



Optimizing medication in caring for seniors living with frailty: Five perspectives

Community Care

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Streamlining Medication Appropriateness and Deprescribing
within Integrated Health-Care Teams*



Objectives



- ▶ Attendees will gain insight and **appreciation for the scope of polypharmacy and its significant impact on the care/outcomes of older adults living with frailty** from five perspectives: **community care**, long-term care, acute care, cognitive impairment, and pharmacists.
- ▶ Attendees will learn about **new work** and evidence **to address polypharmacy in these contexts** leading to more optimal use of medications in treating the multiple/complex conditions inherent in living with frailty.

Frailty and Polypharmacy frequently co-exist

- Data from 909 individuals ≥ 65 years of age followed in the NWAHS, a population representative longitudinal study of 4060 men and women aged ≥ 18 years.
- Participants were randomly selected from households in the north-west of metropolitan Adelaide, Australia and attended the clinic assessment at Stage 2 (2004–2006).

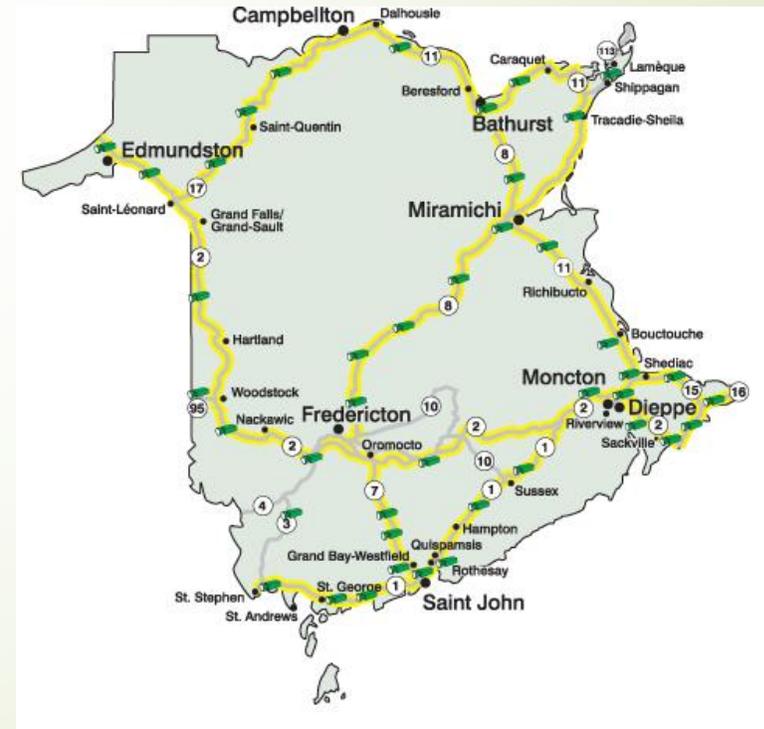
Table 2: Relationship of frailty with descriptive characteristics

	Whole sample, n (%)	Mean FP (SD)	Mean F (SD)	FP categories				FI categories			
				Non-frail, n (%)	Frail, n (%)	OR (95% CI), univariate	OR (95% CI), multivariate	Non-frail, n (%)	Frail, n (%)	OR (95% CI), univariate	OR (95% CI), multivariate
Total	909	1.32 (1.17)	0.23 (0.15)	759 (82)	150 (18)	—	—	496 (52)	413 (48)	—	—
Sex											
Male	453 (45)	1.12 (1.12)	0.20 (0.14)	394 (87)	59 (13)	1	1	275 (61)	178 (39)	1	1
Female	456 (55)	1.49 (1.19)*	0.25 (0.15)*	365 (78)	91 (22)	1.89 (1.33, 2.70)*	1.26 (0.76, 2.09)	221 (44)	235 (56)	1.97 (1.51, 2.58)*	1.89 (1.24, 2.89)*
Age groups											
65–74 years	554 (56)	1.07 (1.05)	0.20 (0.13)	499 (89)	55 (11)	1	1	339 (60)	215 (40)	1	1
>75 years	355 (44)	1.64 (1.25)*	0.26 (0.15)*	260 (72)	95 (28)	3.19 (2.23, 4.55)*	4.09 (2.56, 6.53)*	157 (42)	198 (59)	2.12 (1.62, 2.77)*	2.36 (1.61, 3.46)*
Polypharmacy†											
0–4 medication	471 (51)	1.07 (1.03)	0.18 (0.12)	432 (91)	39 (9)	1	1	332 (68)	139 (32)	1	1
5+ medications	430 (48)	1.59 (1.26)*	0.29 (0.15)*	319 (72)	111 (28)	3.77 (2.59, 5.49)*	3.50 (2.13, 5.75)*	156 (34)	274 (66)	4.05 (3.06, 5.35)*	2.99 (2.08, 4.29)*

The state of polypharmacy in NS and NB

- Quality Indicators

- Explicit measures of medication appropriateness
- Implicit measures of medication appropriateness



Antipsychotics in those with Lewy Body Disease

- In NS Pharmacare beneficiaries with Parkinson's disease or Lewy Body disease are prescribed antipsychotics (n=294)
- According to the STOPP criteria only clozapine and quetiapine are acceptable in someone with Parkinson's disease or Lewy Body disease

Table 3: Nova Scotia Seniors Pharmacare Program beneficiaries dispensed antipsychotic medications concomitant with levodopa-containing medications, by year, categorized by treatment appropriateness

	Preferred atypical, % (n)	Potentially inappropriate, % (n)	Potentially harmful, % (n)	All potentially inappropriate or harmful, % (n)
2009 (n = 151)	56% (85)	29% (44)	15% (22)	44% (66)
2010 (n = 48)	60% (29)	27% (13)	13% (6)	40% (19)
2011-2013 (n = 95)	63% (62)	25% (24)	12% (9)	37% (33)

Clozapine or
Quetiapine

Other Atypical
Antipsychotics

Typical
Antipsychotics

Long-term colchicine

- Gout is a painful inflammatory condition that affects older adults
- Colchicine dose is likely adequate at 1.2-1.5 mg orally daily
- The first STOPP criteria (2008) stated long-term use of colchicine as potentially inappropriate prescribing
- Updated STOPP guidelines (2015) indicate potentially inappropriate prescribing of colchicine for durations >3 months.

