance explained= 56%) and therefore quite valid in detecting pain. In the prevalence sample, only 47% of postacute patients compared to 63% of postadmission patients reported no pain, and these percentages rose with increasing cognitive impairment. *Implications:* Pain is prevalent in nursing home residents, especially in those with cognitive dysfunction, and often untreated.

Key Words: Care planning, Comprehensive assessment, Long-term care

The Omnibus Budget Reconciliation Act of 1987 mandated that a comprehensive and uniform resident assessment system be implemented nationwide in all United States nursing homes. The Resident Assessment Instrument (RAI) system, with its Minimum Data Set (MDS) assessment, was implemented in 1991 (Morris et al., 1990). The purpose of the RAI was mandated in the original law: to improve care. It was assumed that improved, individualized assessment of a resident's condition would lead to better care planning that would, in turn, lead to better care and improved outcomes. This logic of achieving improved care requires at least that the assessment is accurate and valid.

In this context, pain is a domain acknowledged to be critical yet underrecognized in older people. Prevalence estimates of pain among nursing home residents range from 26% to 66% (Sengstaken & King, 1993; Won et al., 1999). Physicians frequently fail to identify symptoms of pain among nursing home residents and when symptoms are observed, they are often inconsistently documented (Ferrell, Ferrell, & Rivera, 1995; Won et al., 1999). Furthermore, pain among nursing home residents is often untreated (Bernabei et al., 1998), and is a critical issue in terminally ill individuals where it is "one of the most

The Validity of the Minimum Data Set in Measuring the Cognitive Impairment of Persons Admitted to Nursing Homes

Ann L. Gruber-Baldini, PhD, Sheryl Itkin Zimmerman, PhD,†‡ Eduard Mortimore, AM,†‡ and Jay Magaziner, PhD, MS Hyg**

OBJECTIVES: This study examined the construct validity of two cognitive scales from the federally mandated Minimum Data Set (MDS) of the nursing home Resident Assessment Instrument.

DESIGN: A cross-sectional comparisons of the MDS measures, with scales provided by the resident, a proxy person, and nursing staff.

SETTING: Subjects residing in 59 nursing homes (NHs) in Maryland from 1992 to 1995.

PARTICIPANTS: Subjects were 1939 new admissions to NHs, aged 65 and older, with complete MDS information at admission.

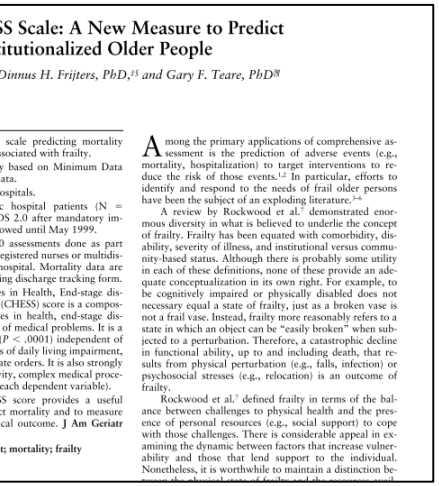
MEASUREMENTS: Two MDS scales, the Cognitive Performance Scale (CPS) and the MDS Cognition Scale (MDS-COGS), were compared with the Mini-Mental State Examination (MMSE) and the staff rating on the Psychogeriatric Dependency Rating Scale (PGDRS) Orientation scale, as well as measures of functioning and functional decline.

RESULTS: The CPS and the MDS-COGS were highly correlated ($r = 0.92$). Both correlated moderately well with the MMSE ($r = -0.65$ and -0.68) and with staff's rating on the PGDRS Orientation scale ($r = 0.63$ and $r = 0.66$). Correlations with the MMSE ($r < 0.70$) are lower than previously reported ($r \geq 0.80$). The proportion of cognitively impaired residents in this NH admission cohort was higher using the MDS-COGS than the CPS (63% vs 57%), but both MDS scales produced lower proportions than the MMSE (70%) and higher proportions than the PGDRS (47%). The internal consistency of the CPS was better without the comatose item (alpha = 0.80 vs 0.70). The MDS-COGS had higher internal consistency (alpha = 0.85) and was simpler to compute.

CONCLUSIONS: This is the first study to examine the validity of the MDS in a large sample of residents and NHs in situations where the MDS was not completed by research-trained staff. Compared with other instruments, the MDS-COGS and the CPS had moderate and similar validity for assessing cognitive impairment. Differences in the scales could provide different estimates of impairment among persons admitted to nursing homes. **J Am Geriatr Soc 48:1601–1606, 2000.**

Key words: nursing homes; cognition; minimum data set; validity; geriatric assessment

The Minimum Data Set (MDS) of the nursing home Resident Assessment Instrument is a federally mandated reporting form required by Medicare for prospective payment reimbursement that is being utilized increasingly by researchers in long-term care.[1–4] However, only a few studies have examined the reliability and validity of components of this instrument. Using trained raters, reliability of some of the MDS cognitive items has been quite good.[5] Two of six validity studies[6–11] have proposed cognitive scales from the MDS: the Cognitive Performance Scale (CPS)[9] and the MDS Cognition Scale (MDS-COGS).[7] Both scales draw from a set of 10 cognitive items and add one functional item, but they utilize different functional items, use only three common cognitive items across the scales, and calculate their scales in a different way (the CPS is hierarchical whereas the MDS-COGS is additive). Both studies have assessed construct validity between these scales and other measures,[10–12] with good concordance found between the MDS and these other cognitive scales (kappas ≥.70).[7,8] The CPS was derived using the Mini-Mental State Examination (MMSE)[13] and the Test of Severe Impairment (TSI)[14] as criterion measures,[9] and the MDS-COGS was derived using the Global Deterioration Scale (GDS).[7,14] Overall, the MDS-COGS has been found to



The MDS-CHESS Scale: A New Measure to Predict Mortality in Institutionalized Older People

*John P. Hirdes, PhD, *† Dinnus H. Frijters, PhD,‡§ and Gary F. Teare, PhD‖*

OBJECTIVES: To develop a scale predicting mortality and other adverse outcomes associated with frailty.

DESIGN: Observational study based on Minimum Data Set (MDS) 2.0 and mortality data.

SETTING: Ontario chronic hospitals.

PARTICIPANTS: All chronic hospital patients (N = 28,495) assessed with the MDS 2.0 after mandatory implementation in July 1996 followed until May 1999.

MEASUREMENTS: MDS 2.0 assessments done as part of normal practice mainly by registered nurses or multidisciplinary teams in a chronic hospital. Mortality data are available from the accompanying discharge tracking form.

RESULTS: The MDS-Changes in Health, End-stage disease and Symptoms and Signs (CHESS) score is a composite measure addressing changes in health, end-stage disease, and symptoms and signs of medical problems. It is a strong predictor of mortality ($P < .0001$) independent of the effects of age, sex, activities of daily living impairment, cognition, and do-not-resuscitate orders. It is also strongly associated with physician activity, complex medical procedures, and pain ($P < .001$ for each dependent variable).

