Canadian Home Care Association
canadienne de soins et services à domicile

Advancing Excellence in Home Care

KNOWLEDGE NETWORK
Building Capacity... Improving Performance

VIRTUAL LEARNING SERIES

Unleashing the Power of InterRAI
ACCOUNTABLE AND SUSTAINABLE CARE

September 10 2019

About the Canadian Home Care Association's Virtual Learning Series

The aim of the virtual learning series is to improve the capabilities of individuals and organizations across the home and community care sector.

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Today's webinar may be heard through your computer or a dial-in audio connection.

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Features of this webinar

- To ensure you will have the best experience, **please close other programs on your computer.**

- **Use the "Questions and Comments" chat pod to the left of the presentation** to ask questions or post comments throughout the webinar. **Please tell us who your questions should be directed at.** Questions will be answered at the end.

- **A link for the protected recording will be emailed to participants,** with a copy of the slides next week.

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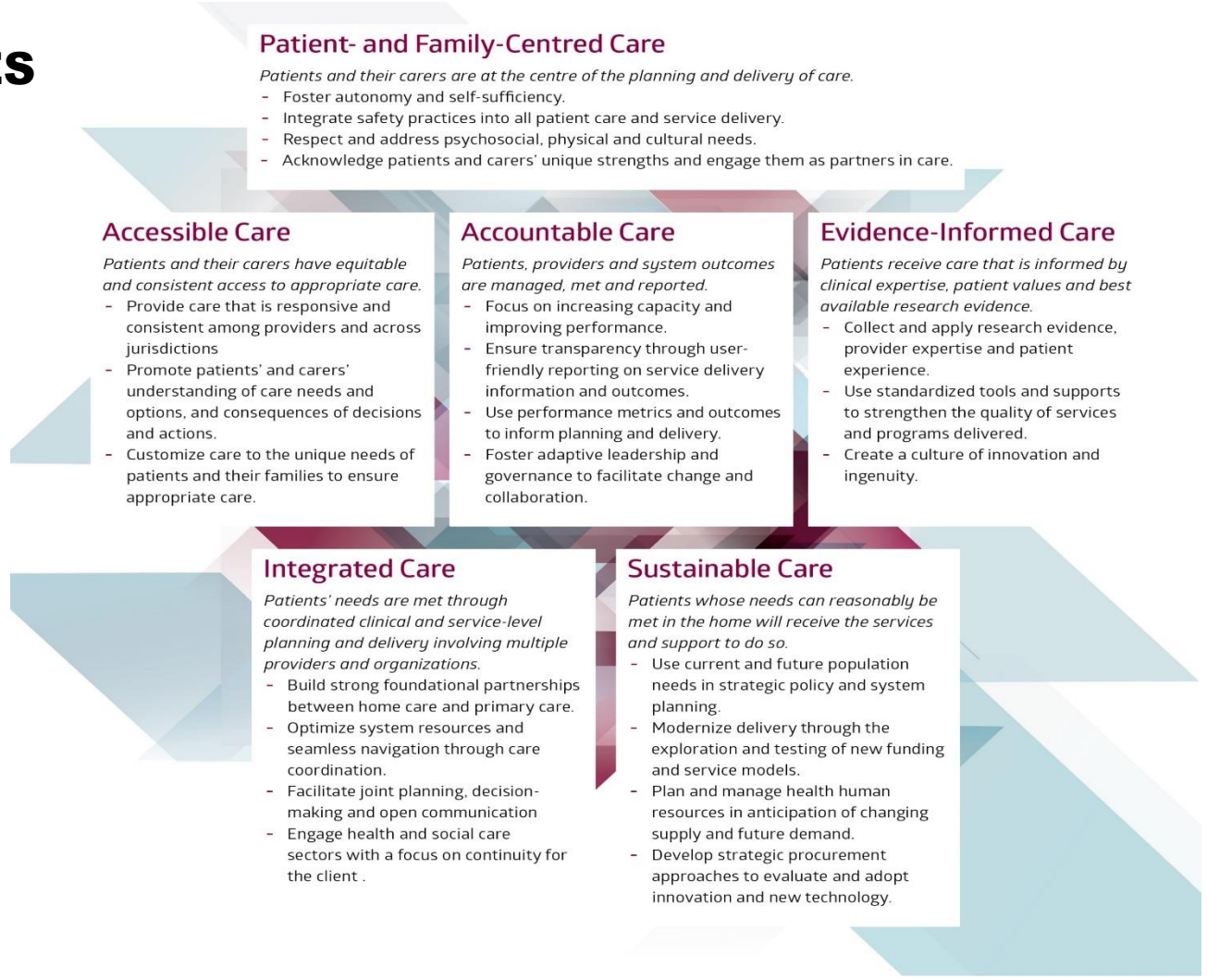
HARMONIZED PRINCIPLES FOR HOME CARE



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Presenters

PROFESSOR JOHN HIRDES
School of Public Health and Health Systems, University of Waterloo

IAN RITCHIE
Regional Director-East Sub-Region, Toronto Central LHIN

LESLIE ECKEL
Knowledge Exchange Associate at interRAI Canada.

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Update on Use of interRAI Systems in Canada

John P. Hirdes, PhD FCAHS

Professor

School of Public Health and Health Systems

University of Waterloo

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Canadian interRAI Fellows by Network

Senior Country Fellow

- Hirdes (UWaterloo) → iNMH Chair, Board

Acute Care (Chair: Gray)

- Berg (UToronto) → PAC Chair
- Boscart (Conestoga)
- Costa (McMaster) → ED Chair
- Heckman (UWaterloo)
- Kergoat (UMontreal)
- Sinha (Mt Sinai)

Integrated Care & Aging (Chair: Declercq)

- Guthrie (WLU) → PC Chair
- Smith (Nipissing)
- McArthur (McMaster)
- Vadeboncoeur (CHEO)

Mental Health (Chair: Hirdes)

- Barbaree (Waypoint) → Forensics
- Brown (Nipissing) → Corrections
- Hoffman (Nipissing) → Police
- Kehyayan (UCalgary – Qatar)
- Martin (Lakehead) → ID Chair
- Mathias (USask)
- Perlman (UWaterloo) → Addictions
- Saari (St Eliz Research)
- Stewart (Western) → Child/Youth Chair, Board

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Implementation & Testing of interRAI Instruments in Canada

Solid symbols – mandated or recommended by govt; Hollow symbols – research/evaluation underway

- RAI 2.0/interRAI LTCF
- RAI-HC/interRAI HC
- RAI-MH
- interRAI CMH
- interRAI ESP
- interRAI PC
- interRAI ID
- interRAI ED/AC
- interRAI CA
- interRAI CHA
- interRAI BMHS
- interRAI SQoL
- interRAI ChYMH

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Implementation status in Canada by interRAI Assessment System and number of assessments currently held at University of Waterloo's interRAI Canada data server

interRAI Instrument	Current Implementation Status													Number of Assessments Held at UWaterloo
	YK	NWT	BC	AB	SK	MB	ON	QC	NB	NS	PEI	NL	NT	
RAI 2.0 (Long-Term Care)	●	●	●	●	●	○	●			◌		●		5,044,480
interRAI Long-Term Care Facility						○	◊		●	○	○		○	10,330
RAI-Home Care	●		●	●	●	○	●			●		●		4,413,724
interRAI Home Care		●		○		◌	●		○		●		○	194,502
interRAI Contact Assessment				◌	◌	◌	●							2,624,332
interRAI Community Health Assessment							●				●			61,363
interRAI Palliative Care				◊	◊		●			◊				119,274
RAI-Mental Health						○	●	◊				●		1,330,915
interRAI Community Mental Health							◌	◌				●		8,667
interRAI Emergency Screener for Psychiatry							◌							5,249
interRAI Brief Mental Health Screener			○		●	●	●							72,734
interRAI Intellectual Disability											●			2,231
interRAI Child/Youth Mental Health							◌				●			12,480
interRAI Acute Care							◊	◊				◊		997
interRAI Quality of Life			●		◊	◊	◌			◊				12,235
TOTAL														**13,913,513**

● – Mandated across province/territory (Note: includes provinces & territories where implementation to begin in 2019 or later)
○ – Mandate planned or mandated regionally only
◌ - Pilot or local implementations only
◊ - Research use only

New interRAI Instruments

Looking for Pilot Sites

- Self-report instruments
  - interRAI Check-Up → Primary care, seniors housing
  - interRAI Caregiver Needs Assessment → Any setting

- Assessor-rated instruments
  - interRAI 0-3
  - interRAI Peds-HC

New Applications of interRAI HC Data

- Personal Support Algorithm
  - Joanna Sinn, PhD thesis
  - Used to inform allocation of PS services in home care

- Referral for Specialized Geriatric Services
  - Sophie Hogan, PhD thesis
  - Used to identify home care clients who may need more specialized geriatric services or referral to geriatrician

New Applications in Development

- ALC risk algorithm from interRAI HC
  - Predict risk of becoming ALC if hospitalized
  - Stella Arthur dissertation

- Update to MAPLe
  - Refinement of MAPLe
  - Expand range of of MAPLe levels, correct anomalies, resolve inconsistencies with other algorithms (e.g., MI-CHOICE)
  - Send feedback/recommendations to Hirdes

