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Leading knowledge exchange on home and community care

Evidence in Action: Mobilizing Knowledge in Home & Community Care

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Full Professor & CRNCC Co-Director, University of Toronto

Presentation to Saint Elizabeth Health Care Conference, 2008

The CRNCC is funded by the SSHRC and Ryerson University

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The Medicare Conundrum

- Medicare remains a defining characteristic of Canadian identity, but “sustainability” a major concern
  - Population aging
  - Advances in medical technologies
  - Rising public expectations

A Narrow Policy Response

- "Blunt force" attempts to control costs failed to solve system problems
  - But they did fuel public concerns about access, wait times, imminent system collapse

Creating A Negative Cycle

- Hollander points to a cycle of increasing preoccupation with high end acute care, drawing more resources away from home and community care (H&CC)
  - Focus on wait lists “big five” (cancer, heart, diagnostic imaging, joint replacements, sight restoration) does little to solve, and may complicate, system problems (ALC, ER, LTC)

Compounding the Problem

- Where we have seen policy interest in H&CC, too often driven by:
  - Cost containment
    - Reduce hospital costs through fewer in-patient beds, shorter lengths of stay
  - Cost-shifting
    - Shift costs to home and community where care is “cheaper” – families, volunteers, lower paid workers, can do more

Breaking The Cycle

- Ontario's LHINs and "aging at home" strategy provide a brilliant opportunity to break this cycle
  - H&CC seen as a crucial component of the broader continuum of care

Making The Case

- But … LHINs must respond to multiple, competing demands for constrained health care dollars
  - They will need evidence to make the case for H&CC
- Two criteria:
  - Better outcomes for individuals and carers
  - Better outcomes for the system

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Mobilizing Knowledge

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The Evidence Game

- Move toward evidence-based decision-making, practice guidelines, benchmarks, performance measures, outcomes
  - If you can't measure it, you can't manage it
  - If you can't manage it, you shouldn't fund it

Playing The Evidence Game

- Evidence game inherently difficult in H&CC
  - Care does not necessarily lead to cure
  - Outcomes difficult to measure (garbage bags vs. autonomy, quality of life, dignity)
  - “Unit of care” is not just the individual
  - Mix of providers
  - Multiple client groups with widely varying needs and preferences

Home & Community Care (H&CC): A Complex Terrain

- Home care
  - Mostly professional, often post-acute, health care services (e.g., nursing, rehabilitation, social work)

Home & Community Care (H&CC): A Complex Terrain

- Community supports
  - *Assistance with personal activities of daily living (ADL):* eating, bathing, grooming, walking, dressing, toileting, personal hygiene
  - *Assistance with instrumental activities of daily living (IADL):* preparing meals, vacuuming, laundry, changing bed linens, bathroom and kitchen cleaning, managing finances, using the telephone, shopping, transportation

Multiple Roles

- Substitute for acute care
  - Meet the needs of people who would otherwise have to enter, or remain in, acute-care facilities
- Substitute for LTC
  - Meet the needs of people who would otherwise require residential care (e.g., nursing homes)
- Preventive/maintenance
  - Help to maintain the health and functional capacity of people living independently

Diverse Needs Groups

- Individuals with such high needs that they are “at risk” of losing independence and requiring care in an institution …
  - As well as those who require minimal assistance with activities of daily living
- Most are seniors …
  - But other needs groups, including persons with disabilities and a growing number of medically-fragile children and their families, also utilize H&CC

Beyond Medicare's Frontier

- H&CC outside the Canada Health Act
  - Not "medically necessary"
  - No "uniform terms and conditions"

- Limited consensus on role of government, private markets, individuals, families, communities
  - When should transportation, housekeeping be publicly funded?

One Response: CRNCC

- CRNCC grew out of March 2005 symposium
  - "From Ideas to Action: Community Services in the Continuum of Care"
  - With Neighbourhood Link/Senior Link

- Minister Smitherman's challenge:
  - Give me the evidence to make the case!

Knowledge Impact in Society (KIS)

- Social Sciences and Humanities Research Council of Canada wanted more *knowledge mobilization* initiatives:
  - "…moving knowledge into active service for the broadest possible common good…"
- CRNCC ranked #1 in national competition
  - Funded by SSHRC and Ryerson University

CRNCC: Who We Are

- Knowledge network of over 500 members (and growing) nationally, internationally
  - Researchers, providers, consumers, policy-makers
- Co-Chairs
  - Dr. Janet Lum, Ryerson University
- National Steering Committee
  - Researchers, practitioners, policy-makers, consumers

CRNCC Partners & Members Include …

Canadian Healthcare Association
Canadian Mental Health Association
Canadian Pensioners Concerned, National
Canadian Red Cross
Centre for Addictions and Mental Health
Children and Youth Home Care Network
Health Canada/Santé Canada - Home and Continuing Care Unit
Ontario Ministry of Health and Long Term Care
Ontario Association of Community Care Access Centres
Ontario Association of Non-Profit Homes & Services for Seniors
Ontario Coalition of Senior Citizens' Organizations
Ontario Community Support Association
Ontario Home Care Association
Ontario Seniors' Secretariat
Registered Nurses Association of Ontario
VHA Home Healthcare
VON Canada
Centre for Health Innovation and Leadership, Lincoln University, UK
Personal Social Services Research Unit, University of Manchester, UK

CRNCC: What We Do

- Link people to knowledge about H&CC as crucial element of broader continuum of health and social care
- Raise the profile of H&CC
- Build community capacity to generate, mobilize knowledge
- Provide evidence to inform decision-making

CRNCC: What We Don't Do

- Work unilaterally
- Advocate politically

From CRNCC's Toolkit: In Focus Fact Sheets

- Short, concise summaries in lay language, cutting edge international evidence
  - Balance of care
  - Supportive housing
  - Diversity
- All topics identified and developed in partnership with the field
- Distinguish "evidence-based" best practices from "marketing" best practices

"Ideas to Action" Symposia Series

- Supportive Housing: The Winning Formula for Supporting People and Sustaining the Health Care System (October 15, 2007)
  - In partnership with Ontario Community Support Association
- Academic and practice leaders nationally and internationally presenting evidence of what works and why
- Full symposia web-cast & DVD "briefing" version