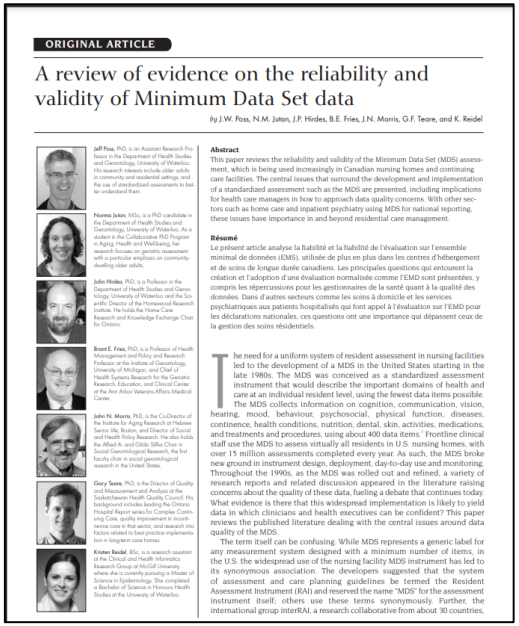
CONCLUSIONS: The CHESS score provides a useful new MDS-based test to predict mortality and to measure instability in health as a clinical outcome. **J Am Geriatr Soc 51:96–100, 2003.**

Key words: Minimum Data Set; mortality; frailty

Among the primary applications of comprehensive assessment is the prediction of adverse events (e.g., mortality, hospitalization) to target interventions to reduce the risk of those events.[1,2] In particular, efforts to identify and respond to the needs of frail older persons have been the subject of an exploding literature.[3–6]

A review by Rockwood et al.[7] demonstrated enormous diversity in what is believed to underlie the concept of frailty. Frailty has been equated with comorbidity, disability, severity of illness, and institutional versus community-based status. Although there is probably some utility in each of these definitions, none of these provide an adequate conceptualization in its own right. For example, to be cognitively impaired or physically disabled does not necessary equal a state of frailty, just as a broken vase is not a frail vase. Instead, frailty more reasonably refers to a state in which an object can be "easily broken" when subjected to a perturbation. Therefore, a catastrophic decline in functional ability, up to and including death, that results from physical perturbation (e.g., falls, infection) or psychosocial stresses (e.g., relocation) is an outcome of frailty.

Rockwood et al.[7] defined frailty in terms of the balance between challenges to physical health and the presence of personal resources (e.g., social support) to cope with those challenges. There is considerable appeal in examining the dynamic between factors that increase vulnerability and those that lend support to the individual. Nonetheless, it is worthwhile to maintain a distinction be-



ORIGINAL ARTICLE

A review of evidence on the reliability and validity of Minimum Data Set data

by J.W. Poss, N.M. Jutan, J.P. Hirdes, B.E. Fries, J.N. Morris, G.F. Teare, and K. Reidel

Jeff Poss, PhD, is an Assistant Research Professor in the Department of Health Studies and Gerontology, University of Waterloo. His research interests include older adults in community and residential settings, and the use of standardized assessments to better understand them.

Norma Jutan, MSc, is a PhD candidate in the Department of Health Studies and Gerontology, University of Waterloo. As a student in the Collaborative PhD Program in Aging, Health and Wellbeing, her research focuses on geriatric assessment with a particular emphasis on community-dwelling older adults.

John Hirdes, PhD, is a Professor in the Department of Health Studies and Gerontology, University of Waterloo and the Scientific Director of the Homewood Research Institute. He holds the Home Care Research and Knowledge Exchange Chair for Ontario.

Brant E. Fries, PhD, is a Professor of Health Management and Policy and Research Professor at the Institute of Gerontology, University of Michigan, and Chief of Health Systems Research for the Geriatric Research, Education, and Clinical Center at the Ann Arbor Veterans Affairs Medical Center.

John N. Morris, PhD, is the Co-Director of the Institute for Aging Research at Hebrew Senior Life, Boston, and Director of Social and Health Policy Research. He also holds the Alfred A. and Gilda Siffka Chair in Social Gerontological Research, the first faculty chair in social gerontological research in the United States.

Gary Teare, PhD, is the Director of Quality and Measurement and Analysis at the Saskatchewan Health Quality Council. His background includes leading the Ontario Hospital Report series for Complex Continuing Care, quality improvement in incontinence care in that sector, and research into factors related to best practice implementation in long-term care homes.

Kristen Reidel, BSc, is a research assistant at the Clinical and Health Informatics Research Group at McGill University where she is currently pursuing a Master of Science in Epidemiology. She completed a Bachelor of Science in Honours Health Studies at the University of Waterloo.

Abstract

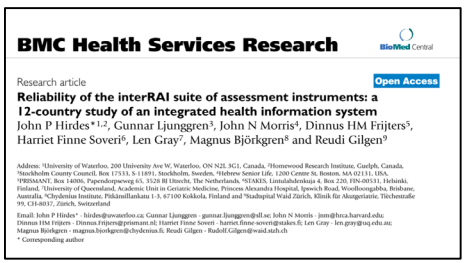
This paper reviews the reliability and validity of the Minimum Data Set (MDS) assessment, which is being used increasingly in Canadian nursing homes and continuing care facilities. The central issues that surround the development and implementation of a standardized assessment such as the MDS are presented, including implications for health care managers in how to approach data quality concerns. With other sectors such as home care and inpatient psychiatry using MDS for national reporting, these issues have importance in and beyond residential care management.

Résumé

Le présent article analyse la fiabilité et la fiabilité de l'évaluation sur l'ensemble minimal de données (EMS), utilisée de plus en plus dans les centres d'hébergement et de soins de longue durée canadiens. Les principales questions qui entourent la création et l'adoption d'une évaluation normalisée comme l'EMD sont présentées, y compris les répercussions pour les gestionnaires de la santé quant à la qualité des données. Dans d'autres secteurs comme les soins à domicile et les services psychiatriques aux patients hospitalisés qui font appel à l'évaluation sur l'EMD pour les déclarations nationales, ces questions ont une importance qui dépassent ceux de la gestion des soins résidentiels.

The need for a uniform system of resident assessment in nursing facilities led to the development of a MDS in the United States starting in the late 1980s. The MDS was conceived as a standardized assessment instrument that would describe the important domains of health and care at an individual resident level, using the fewest data items possible. The MDS collects information on cognition, communication, vision, hearing, mood, behaviour, psychosocial, physical function, diseases, continence, health conditions, nutrition, dental, skin, activities, medications, and treatments and procedures, using about 400 data items.[1] Frontline clinical staff use the MDS to assess virtually all residents in U.S. nursing homes, with over 15 million assessments completed every year. As such, the MDS broke new ground in instrument design, deployment, day-to-day use and monitoring. Throughout the 1990s, as the MDS was rolled out and refined, a variety of research reports and related discussion appeared in the literature raising concerns about the quality of these data, fueling a debate that continues today. What evidence is there that this widespread implementation is likely to yield data in which clinicians and health executives can be confident? This paper reviews the published literature dealing with the central issues around data quality of the MDS.