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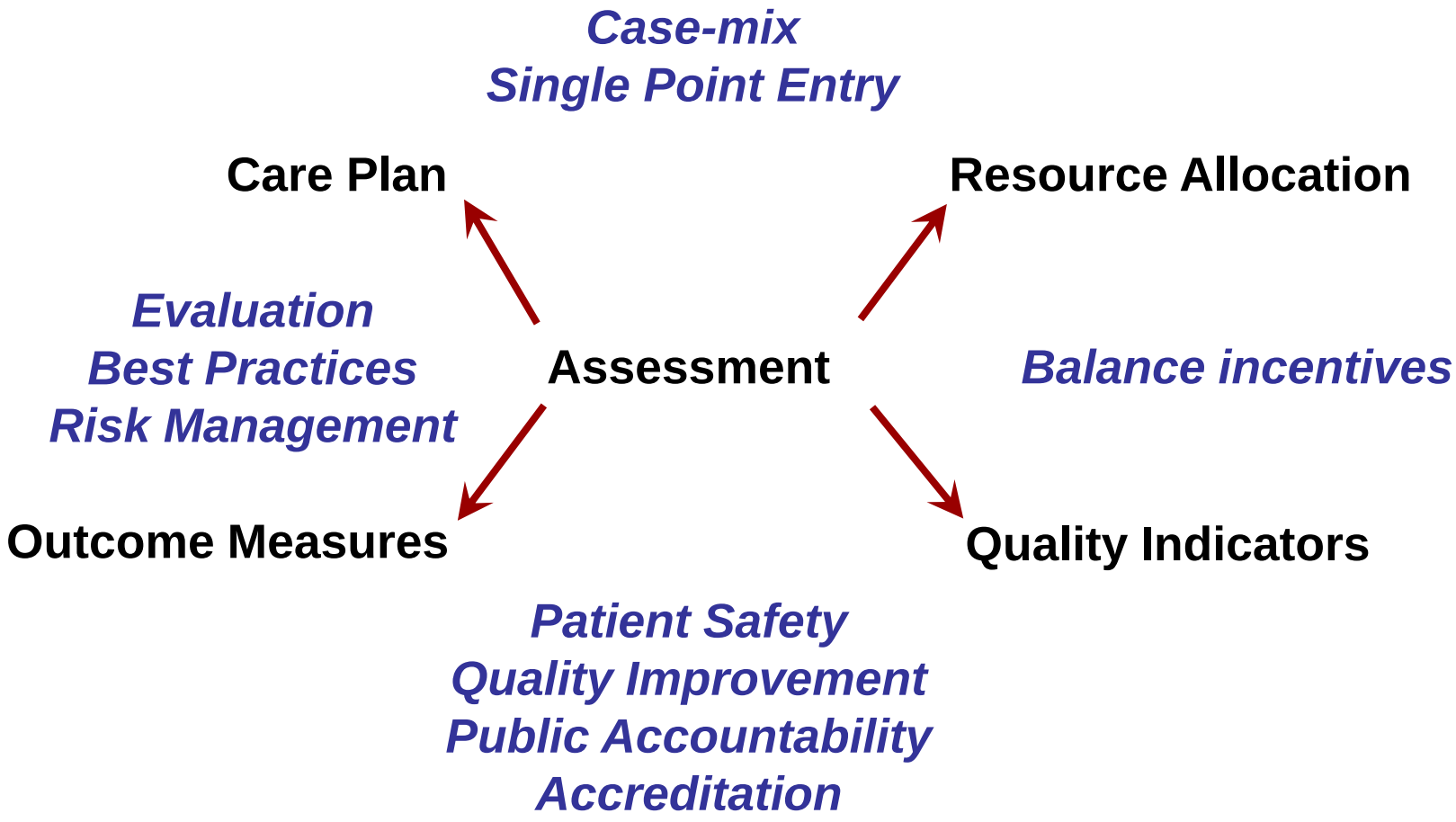
Applications of interRAI's Assessment Instruments:

One assessment … multiple applications



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Vulnerable Persons at Risk (VPR) Algorithm

- Three level algorithm to identify persons at greatest risk of adverse outcomes during disaster of any type
- Refinement of original algorithm used in Christchurch NZ earthquake
  - Sandy van Solm dissertation
- Validated against mortality, hospitalization, LTC placement, clinician ratings
- Can be derived from RAI-HC and interRAI HC
- Specifications available through CIHI
- Check that your vendor has this application

JEM

Using standard clinical assessments for home care to identify vulnerable populations before, during, and after disasters

Alexandra I.T. van Solm, PhD
John P. Hirdes, PhD, FCAHS
Leslie A. Eckel, PhD(c), RSW
George A. Heckman, MD, FRCPC
Philip L. Bigelow, PhD

ABSTRACT

Objectives: *Several studies have shown the increased vulnerability of and disproportionate mortality rate among frail community-dwelling older adults as a result of emergencies and disasters. This article will discuss the applicability of the Vulnerable Persons at Risk (VPR) and VPR Plus decision support algorithms designed based on the Resident Assessment Instrument-Home Care (RAI-HC) to identify the most vulnerable community-dwelling (older) adults.*

Design: *A sample was taken from the Ontario RAI-HC database by selecting unique home care clients with assessments closest to December 31, 2014 (N = 275,797). Statistical methods used include cross tabulation, bivariate logistic regression as well as Kaplan-Meier survival plotting and Cox proportional hazards ratios calculations.*

Results: *The VPR and VPR Plus algorithms, were highly predictive of mortality, long-term care admission and hospitalization in ordinary circumstances. This provides a good indication of the strength of the algorithms in identifying vulnerable persons at times of emergencies.*

Conclusions: *Access to real-time person-level information of persons with functional care needs is a vital enabler for emergency responders in prioritizing and allocating resources during a disaster, and has great utility for emergency planning and recovery efforts. The development of valid and reliable algorithms supports the rapid identification and response to vulnerable community-dwelling persons for all phases of emergency management.*

Key words: vulnerable populations, disasters, emergency management, frail elderly, interRAI

INTRODUCTION

Canada has experienced—and will continue to experience—a full range of meteorological, geological, and other natural hazards as well as unintended and intentional events.[1] In 1998, severe freezing rainstorms affected Quebec and other parts of North America. In Quebec, these storms caused major power outages and damage to roofs and trees, affecting almost five million people.[2] More recent examples include severe floods in Calgary, Alberta (2013), a major ice storm in Southern Ontario (2013), and the wild fire in Fort McMurray, Alberta (2016) that led to the evacuation of over 80,000 people.

Concurrently, Canada is experiencing an aging population. By 2036, seniors aged 65 years and older could represent about 25 percent of the total population (between 9.9 and 10.9 million people).[3] Moreover, with technological change and the restructuring of healthcare systems, the locus of care is shifting from institutions to the home.[4] As a result of this policy shift, a growing proportion of elderly persons with substantial care needs are residing in their own homes longer, and are dependent on formal home and community care services to manage their activities of daily living (ADL).

Old age has been repeatedly reported as having an association with morbidity and mortality resulting from a disaster.[2,5-8] In a summary report based on a series of unpublished case studies of individual

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VPR Scale Components

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- Impairment
  - CPS 2+
  - CHESS 3+
  - Vision D1=3+
  - ADL Hierarchy 3+
  - ADL Self-performance
    - Transfer
    - Locomotion
    - Toilet Use
  - IADL
    - Medication management
    - Meal preparation
  - Wheelchair
- Social Isolation
  - Lived alone
  - Alone Most/All F3a=3
  - Primary Helper
  - Withdrawal soc act
  - Reduces Social intx
- Caregiver
  - Any caregiver distress
  - Conflict fam/friends
- Technology Dependent
  - Dialysis, oxygen

Multi-pronged information strategy for emergency response

- Target vulnerable populations for immediate follow-up
- Expanded monitoring for medium term risk of increased mortality related to on-going stress of event and relocation
- Supporting continuity of care by transmission of interRAI assessments and care planning information for evacuees
- Care of evacuees using interRAI Acute Care
- Management of evacuation process
  - Decide who to move, when and how
- Post-emergency evaluation
  - E.g., Mor papers on Hurricane Katrina

Thank you!

Questions/comments?

Toronto Central LHIN

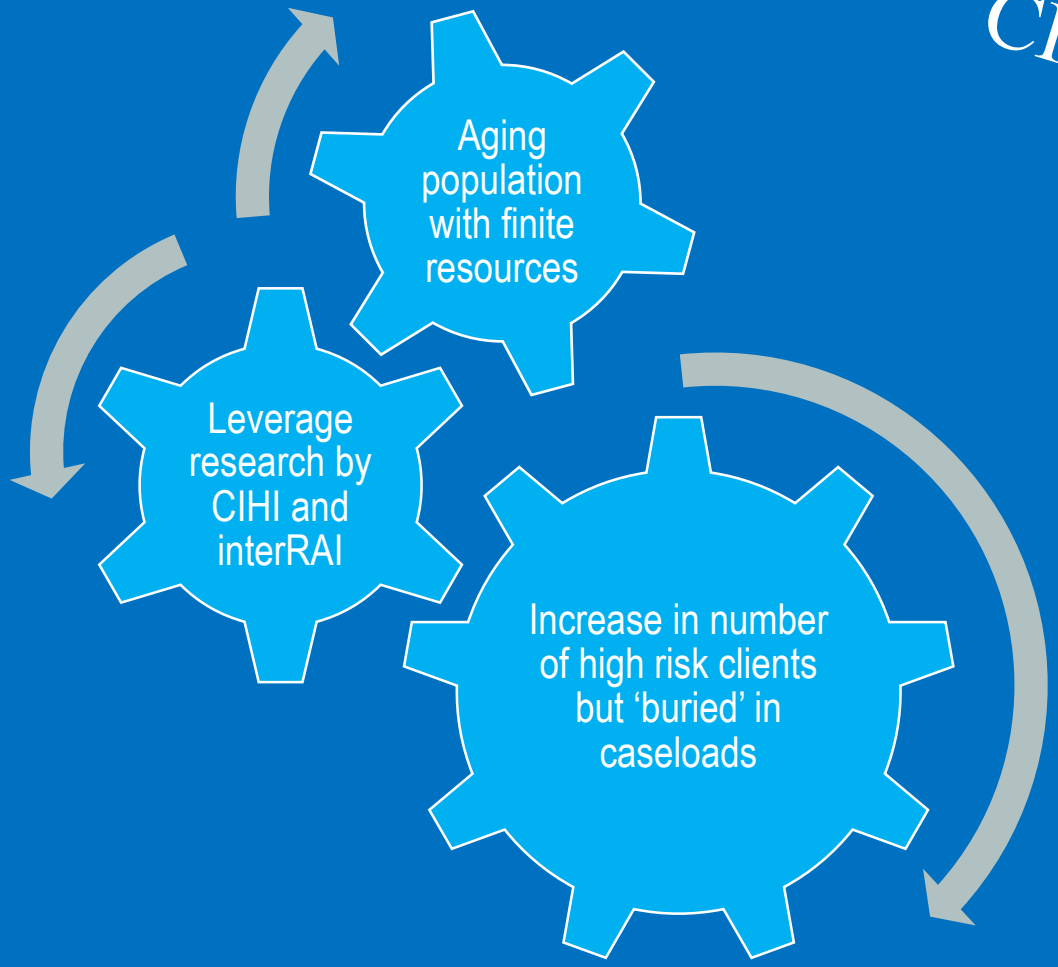
Investing in Communities

The Role of interRAI Assessments: Linking Data to Interventions/ Resource Allocation

Canadian Home Care Association Presentation
Ian Ritchie
September 10, 2019

Ontario

WHY CHANGE?