New "Profiles" Series

- Promising (although sometimes not fully evaluated) innovations in H&CC
- CREMS (Community Referrals by EMS) direct referrals to Toronto Central CCAC by paramedics who respond to 911 calls

Student Placements

- Link students to research/employment opportunities in H&CC nationally
  - Next generation of researchers, policy-makers

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The Evidence

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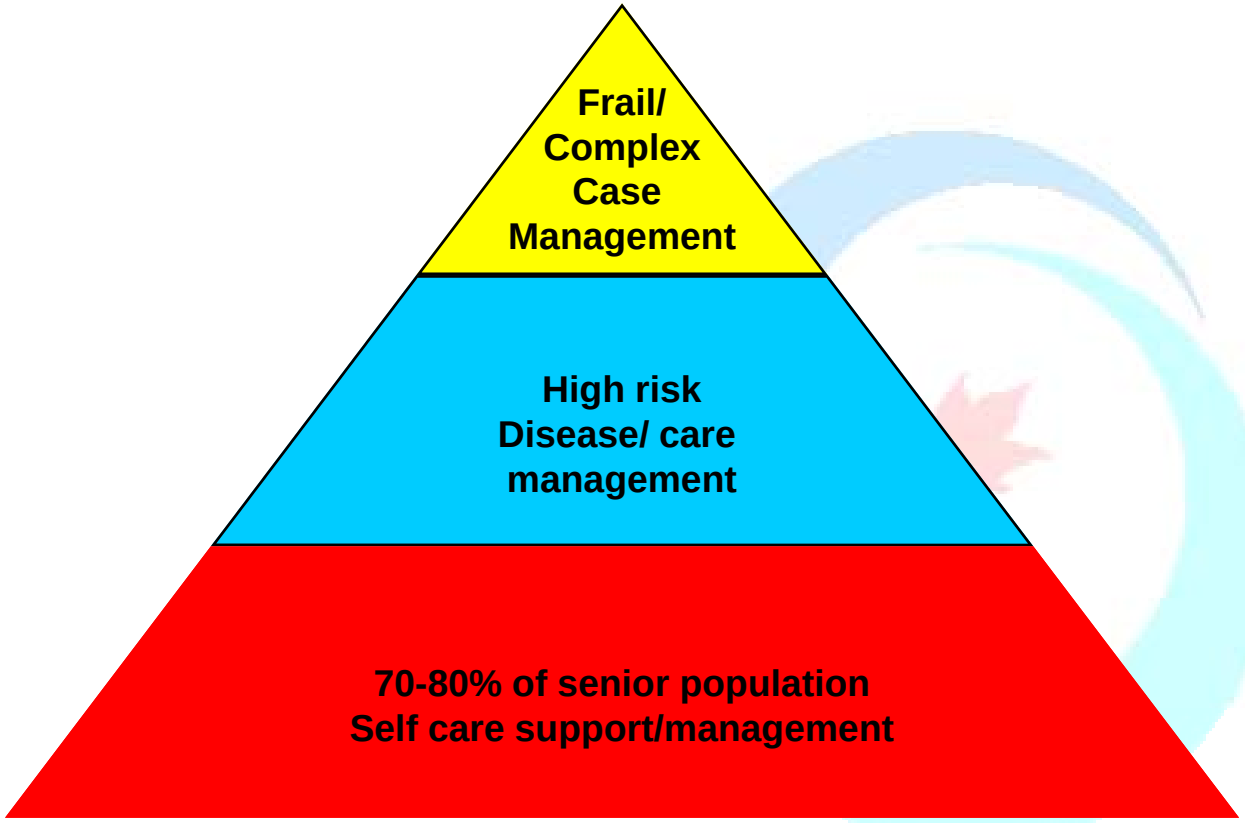
What Does the International Evidence Tell Us?

- Stand-alone services may/may not achieve measurable gains
  - Individuals with widely varying needs
  - Often in combination with other services, formal and informal carers
  - Limited ability to do comparative, costing analysis
  - Little systematic outcomes data (or even agreement on what outcomes should look like)
  - Different methodologies
  - Different time frames

Credible and Growing Evidence for Integrated H&CC

- Growing evidence that *targeted*, *managed and integrated* H&CC consistently …
  - Maintain the health, well-being and autonomy of at risk older persons and carers
  - Help solve key health system problems (e.g., ALC beds, inappropriate ER use, LTC waits)

The Trinity: Targeted, Integrated, Managed Care



Kaiser Permanente Triangle

Source: UK Department of Health (2005)

Vital Signs: On Lok/PACE

- On Lok/PACE (Program of All Inclusive Care for the Elderly)
  - Began 1970s, San Francisco, Chinese community
  - Currently 35+ PACE replication projects in U.S.

- *Service model*
  - Organized around adult day care centre
  - Individuals transported to services
  - Continuum of services including health care
  - Needs assessed and managed on an ongoing basis by multi-disciplinary team

On Lok/PACE

- *Target group*
  - "At risk" seniors
  - Average 80 years of age
  - 8 medical conditions (e.g., diabetes, dementia, heart disease, cerebrovascular diseases)
  - Most lived alone
  - 40% poor enough to qualify for public income supplements
  - All clients qualified for admission to nursing homes

On Lok/PACE

- *Funding model*
  - Government funded PACE clients at 95% of the cost of nursing home care

On Lok/PACE

- *Outcomes*
  - Most resources to community supports (e.g., transportation)
  - Just over a fifth (22%) to health care (e.g., hospitals, long-term care, x-rays, lab tests, medications and medical specialists)

On Lok/PACE

- *Outcomes*
  - Better health status and quality of life, lower mortality rates, increased choice in how time is spent, greater confidence in dealing with life's problems
  - Care costs 21% lower for participants
  - Inpatient care costs (hospital and skilled nursing) 46.1% lower
  - 5-15% cost savings over standard fee for service care