The term itself can be confusing. While MDS represents a generic label for any measurement system designed with a minimum number of items, in the U.S. the widespread use of the nursing facility MDS instrument has led to its synonymous association. The developers suggested that the system of assessment and care planning guidelines be termed the Resident Assessment Instrument (RAI) and reserved the name "MDS" for the assessment instrument itself; others use these terms synonymously. Further, the international group interRAI, a research collaborative from about 30 countries



BMC Health Services Research BioMed Central

Research article Open Access

Reliability of the interRAI suite of assessment instruments: a 12-country study of an integrated health information system

John P Hirdes*[1,2], Gunnar Ljunggren[3], John N Morris[4], Dinnus HM Frijters[5], Harriet Finne Soveri[6], Len Gray[7], Magnus Björkgren[8] and Reudi Gilgen[9]

PLOS ONE

RESEARCH ARTICLE

Detection of vision and /or hearing loss using the interRAI Community Health Assessment aligns well with common behavioral vision/ hearing measurements

Andrea Urqueta Alfaro[1,2]*, **Dawn M. Guthrie**[3,4], **Natalie A. Phillips**[5], **M. Kathleen Pichora-Fuller**[6], **Paul Mick**[7], **Cathy McGraw**[8], **Walter Wittich**[1,8,9]

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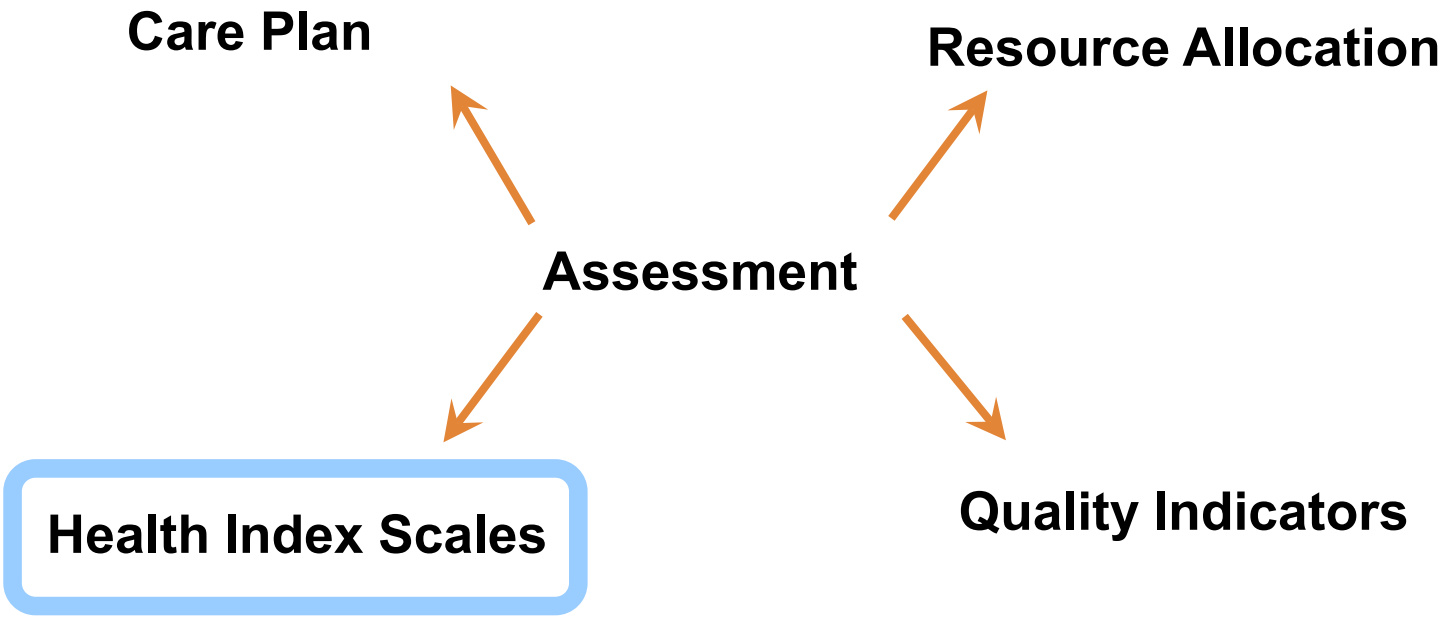
Abstract

This study's main objective was to assess the sensitivity and specificity of the interRAI Community Health Assessment (CHA) for detecting the presence of vision loss (VL), hearing loss (HL) or both (Dual Sensory Loss, DSL) when compared against performance-based measures of vision and hearing. The interRAI CHA and the Montreal Cognitive Assessment (MoCA) were administered to 200 adults (61+ years of age) who had VL, HL or DSL. We calculated the sensitivity and specificity of the interRAI CHA for detecting sensory impairments using as the gold standard performance based measurements of hearing (pure-tone audiogram) and vision (distance acuity) as determined from the rehabilitation centre record. Results were divided according to participants' cognitive status, as measured by the MoCA and the Cognitive Performance Scale (CPS, embedded within the interRAI CHA). Overall, sensitivity was 100% for VL, 97.1% for HL, and 96.9% for DSL. Specificity was at least 93% in all three groups. In participants who failed the MoCA (i.e., at risk of mild cognitive impairment), the sensitivity was 100% for VL

[Link to the paper]

Validity of Vision and Hearing Items

Applications of interRAI Instruments



What are the Health Index Scales?

- Numeric scores for an individual based on items in the assessments

*****Generated by the software*****

- Helps the home care assessor understand the person's level of functioning and their needs
- Used together with all of the other information about the person to ***inform decisions***
- Can help them to track changes over time

Examples of Health Index Scales

- Cognitive Performance Scale (CPS)
- Depression Rating Scale (DRS)
- Pain Scale
- IADL Involvement Scale
- ADL Self-performance Hierarchy Scale
- CHESS (Changes in Health, End-stage Disease, Signs and Symptoms) Scale
- Caregiver Risk Evaluation (CaRE)

Cognitive Performance Scale (CPS)

- List of items included:
  1. Cognitive skills for daily decision-making
  2. Making self understood
  3. Short-term memory
  4. Ability to eat independently
- Scoring of the CPS

0=	no issues/intact
1=	borderline intact
2=	mild impairment
3=	moderate impairment
4=	moderate/severe impairment
5=	severe impairment
6=	very severe impairment

Cognitive impairment=CPS score of 1 or higher

interRAI tools:

- Standardized, detailed, clinical assessment tools
- Used across Canada and globally

interRAI data can be used to:

- Guide care planning and service delivery for an individual
- Guide overall planning and quality improvement for a program or region

Prevalence of sensory impairments across Canada

LINK TO THE PAPER

Methods

- Analysis of existing interRAI data in home care (HC) and long-term care (LTC) from across Canada for adults (aged 18+)
  - In HC: 297,491 unique individuals
  - In LTC: 136,585 unique individuals
- Data collected between 2008-2018 from these regions:
  - Ontario, Newfoundland and Labrador, Yukon Territory, Manitoba, BC, Alberta (and in Saskatchewan but only in LTC)