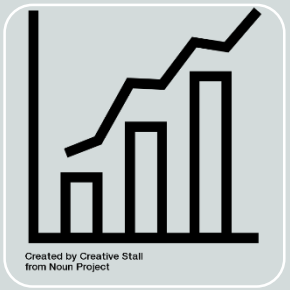
Because we have to!

Alice's Experience

Ontario

- 84 Year Old Female
- MAPLe 5/5 and fits HIGH RISK profile for CIHI and interRAI
- CRISIS risk level 4 (automatically eligible for LTC)
- Dementia and multiple health issues/ high CPS/MMSE
- Clear caregiver distress and family burnout
- Multiple hospitalizations that ended as ALC LTC
- Personal support hours/visits 10 hours/week
- No home visit by Care Coordinator for 6 months
- Alice is 1 of 40 or 80 clients on a caseload

Needle in a Haystack Issue



According to Cancer Care Ontario there are 4600+ clients in Ontario hospitals every day

At MGH

Every week 100 clients will be admitted to home care each week

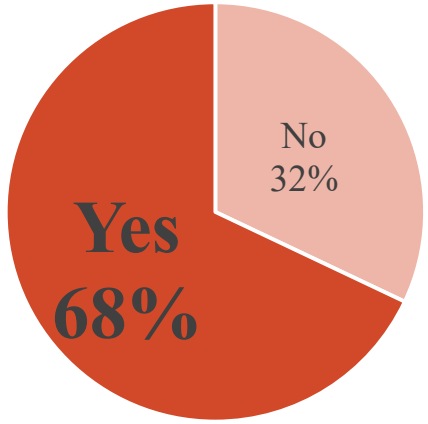
Only 1.58 clients per week will be so debilitated and frail that they will end up with an ALC-LTC designation

Cumulative total over 12 months will be a loss of 82 acute care beds in one medium sized hospital

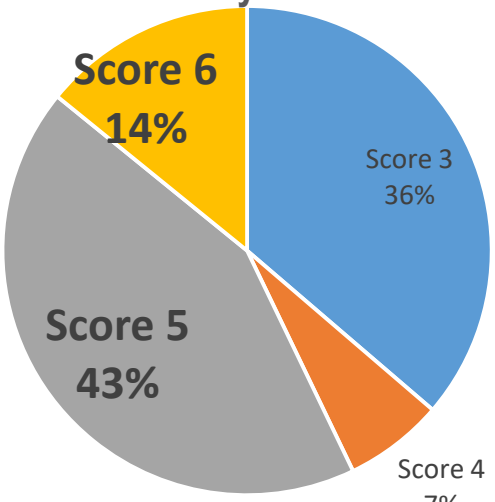
Cognitive Performance

Ontario

% of Clients with Dementia



% of Clients by CPS Score



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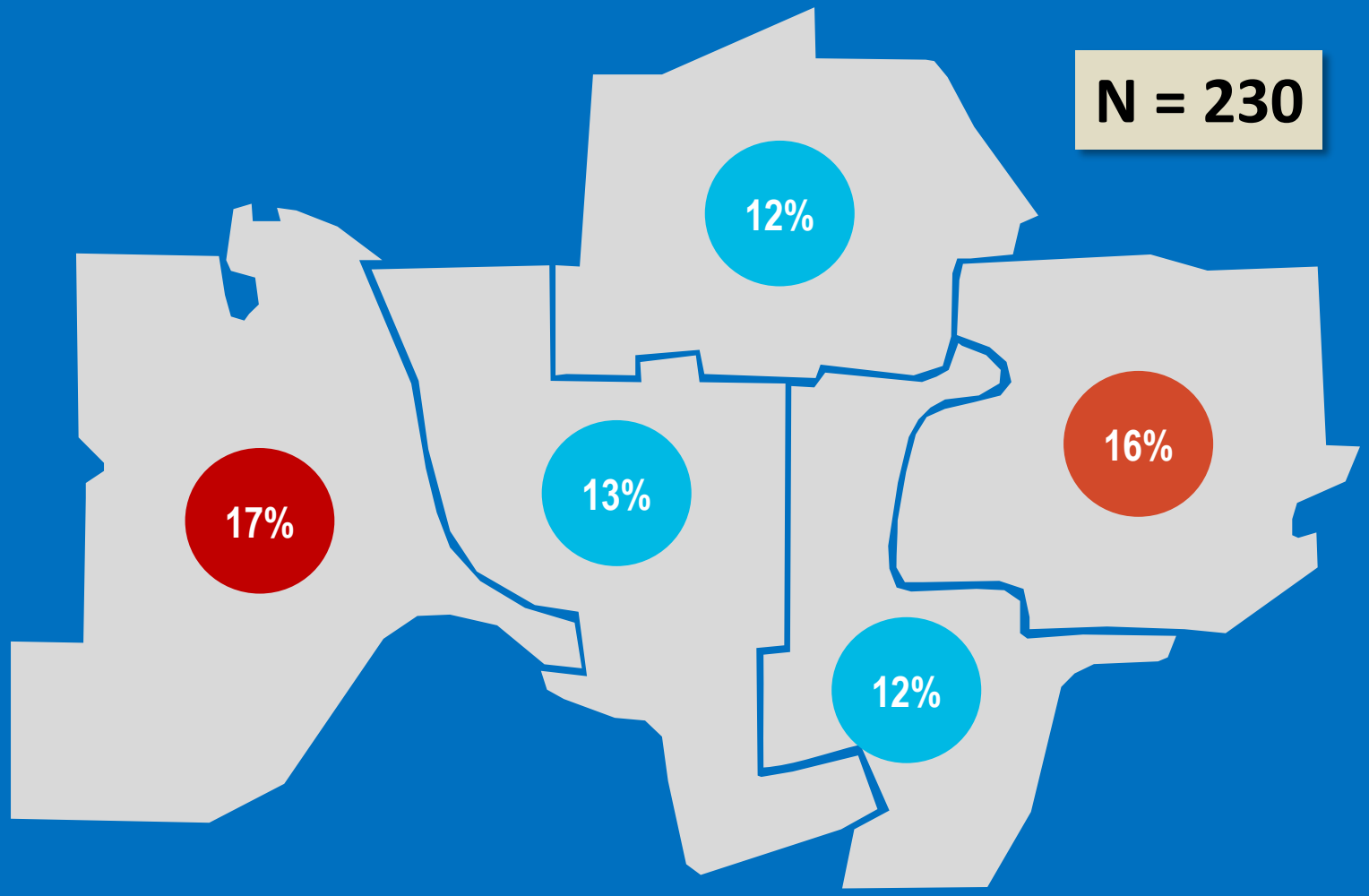
Source: CHRIS Database (InterRAI-HC), Extracted: February 2019

% of Clients with Cognitive Performance Scale Score of 6 (FY 2018/19)

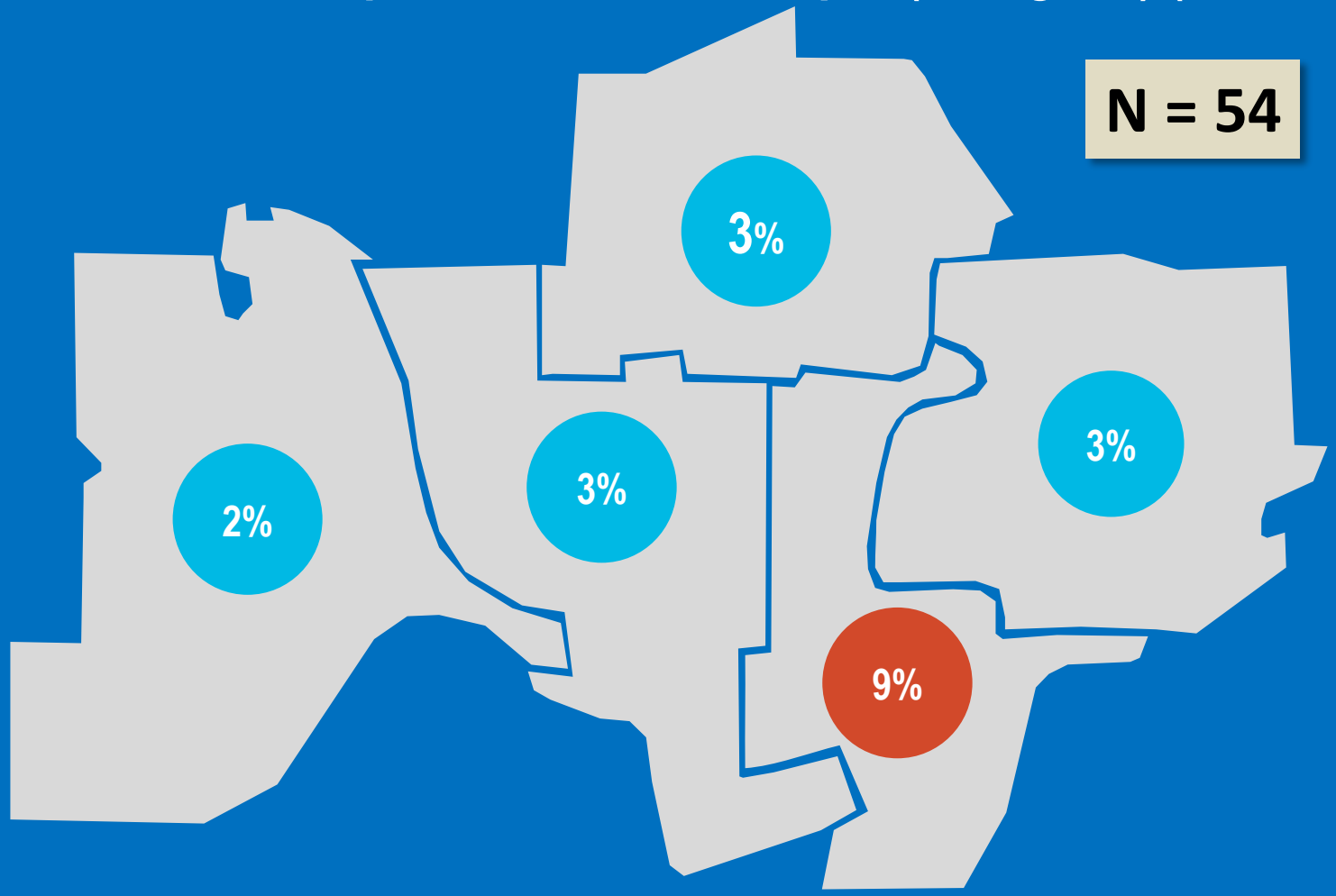
Ontario



- West and East Toronto Sub-Regions have the highest proportion of clients with a CPS score above 6