Vital Signs: CHOICE

- *Comprehensive Home Option of Integrated Care for the Elderly*

  Capital Health Region, Edmonton, Alberta

  - Established 1996 -- support from PACE

Thanks to Iris Neumann – go to www.CRNCC.ca

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CHOICE

- Program Review 2003 (137 clients)
  - In-patient episodes decreased 67% (av. annualized cost reduction $1.5M)
  - In-patient days decreased 70%
  - ER visits decreased 62.9%
  - Ambulatory services decreased 25% (av. annualized cost reduction $50K)

CHOICE

- Cost comparison
  - ** CHOICE $59.80/day
  - * Assisted Living $64.25/day
  - * Continuing Care Centre $76.50 to $112.25/day

  - Notes:
    - * excludes MD costs, accommodation fees (2004)
    - ** Monthly cost of $120.00 for those not on government subsidies, no refusal due to inability to pay. Drugs billed to provincial drug plan

Vital Signs: Vancouver Coastal Health

- Mix of in-house and contracted services
- 24,500 staff
- Over 5000 volunteers
- 17 Municipalities/Regional Districts
- 15 First Nation Communities
- 56 Residential Care Facilities (6343 beds)
- 14 Acute Care Facilities (1848 beds)
- 14 Assisted Living sites (620 units)
- Community programs and services

Thanks to Nancy Rigg – go to www.CRNCC.ca

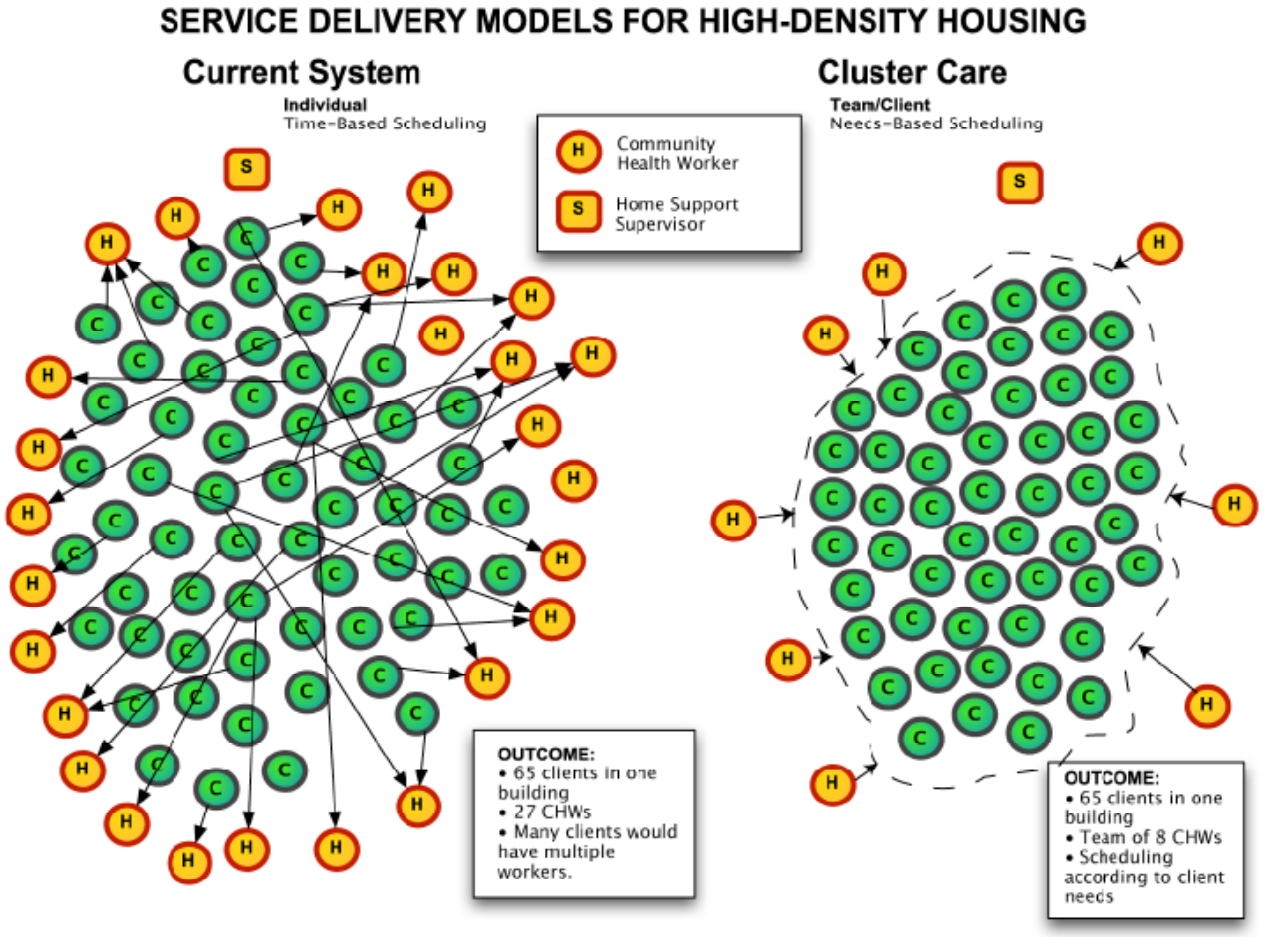
Vancouver Coastal Health

- Initially targeted highest needs groups
  - Complex care seniors, ABI, adults with disabilities
- Linked community care funding to system outcomes
  - E.g. ALC bed reductions
- Shifted focus away from LTC beds …
  - To assisted living (supportive housing) and home care

Vancouver Coastal Health

- ALC days reduced from 12% to 6%
  - Freed up system resources for community care
  - Seniors lose 5% capacity each day in hospital
- 17 in-patient ED beds saved
  - Introduced geri-triage nurses
- Residential care bed numbers reduced
  - 500 beds closed although 25 to 30% of community clients met residential care thresholds

Vancouver Coastal Health



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Vital Signs: Veterans' Independence Program

VIP is a comprehensive suite of services to 103,000 clients – mix of approaches

- **Personal Care** (e.g. bathing, dressing)
- **Health and Support Services** (e.g. nurses to administer medication, occupational therapists)
- **Access to Nutrition (**e.g. Meals-on-Wheels)
- **Housekeeping** (e.g. laundry, vacuuming, meal preparation)
- **Grounds Maintenance** to assist with grass cutting and snow removal

Thanks to Dr. David Pedlar – go to www.CRNCC.ca

Veterans' Independence Program

- **Ambulatory Health** outside the home (e.g. adult day care, health assessments, diagnostic services, and travel costs to access these services)
- **Transportation** (e.g. for attending senior citizen centers and churches, shopping, banking, and visiting friends)
- **Home Adaptations** (e.g. bathrooms, kitchens, doorways can be modified to provide access for basic everyday activities like food preparation, personal hygiene, sleep)
- **Nursing Home Care** in the client's community may be provided if / when the client can no longer remain at home.