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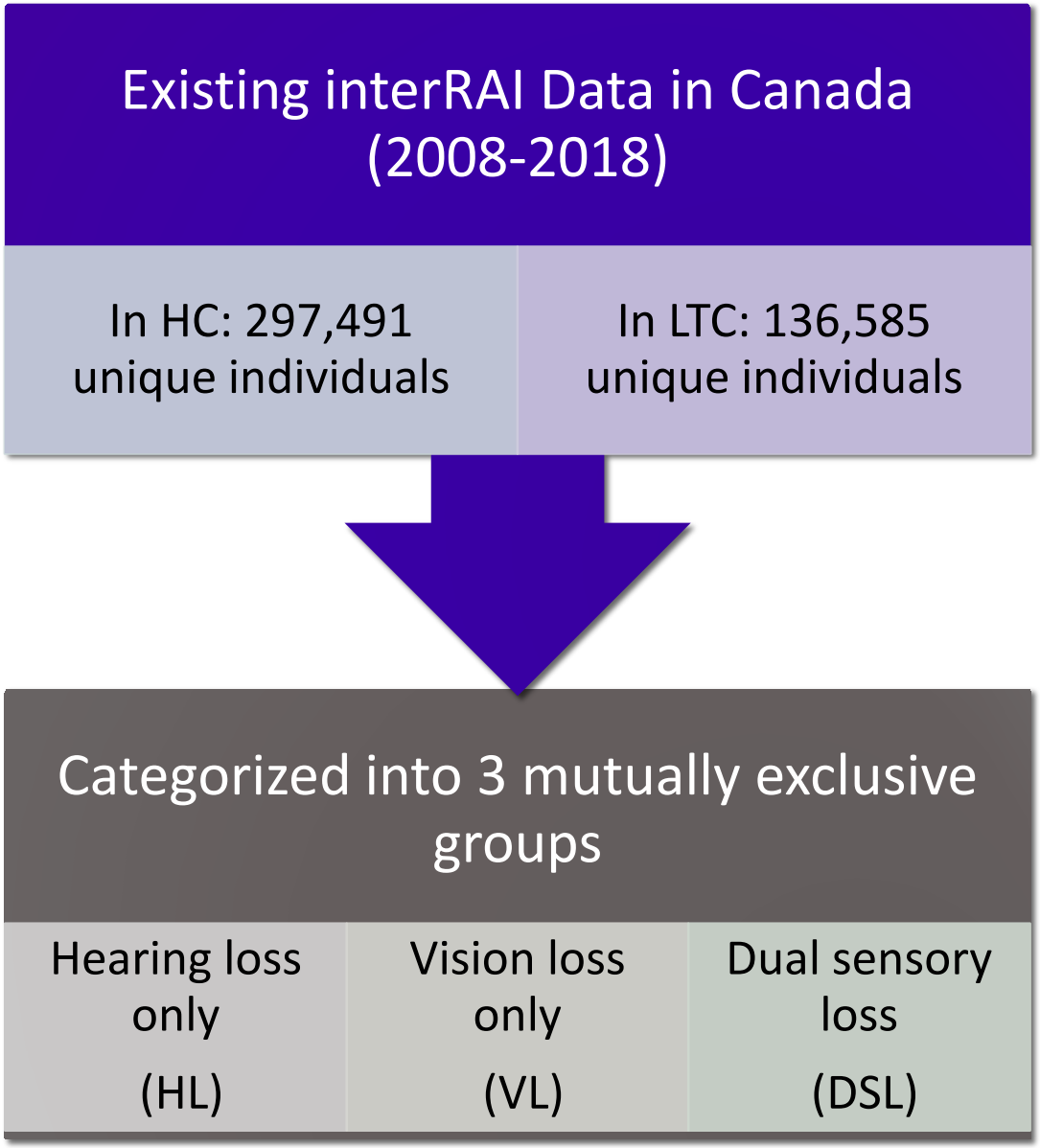
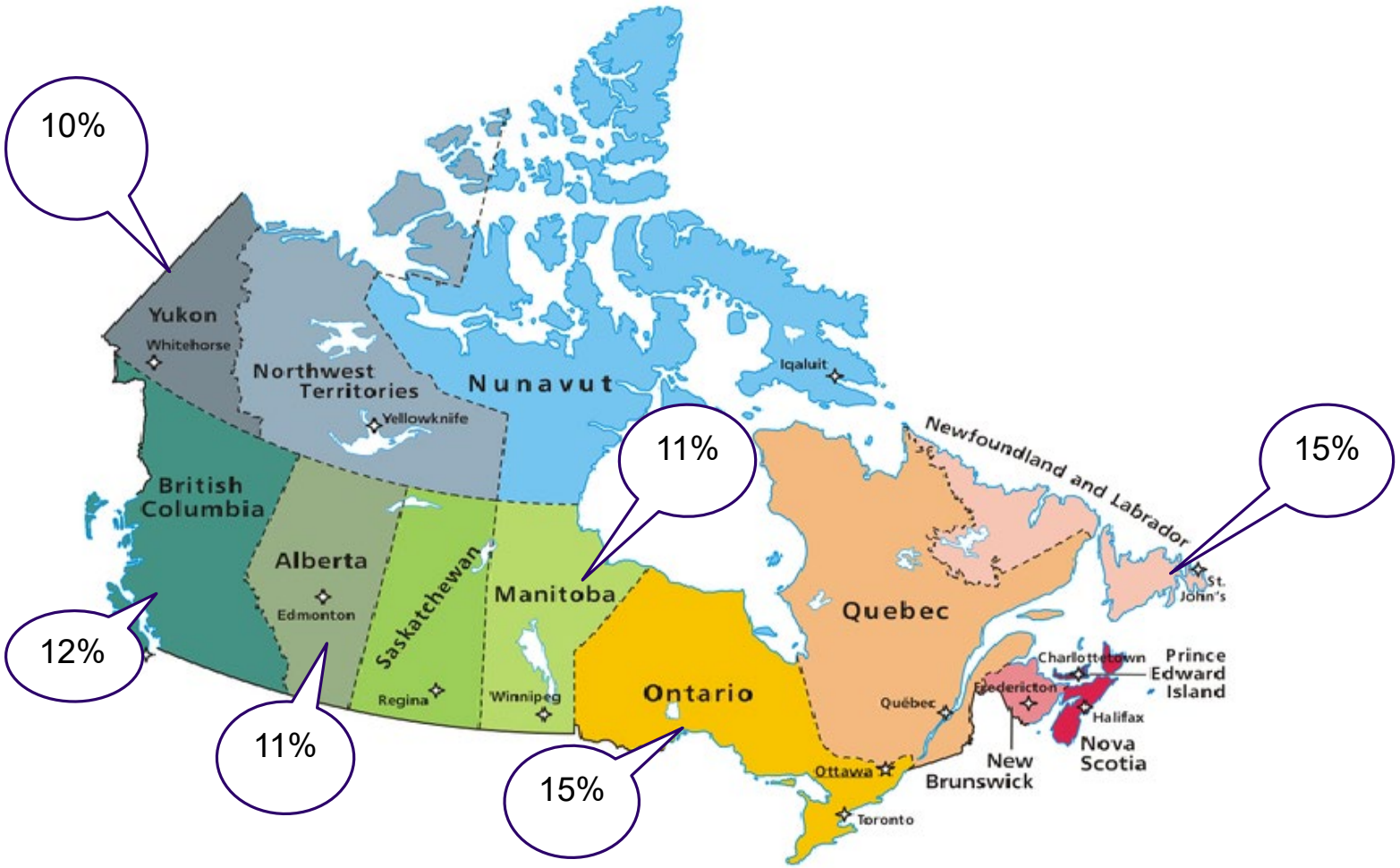
Methods