West Toronto	Mid-West Toronto	North Toronto	Mid-East Toronto	East Toronto	Grand Total
17.4%	13.0%	11.9%	11.6%	15.6%	14.1%

Percent (%) of Clients that Report No Informal Helper (Caregiver) (FY 2018/19)



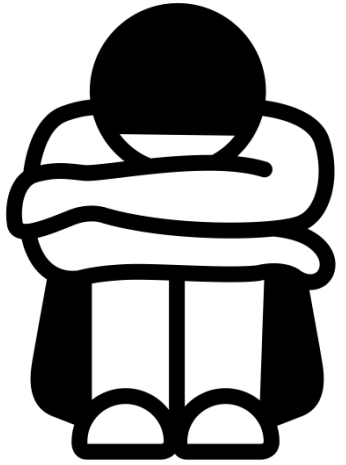
- Clients in Mid-East report the highest rate of no informal help or caregivers

West Toronto	Mid-West Toronto	North Toronto	Mid-East Toronto	East Toronto	Grand Total
2.0%	3.4%	3.3%	8.5%	2.6%	3.3%

Ontario

Caregiver Distress

- Informal helper reports difficulty to continue in caregiving activities
- Primary helper reports feelings of distress, anger, or depression
- Family/friends reports feeling overwhelmed



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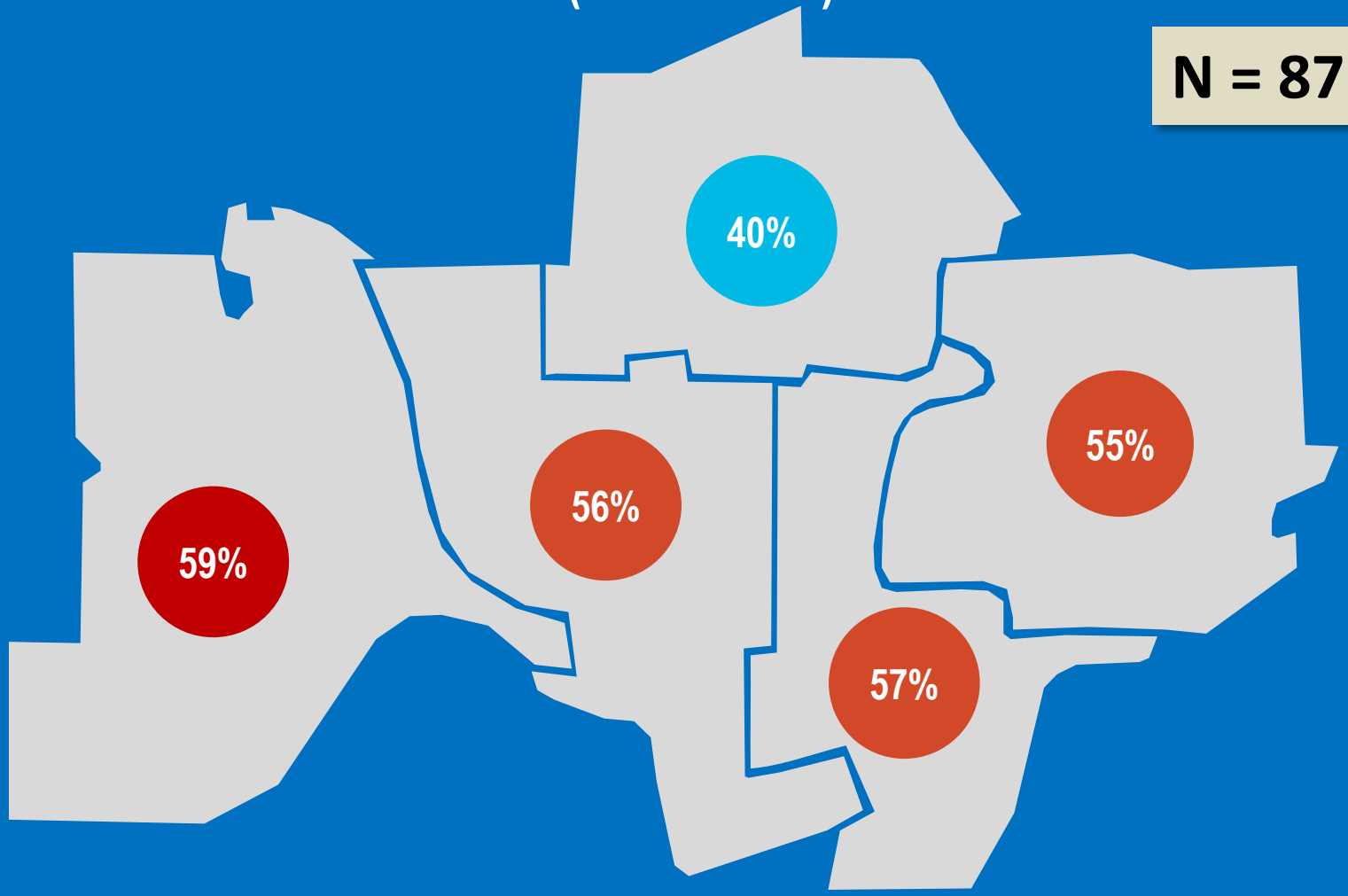
Percent (%) of Clients that Report Caregiver Distress (FY 2018/19)

Ontario

N = 871

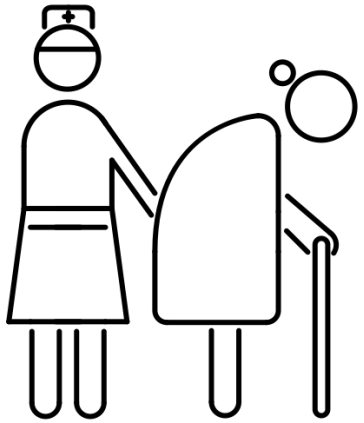


- Clients in West Toronto exhibits the highest levels of caregiver distress, and North Toronto has the lowest

West Toronto	Mid-West Toronto	North Toronto	Mid-East Toronto	East Toronto	Grand Total
59.4%	55.9%	40.1%	56.6%	54.9%	53.6%

Personal Support Care Group

- The Personal Support algorithm provides a framework for allocating personal support
- Ranges from 1 to 6, where a higher group indicates greater need for personal support (1 = low high, 6 = high need)



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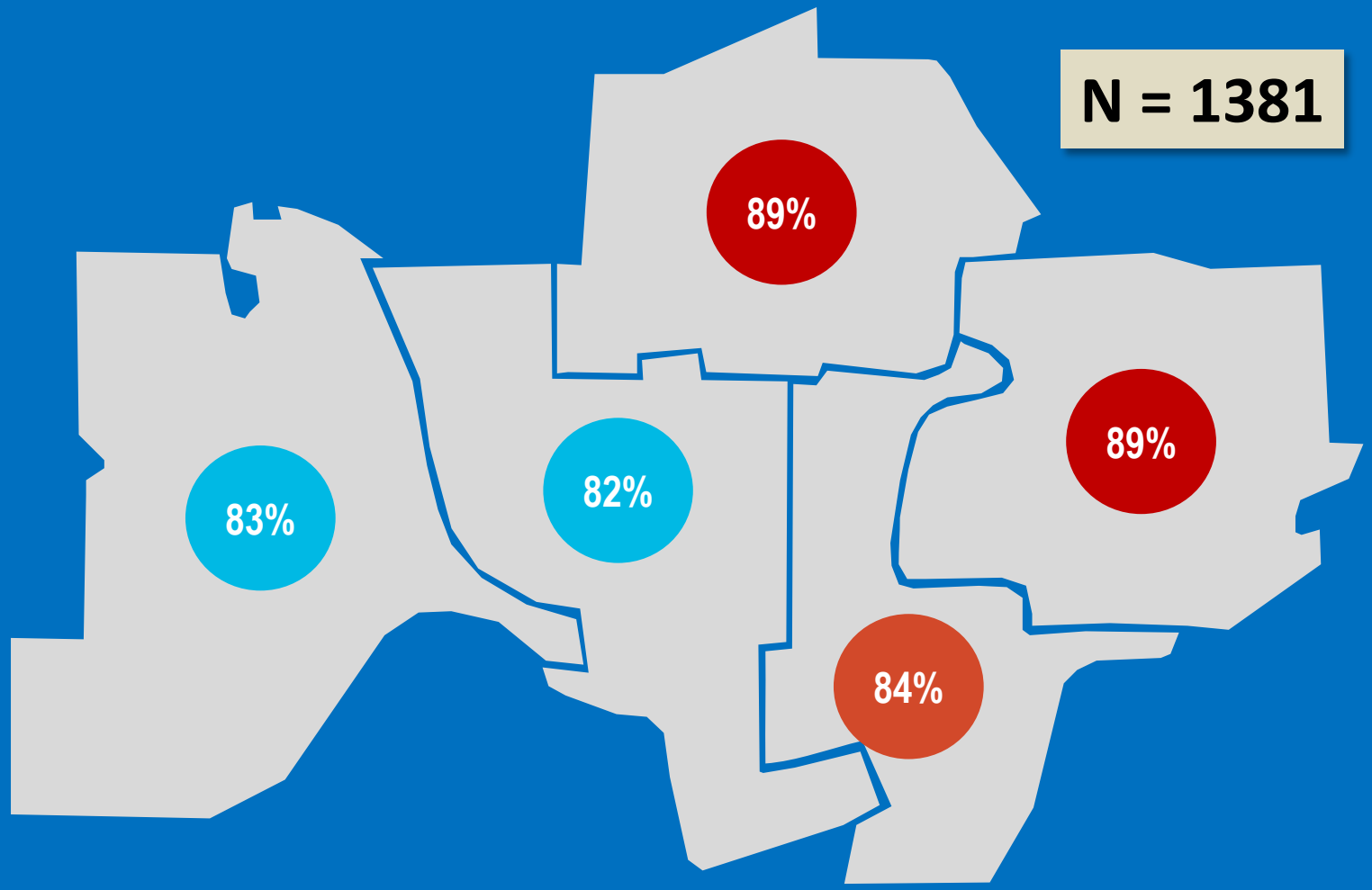
Ontario

% of Clients with PS Score at 5 or Above (FY 2018/19)

Ontario



- North and East Toronto Sub-Regions have the highest proportion of clients with PS score above 5

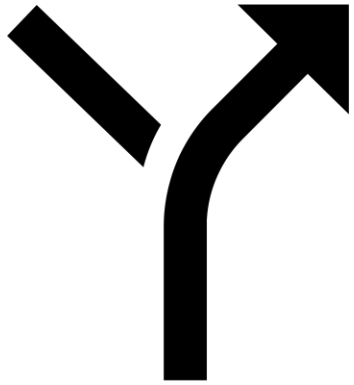
West Toronto	Mid-West Toronto	North Toronto	Mid-East Toronto	East Toronto	Grand Total
83.4%	82.3%	89.0%	84.4%	89.2%	85.2%

Ontario

DIVERT Scale

Detection of Indicators and Vulnerabilities for Emergency Room Trips

DIVERT Scale is designed to classify the risk of emergency department use in frail community-dwelling older adults.