Veterans' Independence Program

- **Problem**: growing wait lists for LTC beds
- **Intervention:** home care option offered to wait listed clients – care managers have integrated client budgets encouraging appropriate care across continuum
- **Result:** most on LTC wait lists preferred to stay at home with added support -- grounds maintenance, housekeeping, most used
- **Impact:** program implemented nationally in 2003, evaluation just completed

Vital Signs: Toronto Supportive Housing Studies

- Comparative study of seniors in social housing and supportive housing (2004-5 & 2006-7)
  - Three pairs of buildings, 3 areas in Toronto
  - Comparable incomes (rent geared-to-income), living arrangements, access to H&CC
  - Key difference: in social housing H&CC may be available – in supportive housing, H&CC care managed

Source: Lum, Ruff & Williams, 2005 -- *go to* www.CRNCC.ca

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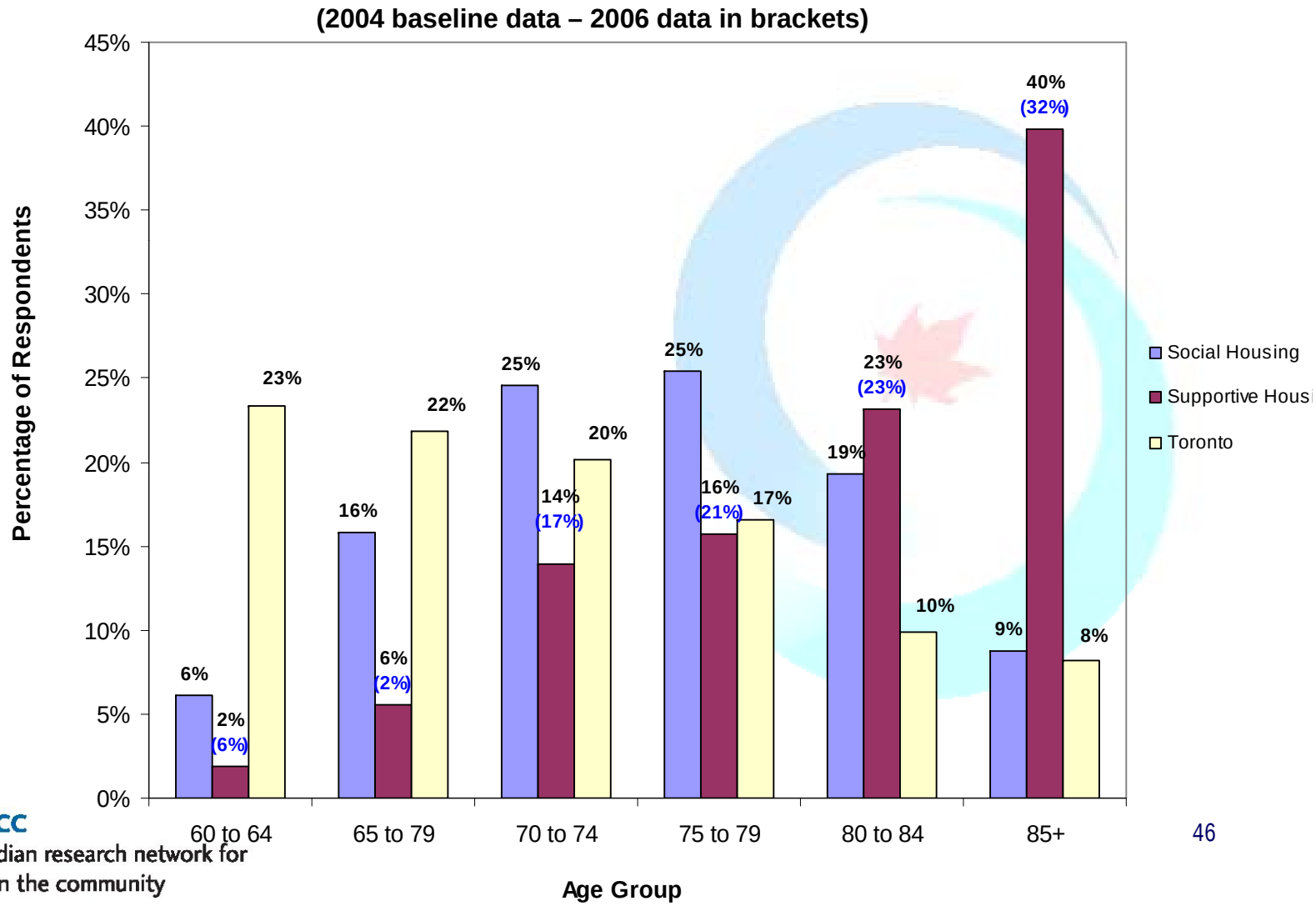
Age