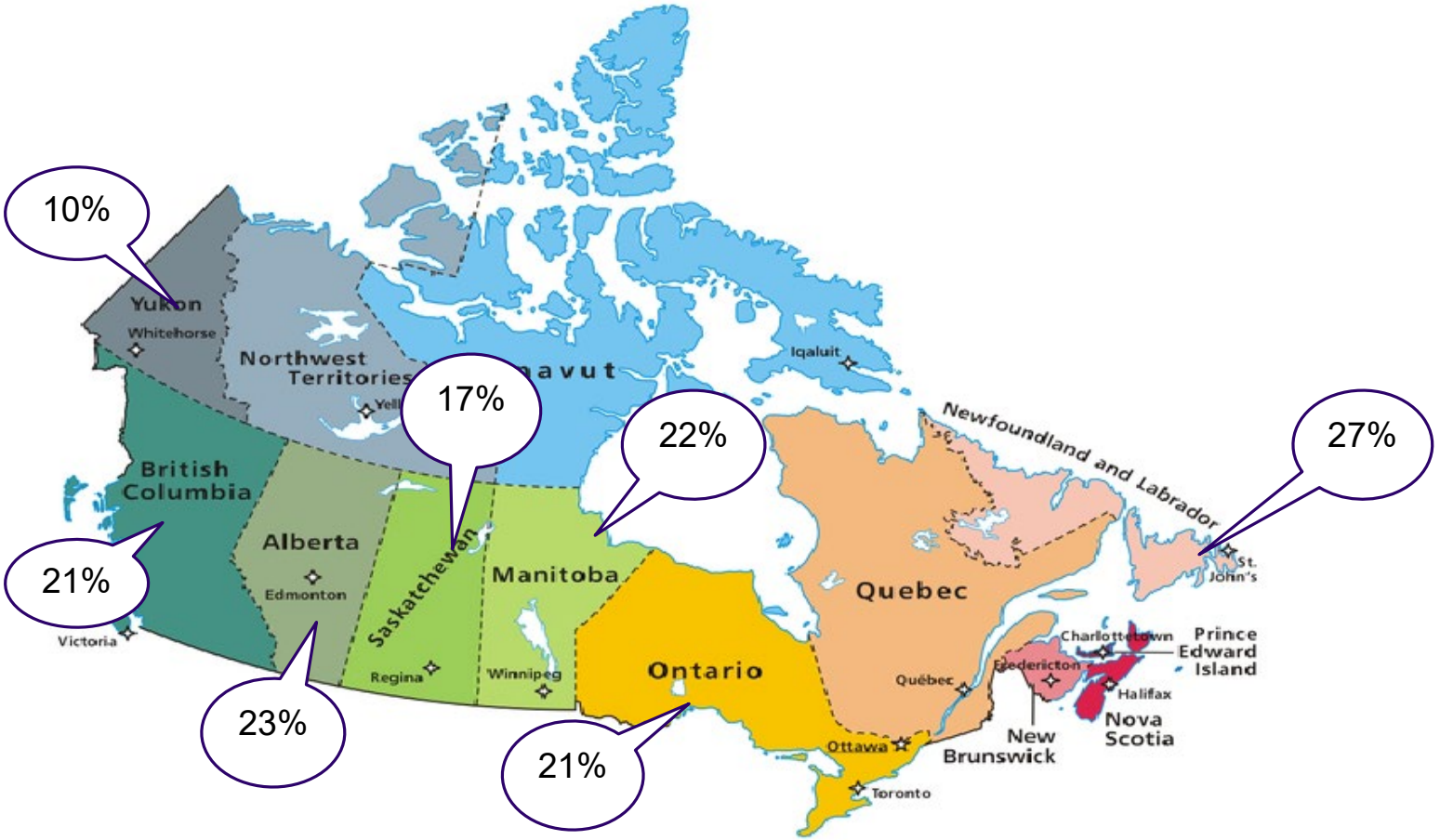

Existing interRAI Data in Canada (2008-2018)
In HC: 297,491 unique individuals
In LTC: 136,585 unique individuals
Categorized into 3 mutually exclusive groups
Hearing loss only (HL)
Vision loss only (VL)
Dual sensory loss (DSL)