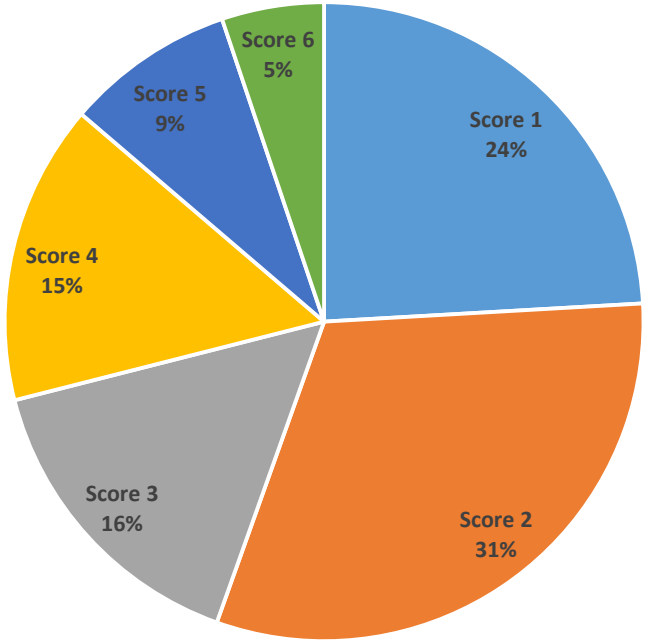


Created by Hare Krishna
from Noun Project

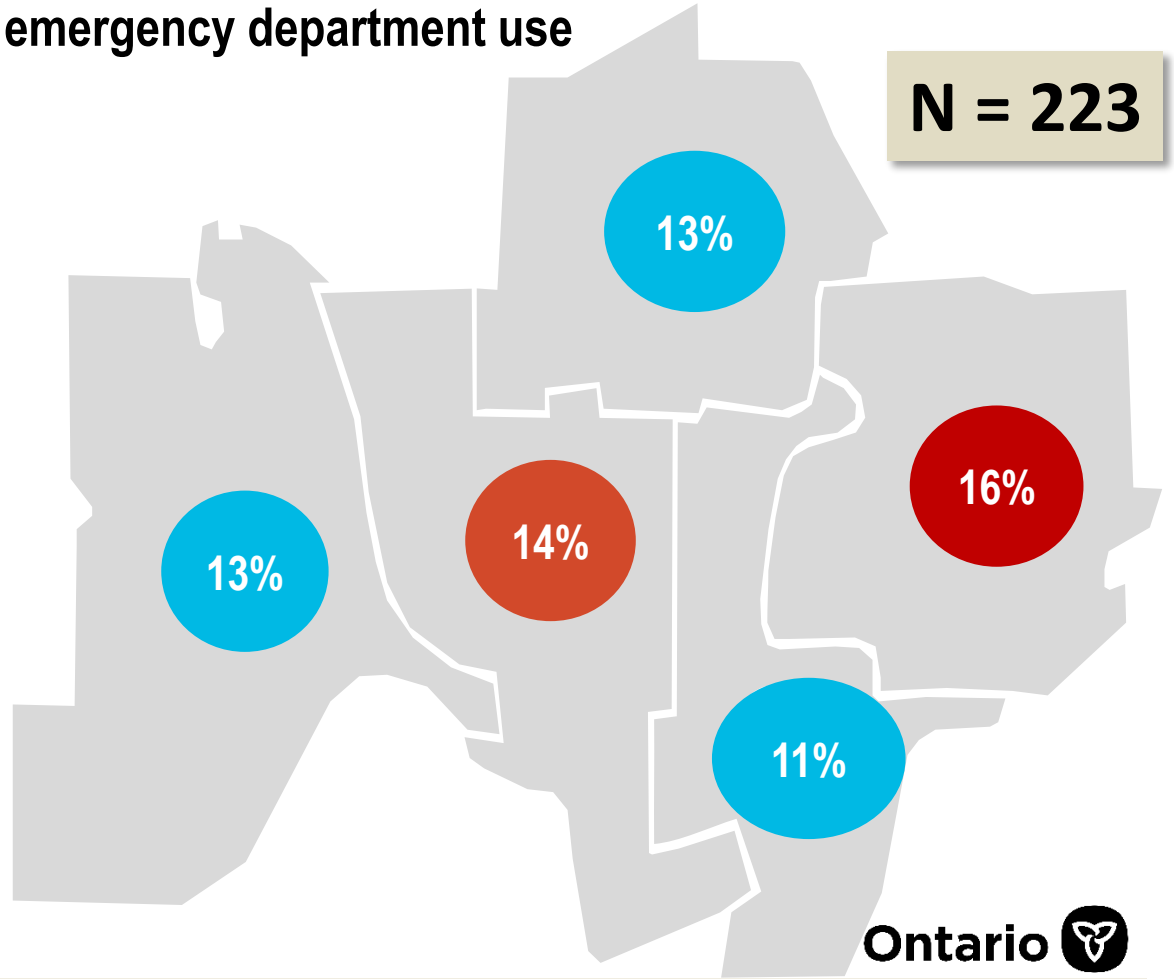
Clients with High Scores on Detection of Indicators and Vulnerabilities for Emergency Room Trips (DIVERT) Scale

5/6 = Highest risk for future emergency department use

% of Clients by DIVERT Score



N = 223



Ontario

- Of the clients that met the CIHI criteria **14% are at the highest risk of future ED use** (score in 5-6 range)

Source: CHRIS Database (InterRAI-HC), Extracted: February 2019

Finding the ‘Right’ Clients

Using data to find and target the physically frail.

Created by R Diepenheim
from Noun Project

Latest research from InterRAI

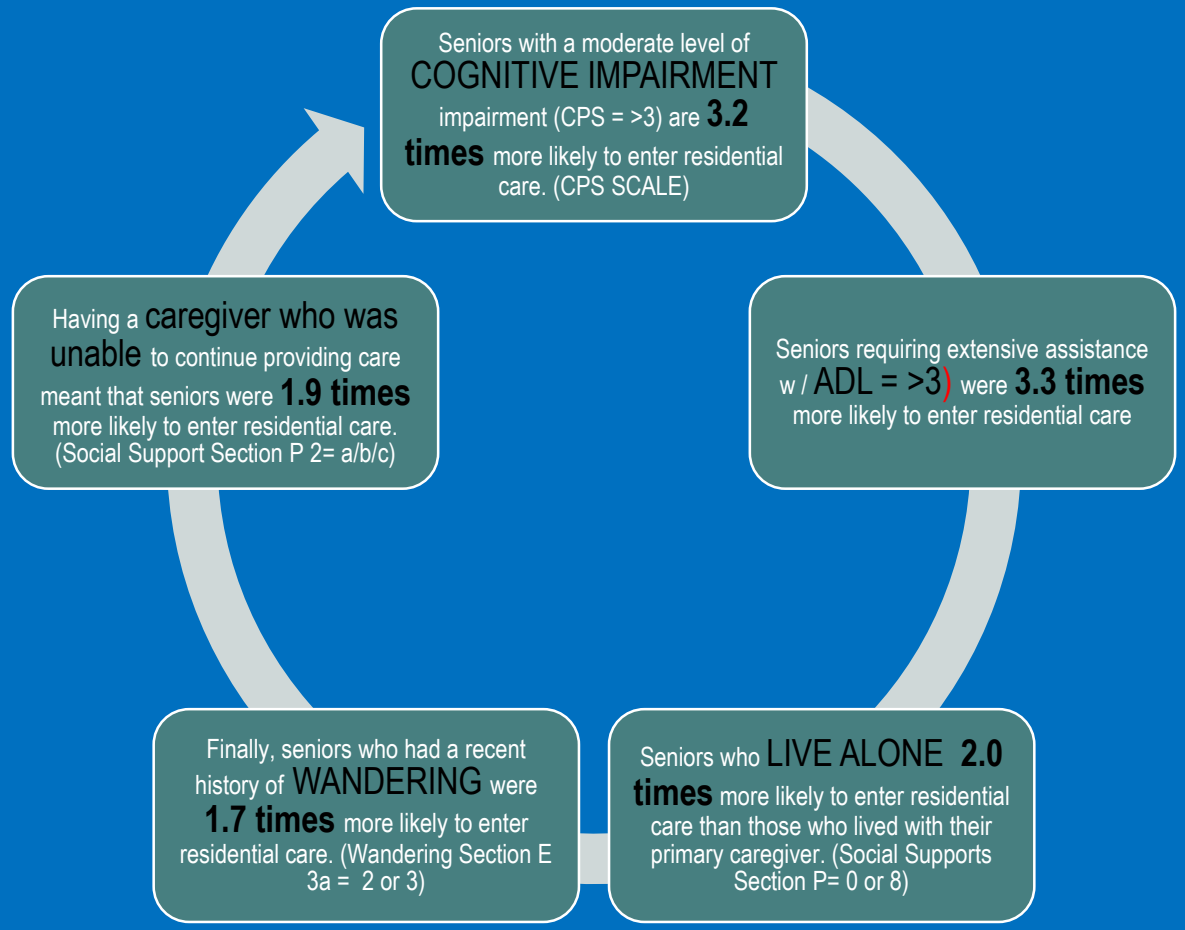
(reference at end of presentation)