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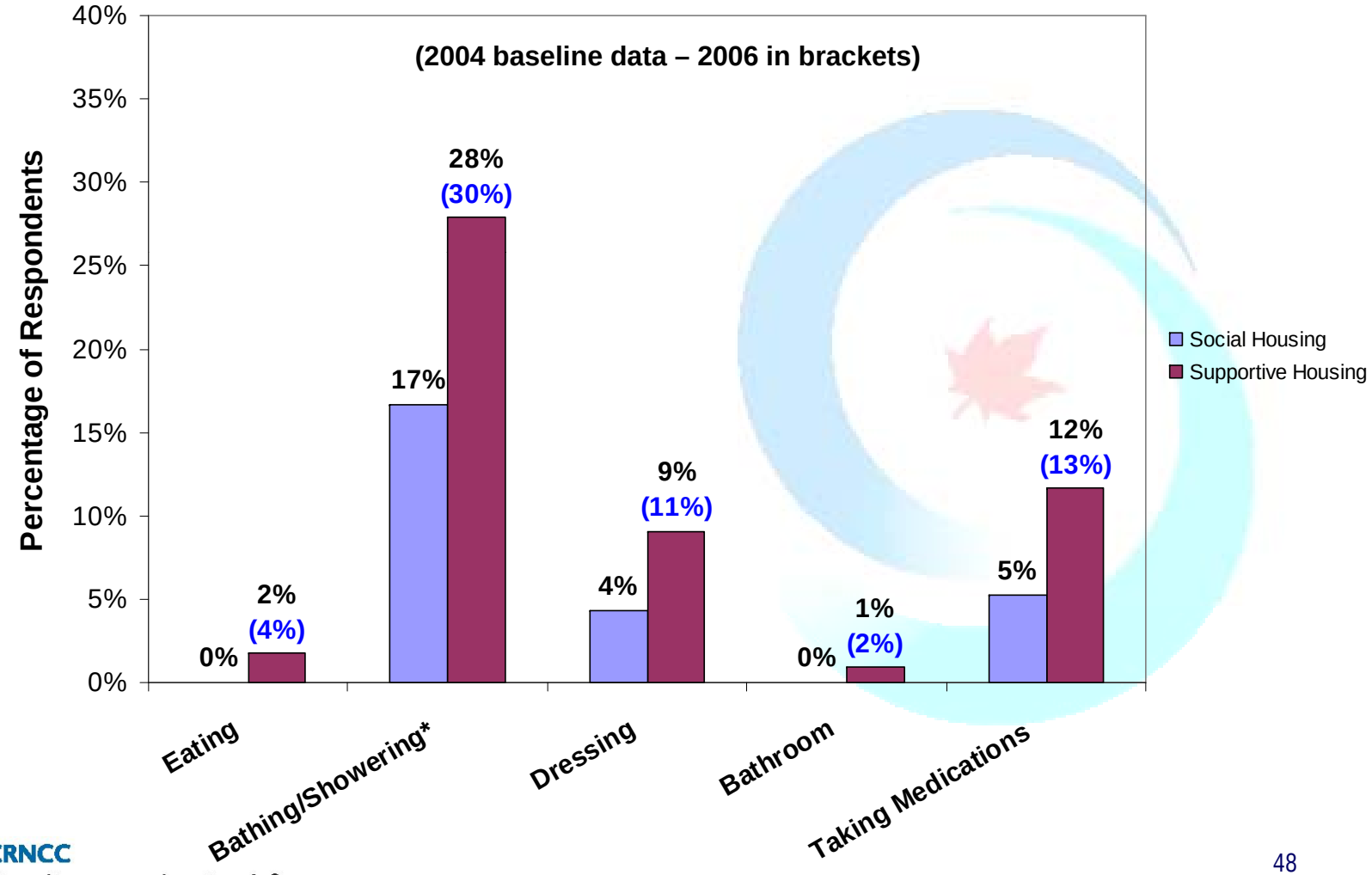
Health Risks

Disease	Social Housing	Supportive Housing	Seniors Population in Canada (1996)
Arthritis	61%	69%	42%
High Blood Pressure	56%	59%	33%
Back Problems	60%	51%	-
Heart Problems	36%	38%	16%
Osteoporosis	21%	44%	-
Diabetes	23%	16%	-
Stroke	10%	10%	-
Tumour/ cancer	8%	15%	-

(2004 baseline data)

Supports for ADL



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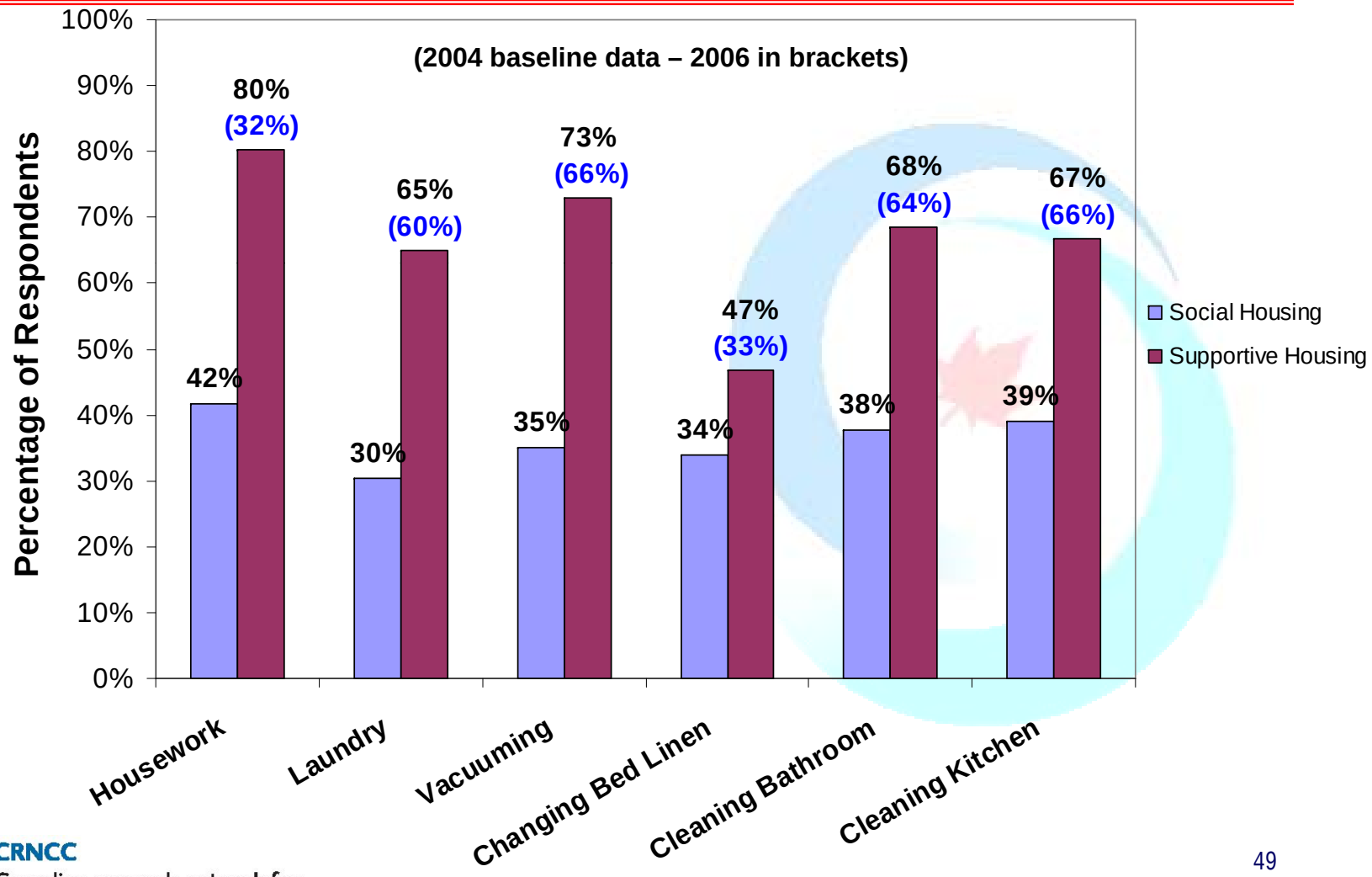
Supports for IADL