Let's start with VL…

Prevalence of vision loss in **home care** clients

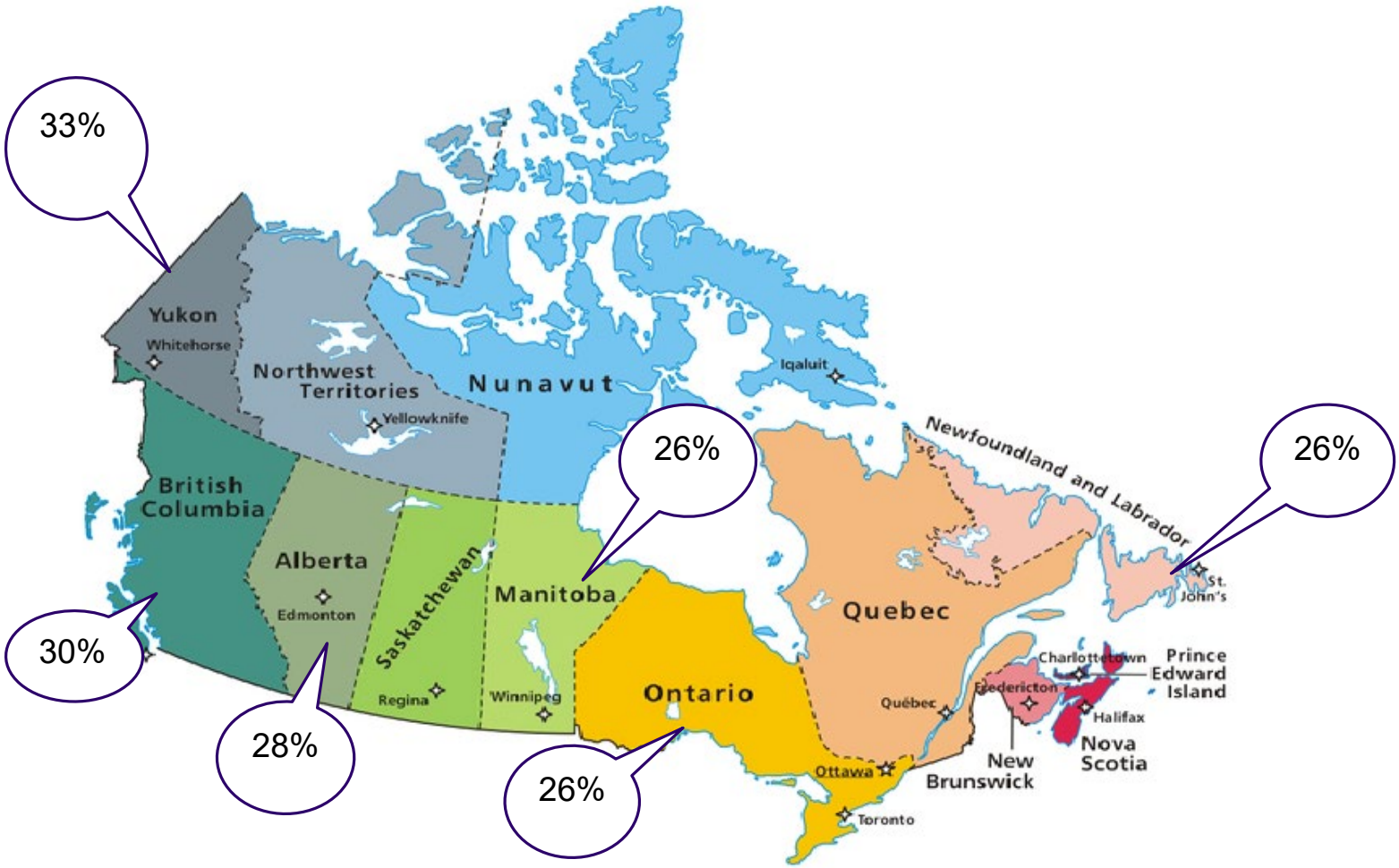


Prevalence of vision loss in **long-term care** residents

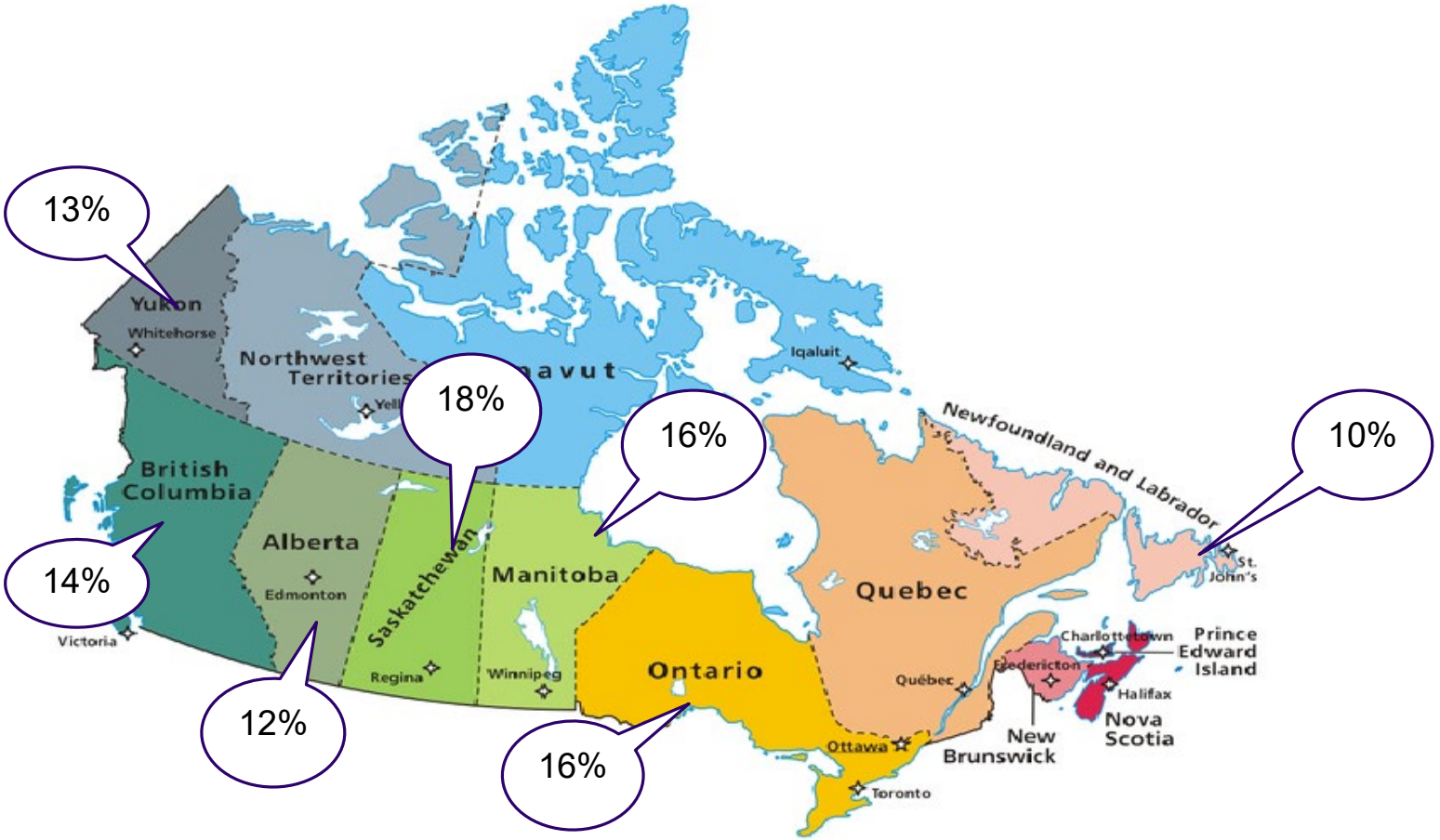


Let's move on to HL...