29% of MAPLe 4/5 plus CHESS 4/5 will be in LTC or pass away within 6 months of the Assessment- This Presents a large RISK

13,460 active home care clients with a interRAI-HC assessment
1,666 clients that fulfil the 'Adverse Events in Home Care' paper criteria (MAPLe>=4 and CHESS>=3)

CIHI RISK FACTORS

(n=85,000 RAI HC Assessments/Reassessments)



Active* Client Stratification

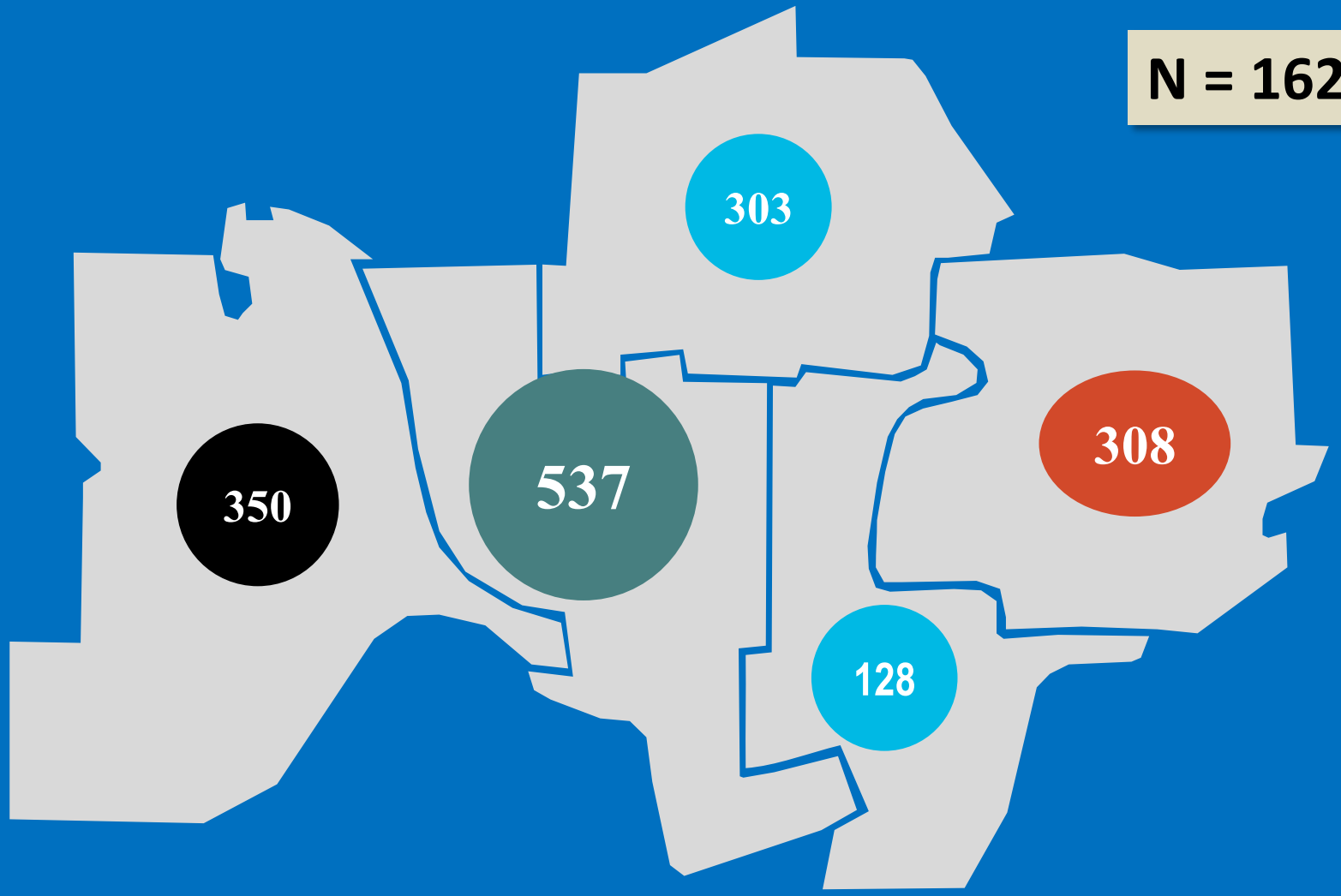
- 13,460 active home care clients with a interRAI-HC assessment
- 1,356 clients that fulfil CIHI Seniors in Transition Criteria (CPS>=3, ADLH>=3 and has caregiver distress or lives without caregiver)
- 1,666 clients that fulfil the Adverse Events in Home Care Paper Criteria (MAPLe>=4 and CHESS>=3)
- Only 299 clients fulfil the criteria for both papers

*Active clients as of June 20, 2019

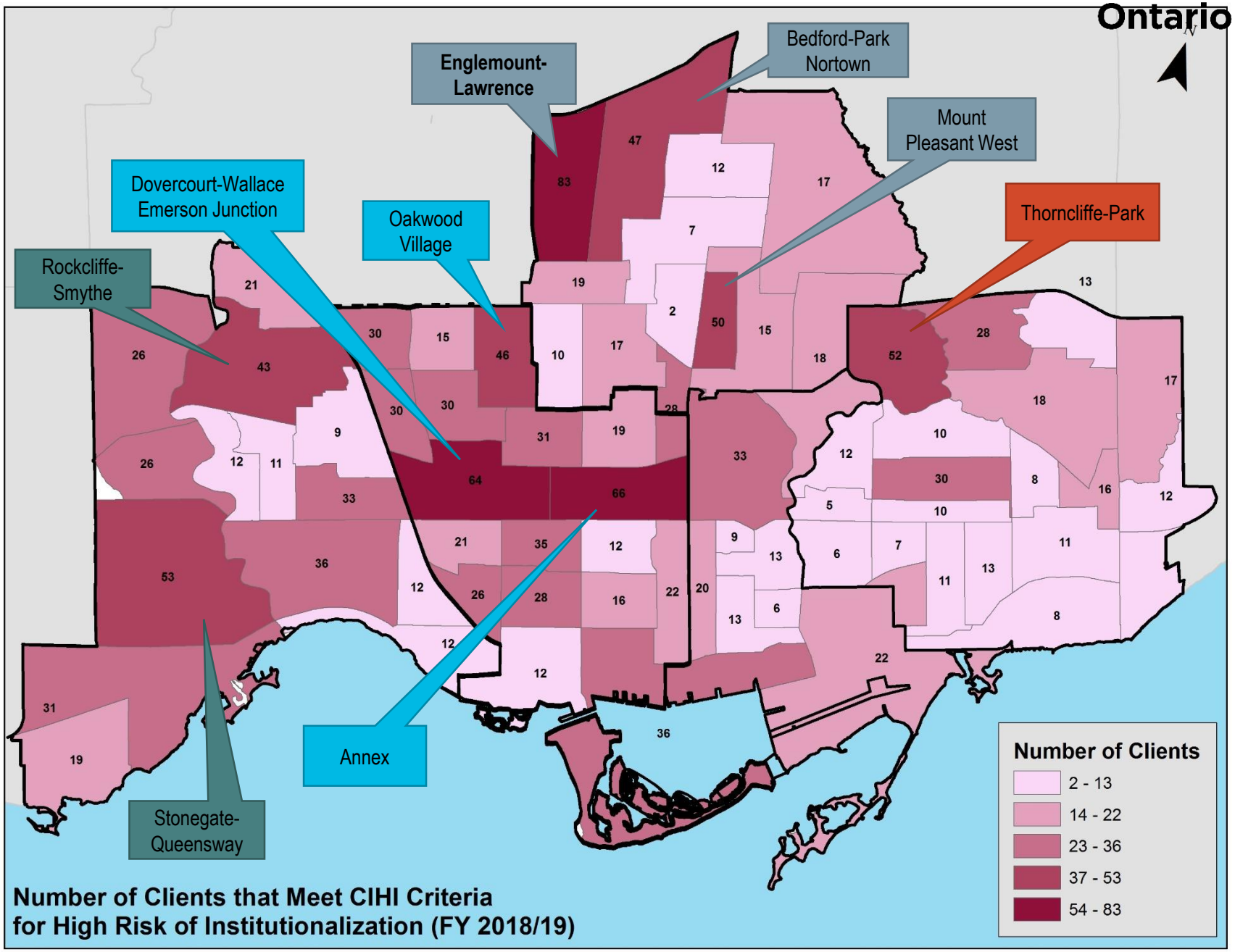
Number of Clients that Meet CIHI Criteria (FY 2018/19)

Ontario

N = 1623



Source: CHRIS Database (InterRAI-HC), Extracted: February 2019


Ontario
Englemount-Lawrence
Bedford-Park Nortown
Mount Pleasant West
Dovercourt-Wallace Emerson Junction
Oakwood Village
Thorncliffe-Park
Rockcliffe-Smythe
Annex
Stonegate-Queensway
Number of Clients
2 - 13
14 - 22
23 - 36
37 - 53
54 - 83
Number of Clients that Meet CIHI Criteria for High Risk of Institutionalization (FY 2018/19)

Strategy #2
Once you land on the "who".....now the "what"