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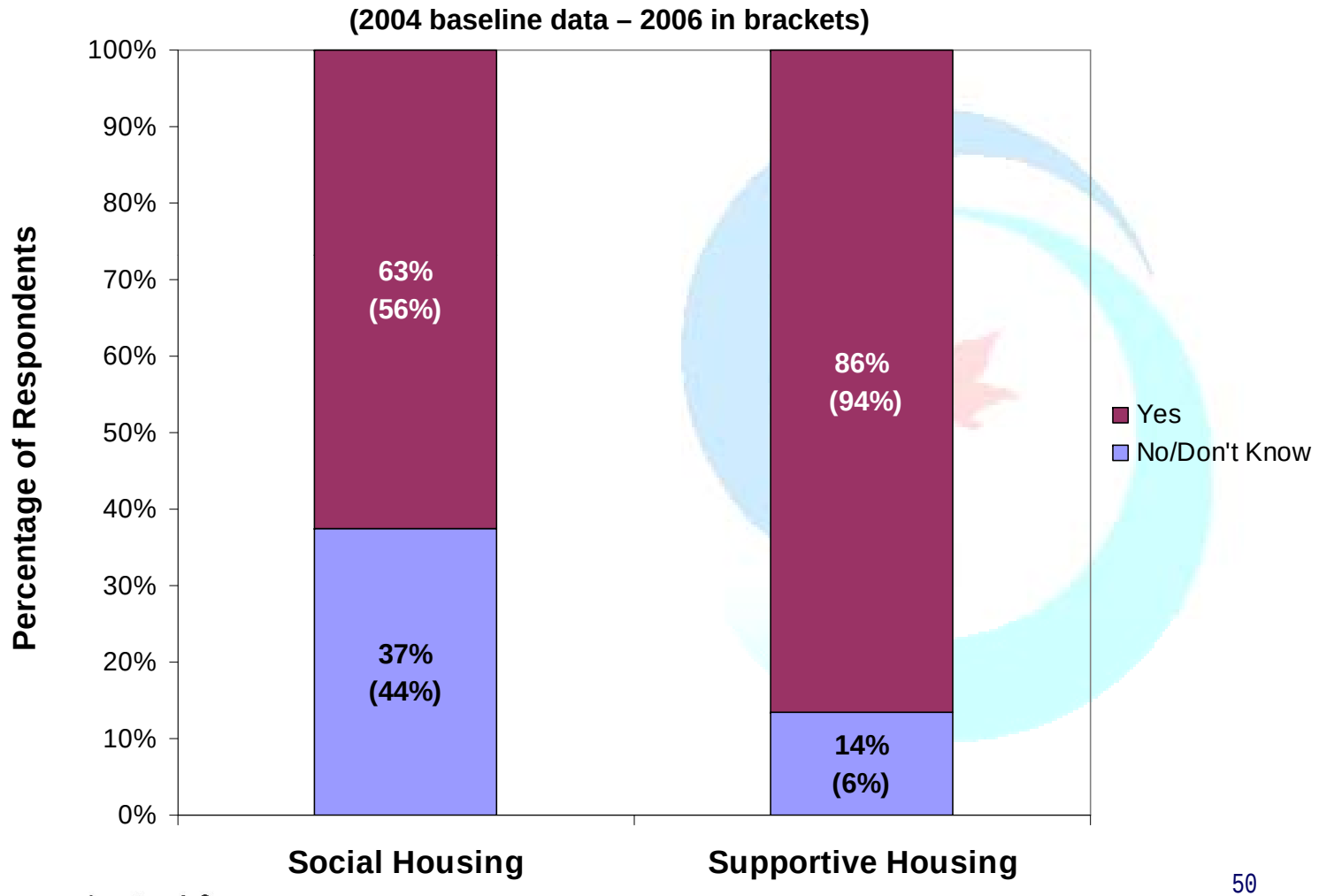
Mental Health:
Confidence in Getting Help When Needed