Prevalence of hearing loss in **home care** clients

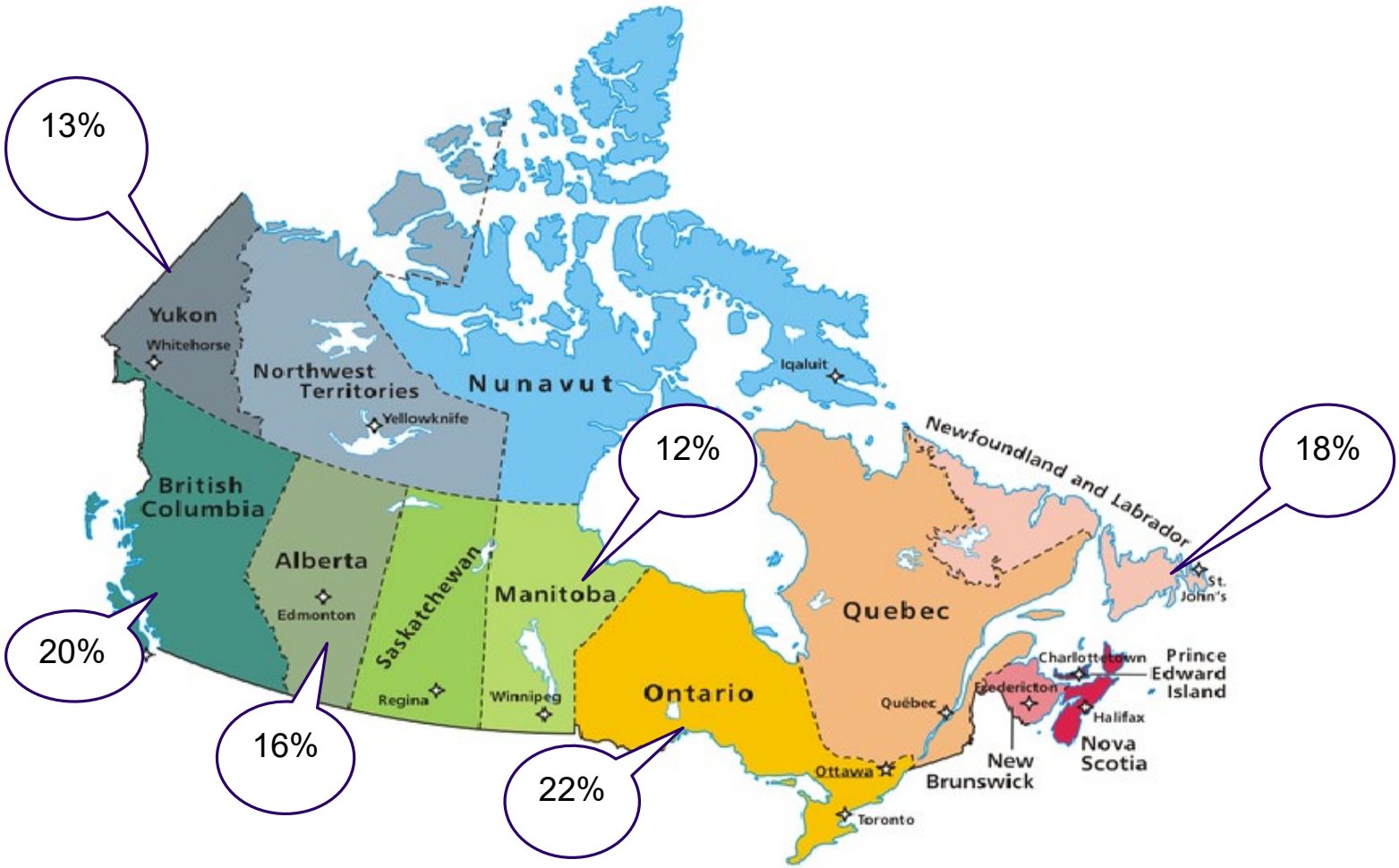


Prevalence of hearing loss in **long-term care** residents



Finally, let's look at prevalence of DSL…

Prevalence of DSL loss in **home care** clients



Link to the paper

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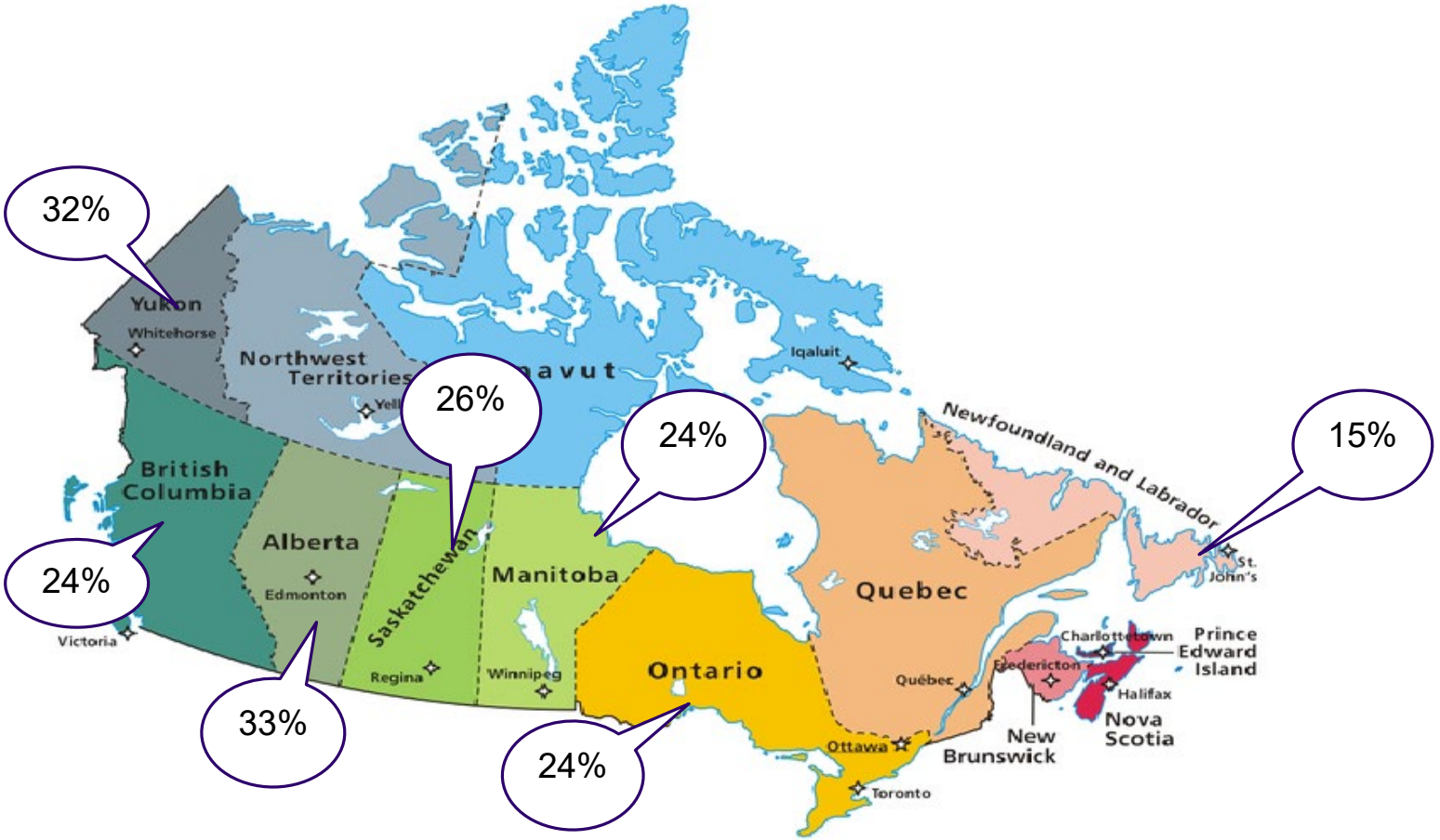
Prevalence of DSL in **long-term care** residents



Implications & Take Home Message

- In both home care and LTC, sensory losses are ***highly*** prevalent
- Roughly **60%** of individuals had one of VL, HL or DSL
- These two interRAI instruments can serve as useful "screening" tools in these two populations
- They can assist health care professionals in flagging individuals who may require additional assessments and/or interventions

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Risk of LTC admission

Background

- The majority of older adults prefer to “age in place”