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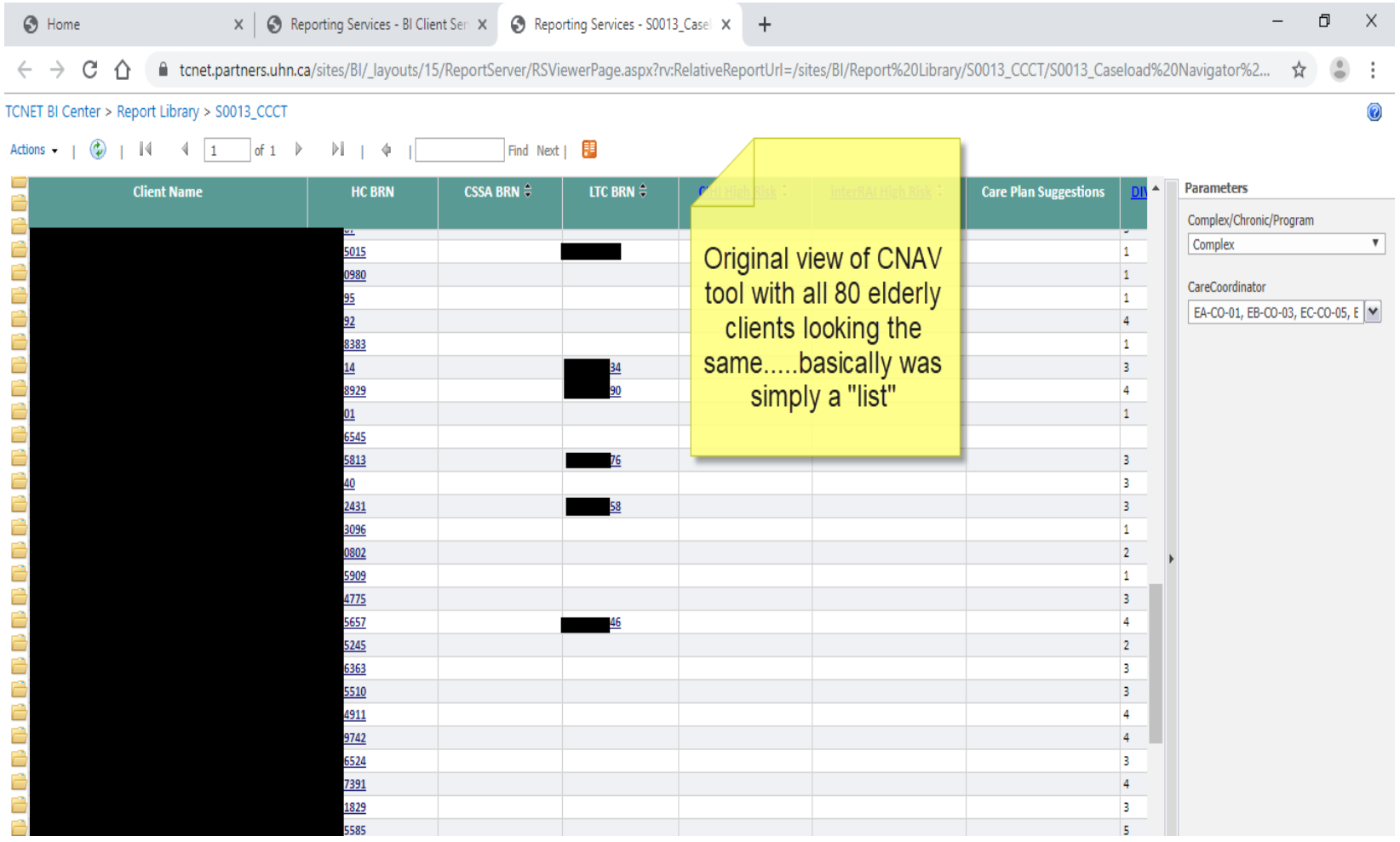
from Noun Project