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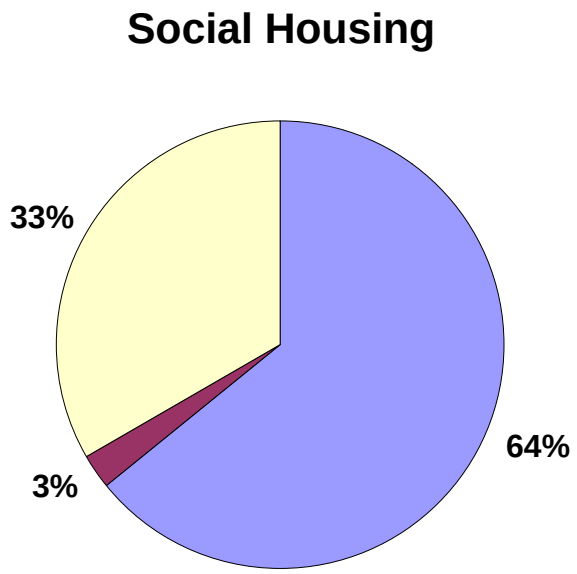
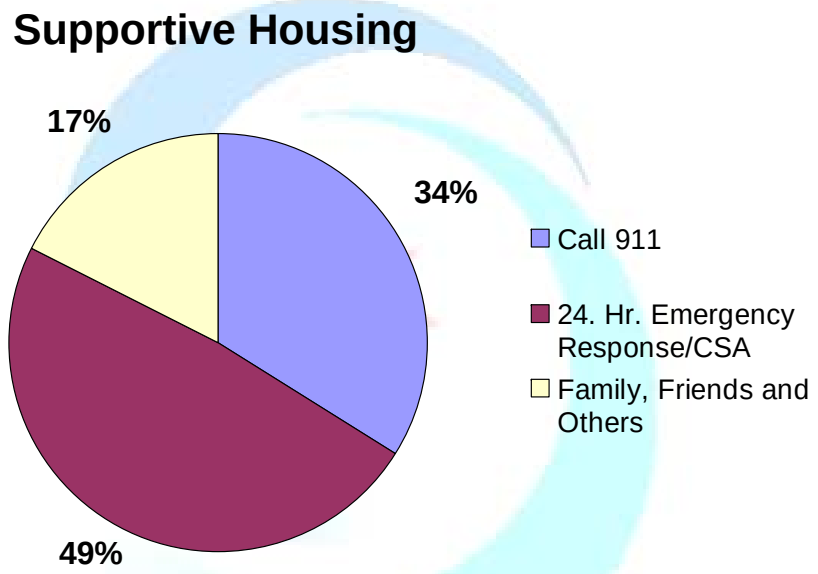
Crisis Management





(2004 baseline data)

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Balance of Care

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Balance of Care: Key Assumptions

What determines optimal balance of institutional care (LTC beds) and H&CC at the local level?

- Demand side: individual characteristics
  - Physical, psychological and social needs
  - Support from/of carers

- Supply side: system configuration
  - Access to safe, appropriate, cost-effective H&CC
  - Varies considerably at local level

LTC Wait Lists

- LTC wait lists a key system performance indicator
  - Waterloo 1100
  - Toronto Central 1600
  - North West 600
  - Central 3000

"How many wait listed individuals could be "diverted" safely, cost-effectively to home and community …

Variable #1: Confusion

Cognitive Performance Scale: short term memory, cognitive skills for decision-making, expressive communication, eating self-performance

	Waterloo	***Toronto***
Intact	43%	48%
Not Intact	57%	52%

Variable #2: ADL

Self-Performance Hierarchy Scale: eating, personal hygiene, locomotion, toilet use

	Waterloo	***Toronto***
No Difficulty	53%	43%
Some Difficulty	28%	28%
Great Difficulty	19%	29%

Variable #3: IADL

IADL Difficulty Scale - meal preparation, housekeeping, phone use, medication management

	Waterloo	***Toronto***
No Difficulty	2%	3%
Some Difficulty	32%	32%
Great Difficulty	66%	65%

Variable #4: Caregiver Living with Client?

	Waterloo	***Toronto***
Yes	46%	35%
No	54%	65%

Characteristics of 36 Client Groups, Toronto (first 14 shown)

Type	Confusion	ADL difficulty	IADL difficulty	Live with Caregiver?	MAPLE score	Frequency and Percentage
1-Appleton	Intact	Low	Low	Yes	Low/Mild	5 (0.3%)
2-Bruni	Intact	Low	Low	No	Low/Mild	28 (1.7%)
3-Copper	Intact	Low	Moderate	Yes	Low/Mild	75 (4.5%)
4-Davis	Intact	Low	Moderate	No	Low/Mild	281 (16.7%)
5-Eggerton	Intact	Low	High	Yes	Low/Mild	36 (2.1%)
6-Fanshaw	Intact	Low	High	No	Mild/Moderate	84 (5%)
7-Grimsby	Intact	Moderate	Low	Yes	Mild/Moderate	0
8-Hamilton	Intact	Moderate	Low	No	Mild/Moderate	3 (0.1%)
9-Islington	Intact	Moderate	Moderate	Yes	Mild/Moderate	18 (1%)
10-Jones	Intact	Moderate	Moderate	No	Moderate	43 (2.6%)
11-Kringle	Intact	Moderate	High	Yes	Moderate	34 (2%)
12-Lambert	Intact	Moderate	High	No	Moderate/High	63 (3.7%)
13-Moore	Intact	High	Low	Yes	Moderate/High	0
14-Nickerson	Intact	High	Low	No	Moderate/High	0

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Client Vignettes

Vignette #3- Copper

"Copper is cognitively intact and functionally independent in all ADLs with the exception of bathing (limited assistance is required). Copper has no difficulty using the phone and managing medications, some difficulty preparing meals and great difficulty with housekeeping and transportation. Copper has a live-in caregiver." This live-in caregiver provides advice/emotional support and assistance with IADLs.

1) Cognition- Intact (memory recall is good, makes consistent/reasonable/safe decisions and can express ideas without difficulty)
2) ADL- No help required with most ADLs (locomotion inside the home, eating, toilet use and personal hygiene), client requires limited assistance when bathing (still highly involved in activity but requires some assistance/guided maneuvering).
3) IADL- No difficulty using the phone and managing medications, some difficulty with preparing meals (needs some help, is very slow/fatigues). Great difficulty with housekeeping and transportation (little or no involvement in the activity is possible).
4) Caregiver (in home?)- Yes, provides advice/emotional support and assistance with IADLs.