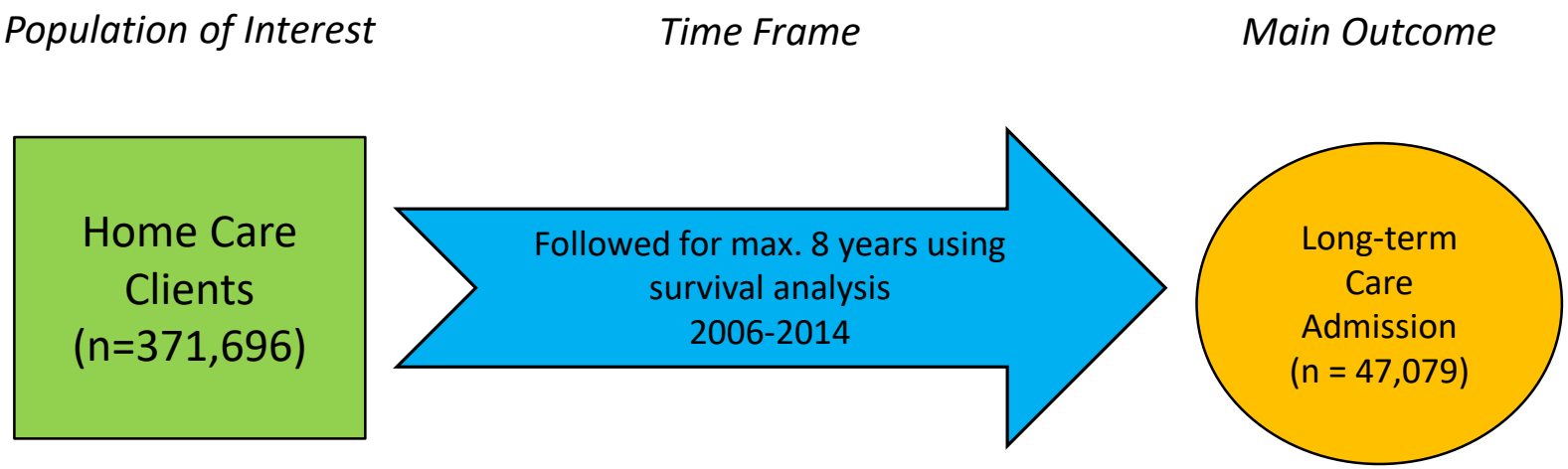
- In many cases, when older adults move into a long-term care (LTC) home, they may experience:
  - A loss of independence and autonomy
  - Reduction in social interactions with friends/family

- Risk factors for LTC home admissions are well known
  - BUT…***influence of HL, VL and DSL have generally not been considered***

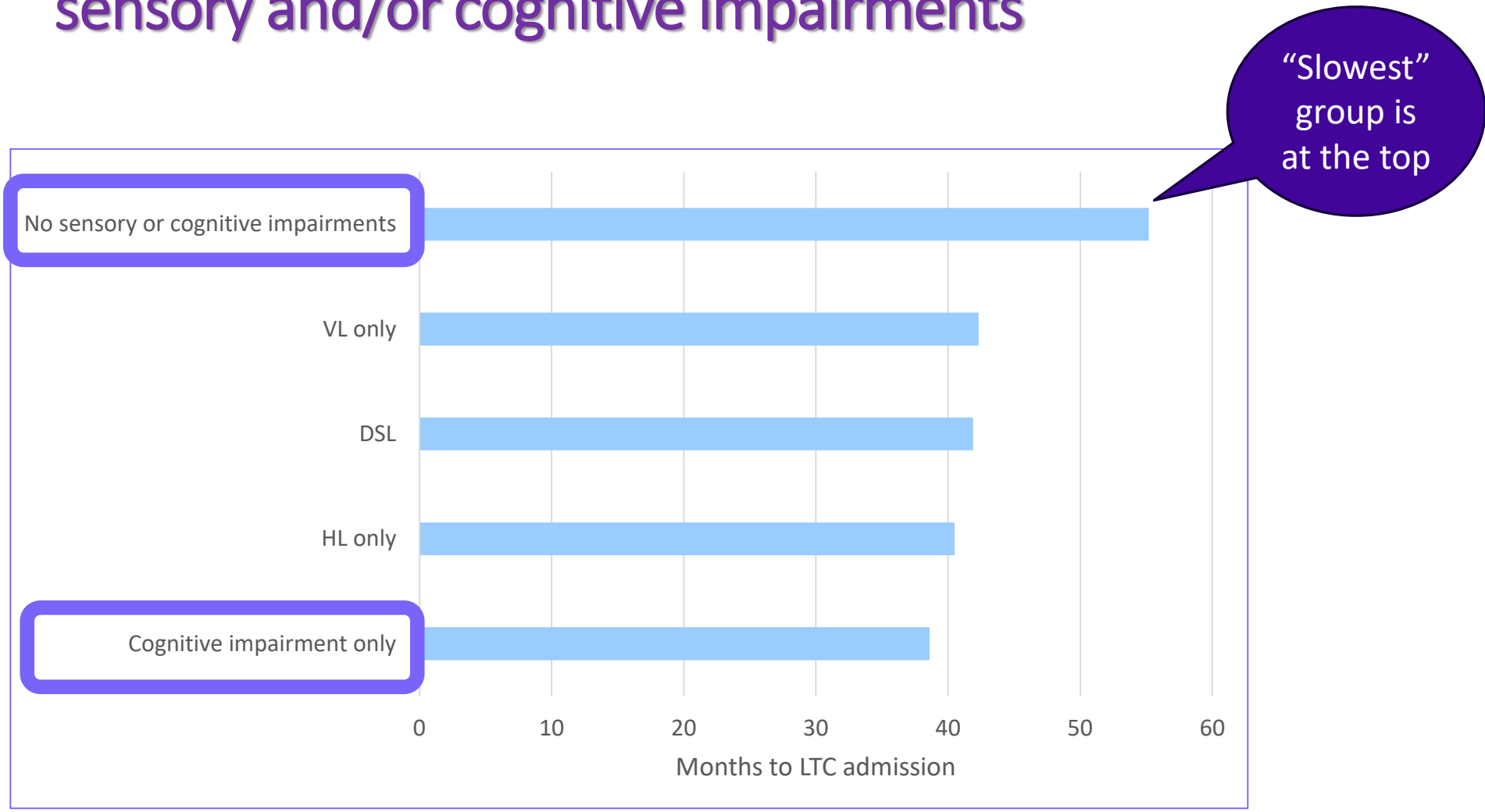
Link to the article

Methods

- Retrospective cohort study using interRAI data for all home care clients (65+ years) in Ontario
- interRAI HC data was linked with person's interRAI LTC assessment
- Definition of HL, VL and DSL the same as in our previous work
- Score on the Cognitive Performance Scale (CPS) to determine cognitive impairment



Time to LTC admission based on the presence of sensory and/or cognitive impairments



BUT…there are many risk factors for LTC…how to sort out the influence of HL for example?

Among individuals without cognitive impairment, but who had HL, they had a 14% increased risk for going to LTC

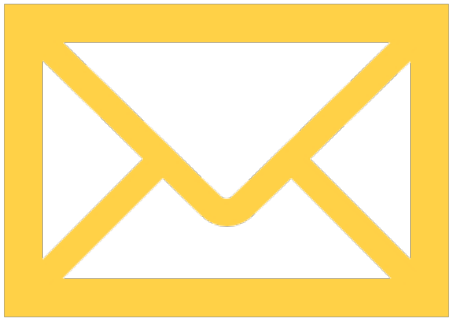
(after controlling for other factors)

Take Home Messages

The interRAI data are widely used across Canada and in multiple countries

These data in Canada can be extremely useful to help in understanding the needs of home care clients and residents in LTC

Sensory impairments are highly prevalent and HL in particular appears to be an important risk factor for LTC admission



Thank you for your attention
Please email me with any questions
(dguthrie@wlu.ca)