Ontario

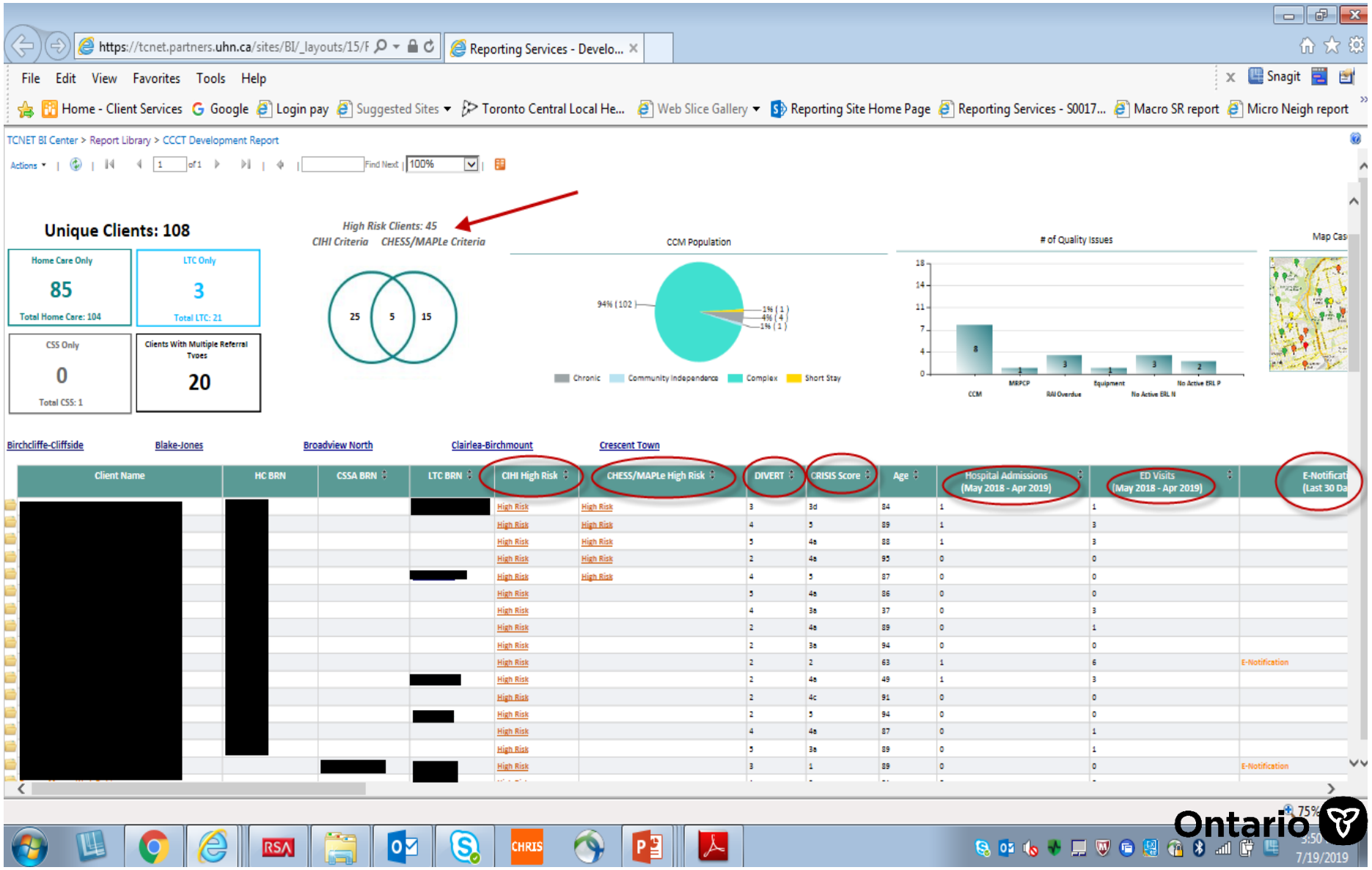
Potential Options/Ideas/Strategies

Ontario

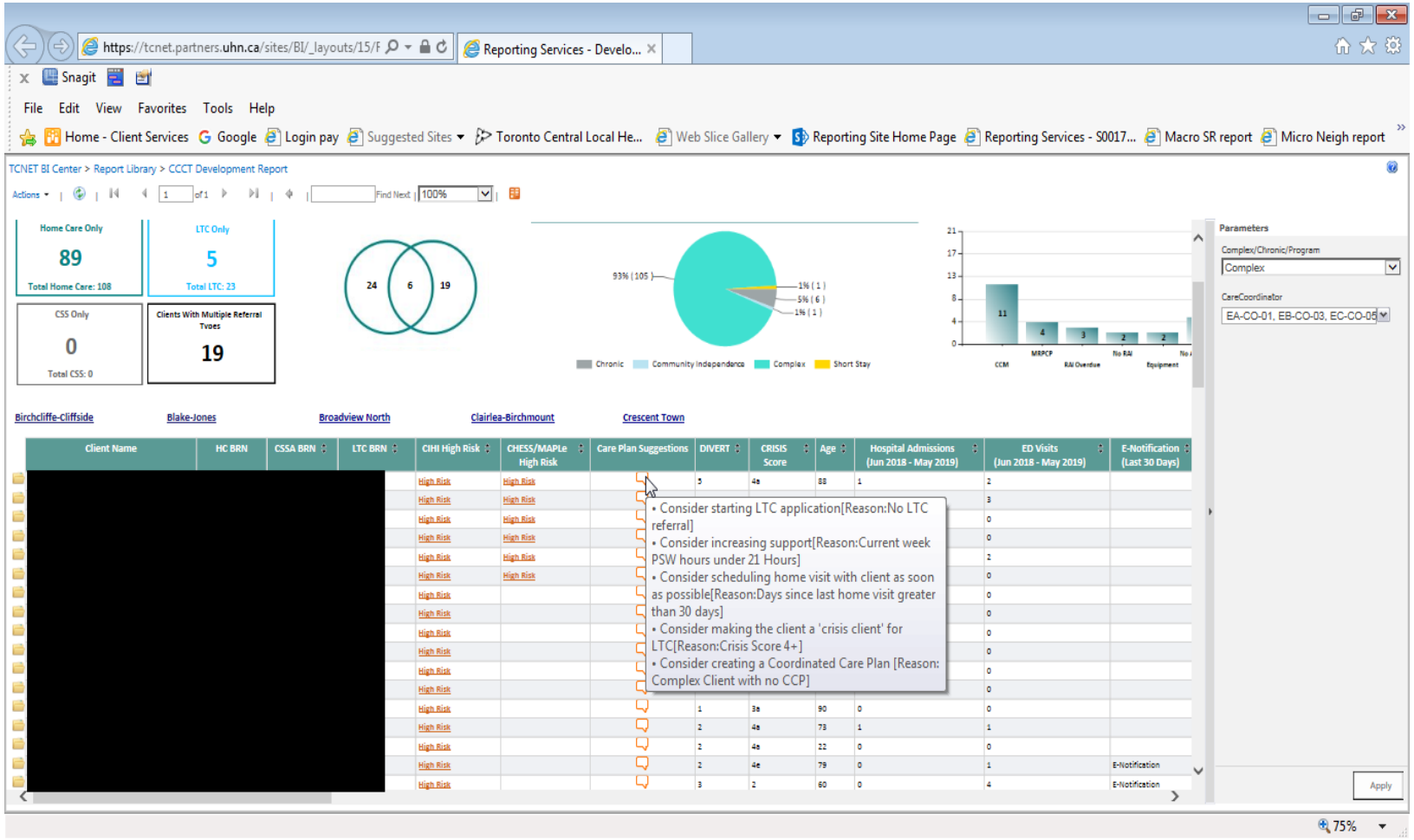
Original CNAV tool view



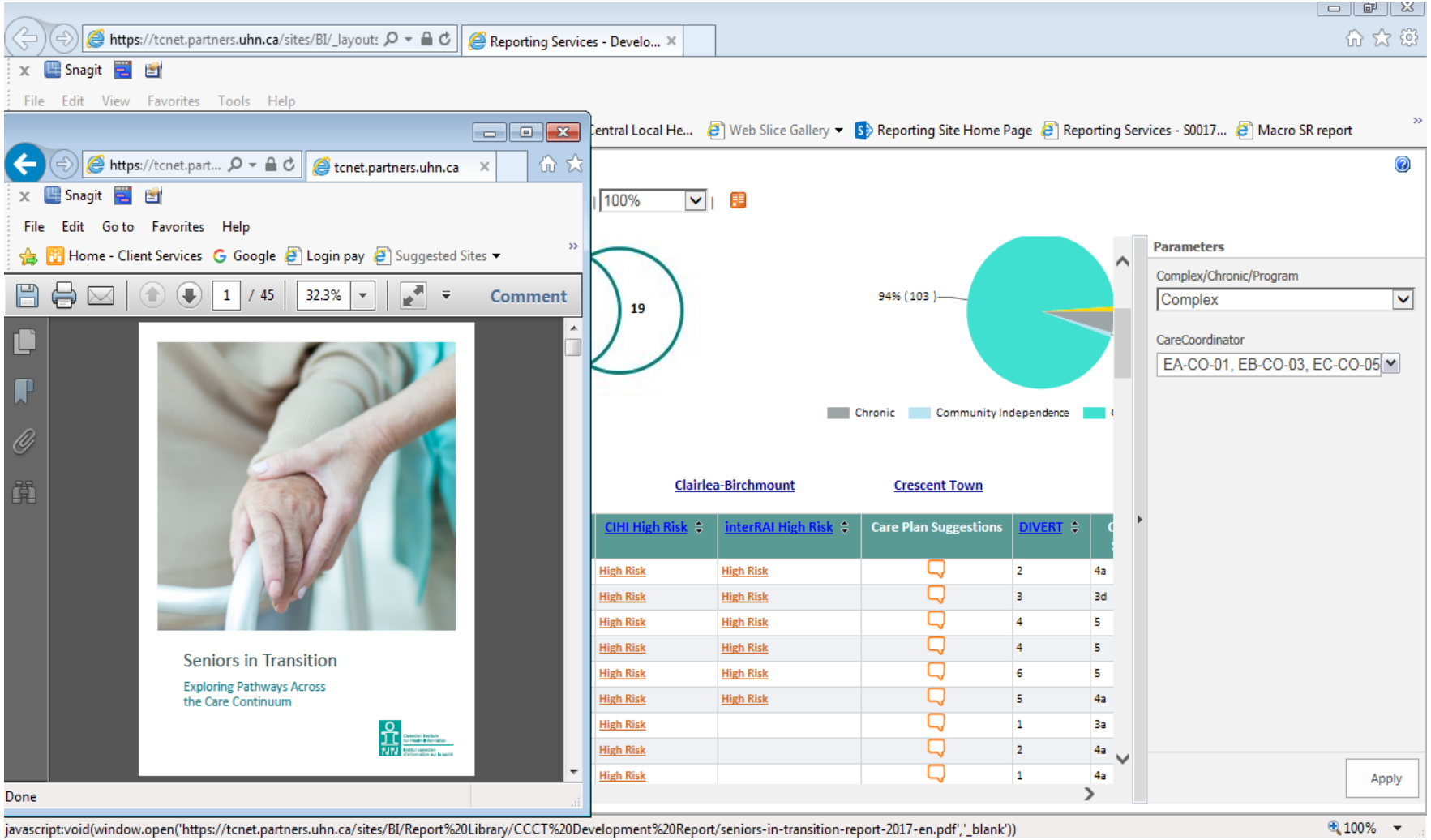
CNAV MOCK UP- Use strategies like this to pull out and focus on attention …instead of Risky Clients being buried inside caseloads



VIEW OF UPDATED CNAV TOOL



CNAV tool link to research article



High Risk Basket Of Services (Straw dog- another example of a possible strategy)

Service	Sector
• Intensive Case Management	NCT
• Nursing/RRN/NP	NCT
• PSW	NCT
• Therapies	NCT
• Equipment	NCT
• Pharmacy	Pharmacy
• Home Based primary care including access to physician/Geriatrician	TBD/MGH/Primary Care
• Meal and grocery delivery	NCT
• Meal prep and feeding	NCT
• EMS check in's	EMS
• Adult Day Program	NCT
• Transportation services	NCT
• Tele monitoring and	NCT/Telehome care/MGH/Virtual Care
• In home Lab work	NCT
• Short Stay Respite	NCT/LTC
• Caregiver Respite/Support	NCT/Alz/TBD
• Friendly visiting and social support	NCT/TBD
• Frailty Intervention Team	Providence

Ontario

Living ALONE

Over the age of **65**

Expresses

Sadness

CPS 4+

(mmse=7)

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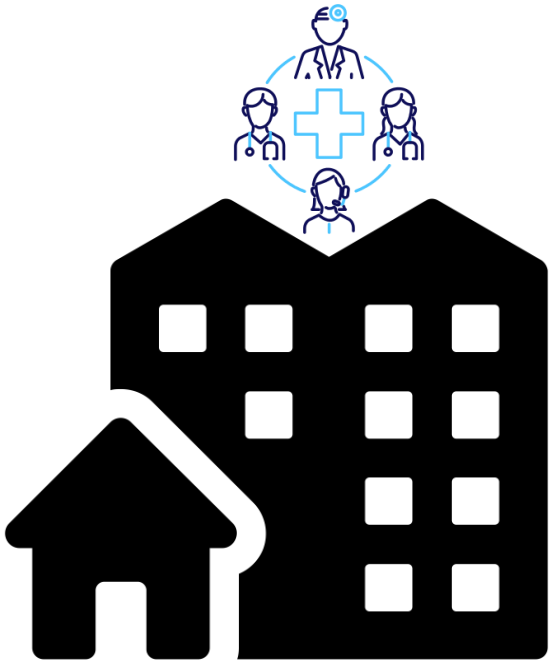

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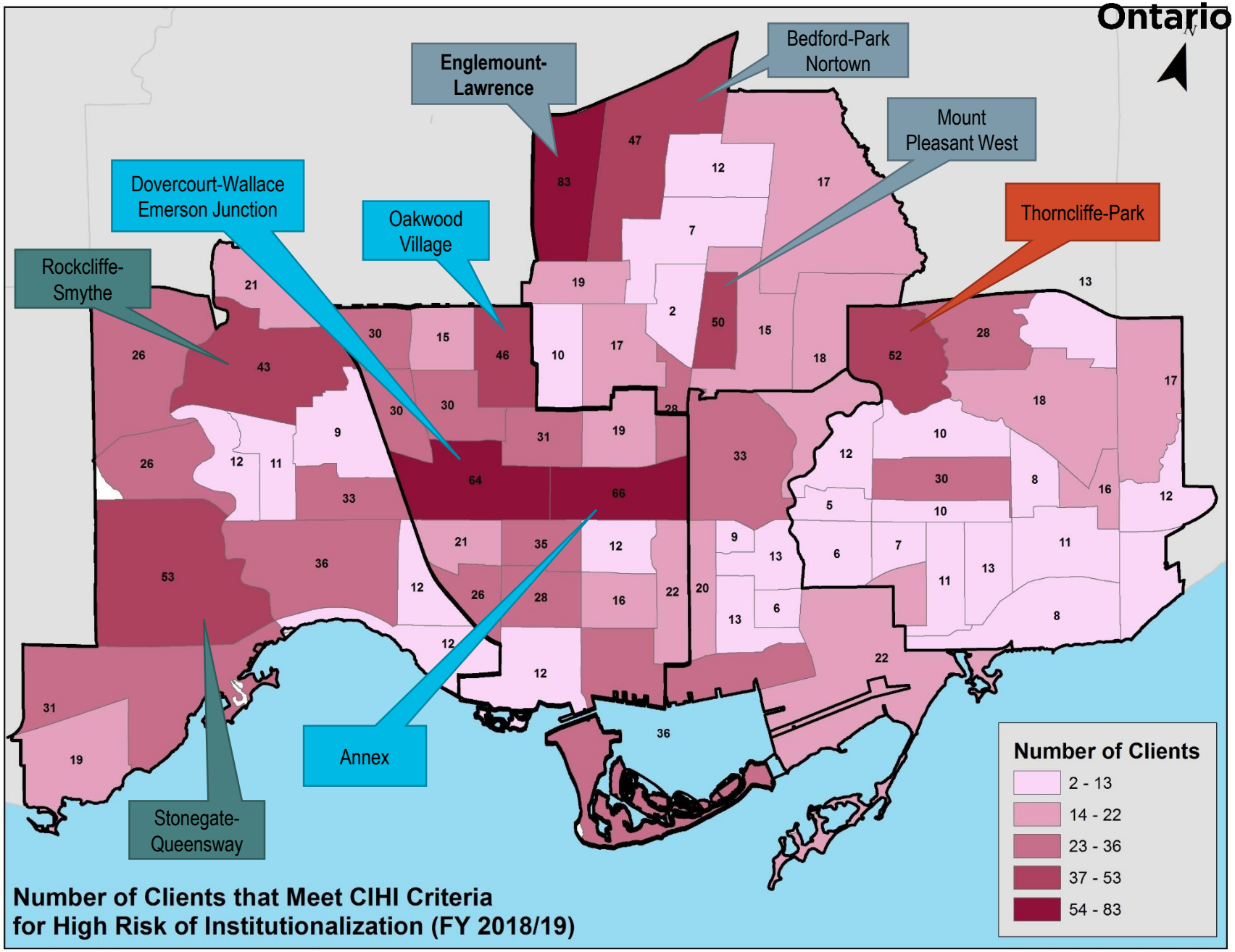
Ontario
Englemount-Lawrence
Bedford-Park Nortown
Mount Pleasant West
Dovercourt-Wallace Emerson Junction
Oakwood Village
Thorncliffe-Park
Rockcliffe-Smythe
Annex
Stonegate-Queensway
Number of Clients
2 - 13
14 - 22
23 - 36
37 - 53
54 - 83
Number of Clients that Meet CIHI Criteria for High Risk of Institutionalization (FY 2018/19)

Ontario

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