Care Packages: Copper
Line By Line (Waterloo N = 49, 6%)

Service	Frequency
Meals on Wheels	3/week
Homemaking	2.5 hours/every 2 weeks
Congregate Dining	1/week
Transportation	2 return trips/week
Home maintenance	1 job/week
CCAC Nursing (education on medication management)	3-4/2-3 weeks
CCAC PSW assist with bath	1/week

Costs: Copper
(Waterloo N = 49, 6.0%)

SERVICE	MINISTRY CODE	UNIT =	COST/UNIT OF SERVICE FOR MINISTRY	CLIENT USER FEE	UNITS OF SERVICE FOR 13 WEEKS	TOTAL MINISTRY COST	TOTAL CLIENT COST	MINISTRY + CLIENT COST
Meals on Wheels	02A	Meal	10.53	7.5	39	410.67	292.5	703.17
Congregate Dining	03A	Attendance	11.05	7	13	143.65	91	234.65
Transportation	04A	1-Way Trip	16.97	10	52	882.44	520	1402.44
Home Maintenance	05C	1 job	23.75	15	13	308.75	195	503.75
Caregiver Support Respite Volunteer	08F	Hour	36.58	0	32.5	1188.85	0	1188.85
Homehelp/Homemaking	09B	Hour	23.82	12	16.25	387.075	195	582.075
Homemaking/Personal Support	10A	Hour	26.53	0	13	344.89	0	344.89
CCAC Nursing-medications mgt	15A	Visit	81.16	0	4	324.64	0	324.64
Community Care Package						3990.965	1293.5	5284.465
Supportive Housing						2865.14		
Long Term Care Home						7259.07	4610.06	11869.13

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Divert Rates (Waterloo Line-by-Line)

Group	Confusion	ADL Needs	IADL Needs	Live with Caregiver?	Frequency (Adjusted Percentage)	MAPLe -- Risk of Adverse Outcome	Cost of H&CC Package (13 weeks @ $80/day) Base LTC cost = $7259.07	H&CC cost lower than LTC cost (13 weeks)?
3-Copper	Intact	Low	Medium	Yes	49 (7%)	Low/Mild	$3913	Yes
4-Davis	Intact	Low	Medium	No	103 (13%)	Low/Mild	$2604	Yes
5-Eggerton	Intact	Low	High	Yes	29 (4%)	Low/Mild	$4149	Yes
6-Fanshaw	Intact	Low	High	No	40 (6%)	Moderate	$4051	Yes
12-Lambert	Intact	Med	High	No	29 (4%)	Moderate	$4651	Yes

Divert Rates (Waterloo Line-by-Line)

Group	Confusion	ADL Needs	IADL Needs	Live with Caregiver?	Frequency (Adjusted Percentage)	MAPLe -- Risk of Adverse Outcome	Cost of H&CC Package (13 weeks @ $80/day) Base LTC cost = $7259.07	H&CC cost lower than LTC cost (13 weeks)?
17-Quinn	Intact	High	High	Yes	20 (3%)	Moderate	$11000	No
21-Upperton	Not Intact	Low	Medium	Yes	32 (4%)	High	$8131	No
22-Vega	Not Intact	Low	Medium	No	38 (6%)	High	$6114	Yes
23-Wong	Not Intact	Low	High	Yes	65 (9%)	High/Very High	$7825	No
24-Xavier	Not Intact	Low	High	No	62 (9%)	High/Very High	$6389	Yes
29- C. Cameron	Not Intact	Medium	High	Yes	72 (10%)	High/Very High	$10159	No

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Group	Confusion	ADL Needs	IADL Needs	Live with Caregiver?	Frequency (Adjusted Percentage)	MAPLe -- Risk of Adverse Outcome	Cost of H&CC Package (13 weeks @ $80/day) Base LTC cost = $7259.07	H&CC cost lower than LTC cost (13 weeks)?
30-D. Daniels	Not Intact	Medium	High	No	71 (10%)	High/Very High	Cost not calculated	No
35-I. Innis	Not Intact	High	High	Yes	66 (9%)	High/Very High	Cost not calculated	No
36-J. Johns	Not Intact	High	High	No	42 (6%)	High/Very High	Cost not calculated	No

Divert Rates (Toronto Line-by-Line and SH)

Group	Frequency (Adjusted Percentage)	Long-Term Care (13 weeks)	Line by Line Care Packages (13 weeks)	Supportive Housing (13 weeks)
3-Copper	75 (5.1%)	$7259.07	$2,682.65	$1,795.30 to $3,498.43
4-Davis	281 (19%)	$7259.07	$3,743.45	$3,896.75 to $5,603.68
6-Fanshaw	84 (5.6%)	$7259.07	$3,985.48	$4,138.78 to $10,468.11
10-Jones	43 (2.9%)	$7259.07	$12,469.88	$5,537.55 to $6,175.90
12-Lambert	63 (4.3%)	$7259.07	$15,431.57	$7,726.34 to $22,366.99

Line by Line Diversions highlighted yellow

Supportive Housing Diversions highlighted purple

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Waterloo and Toronto Divert Rates Summarized

	Divert: line by line	Divert: Supportive housing	LTC Required
Waterloo	49%	N/A	25%
Toronto	37%	50-53%	20%

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Key Messages

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Opportunity Knocks: Aging At Home

- Ontario's LHINs and Aging at Home strategy provide a brilliant opportunity to innovate, demonstrate the value of H&CC in the continuum of care

Mobilizing Knowledge

- Growing and credible evidence for targetted, managed, integrated H&CC

- But evidence often tough to find, assess, transfer
  - Complexity of field
  - Often grey literature
  - “Best practices” vs. “best marketing”

Making the Case for Home and Community Care

- Knowledge networks like CRNCC can help bridge the evidence gap, make the case for H&CC in an integrated continuum

  - Top line: people
  - Bottom line: health system sustainability

CRNCC
Canadian research network for care in the community

RCRSC
Réseau canadien de recherche pour les soins dans la communauté

Leading knowledge exchange on home and community care

www.crncc.ca

Please help us make the case -- membership is free

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