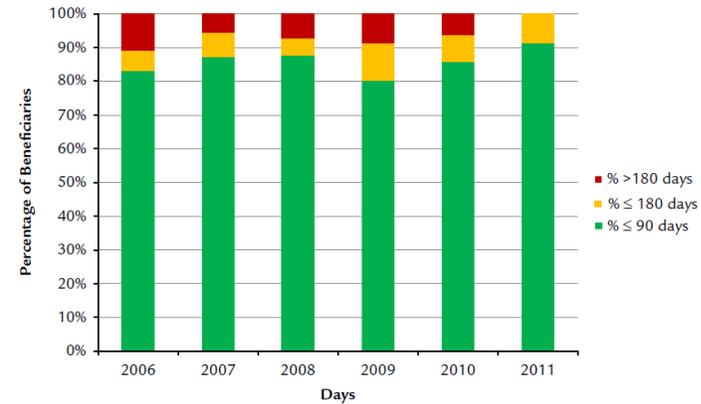


Figure 1. Proportion of Nova Scotia Seniors' Pharmacare Program beneficiaries by colchicine duration and year.

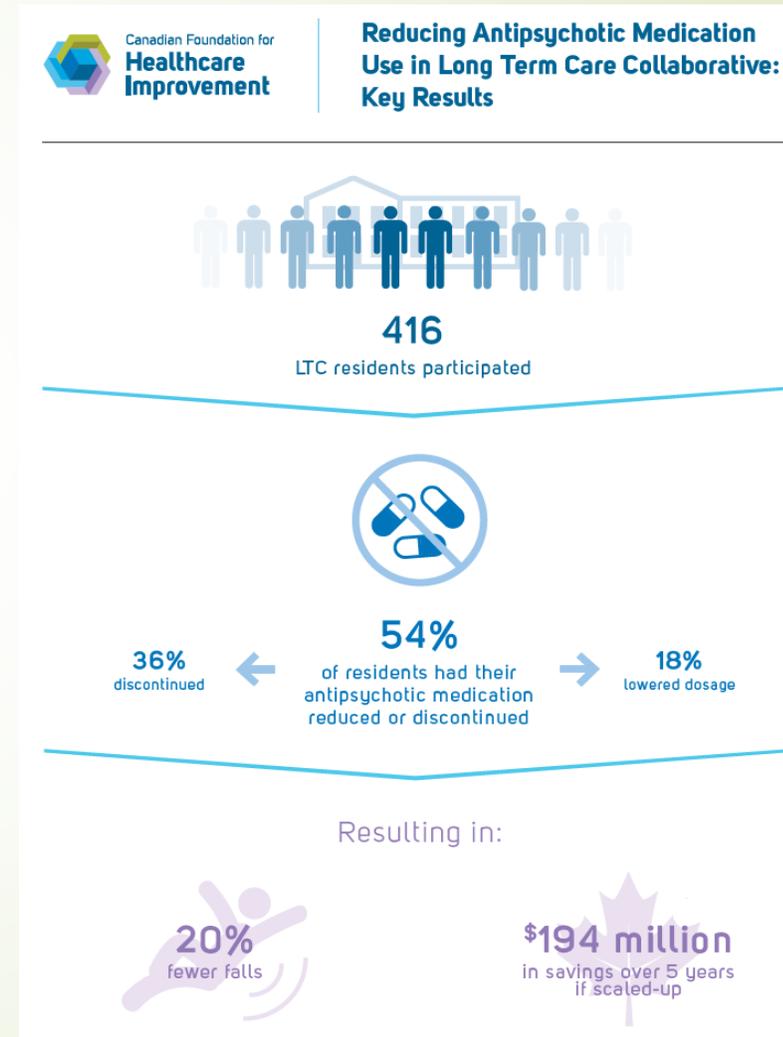
Table II. Colchicine dosing by calendar year (April 1, 2006 to March 31, 2011) in Nova Scotia Seniors' Pharmacare Program beneficiaries.

Dose	2006	2007	2008	2009	2010	2011
≤ 1.2 mg, no. (%)	86 (63.7)	145 (72.1)	175 (65.8)	199 (67.5)	206 (61.3)	63 (67.0)
≤ 1.5 mg, no. (%)	94 (69.6)	148 (73.6)	180 (67.7)	206 (69.8)	213 (63.4)	65 (69.1)
> 1.5 mg, no. (%)	41 (30.4)	53 (26.4)	86 (32.3)	89 (30.2)	123 (36.6)	29 (30.9)
Total	135	201	266	295	336	94

Values may not sum 100% as patients in the ≤1.2 group may have also been captured in the ≤1.5 group.

NB experience - CFHI: Antipsychotics in Nursing Homes

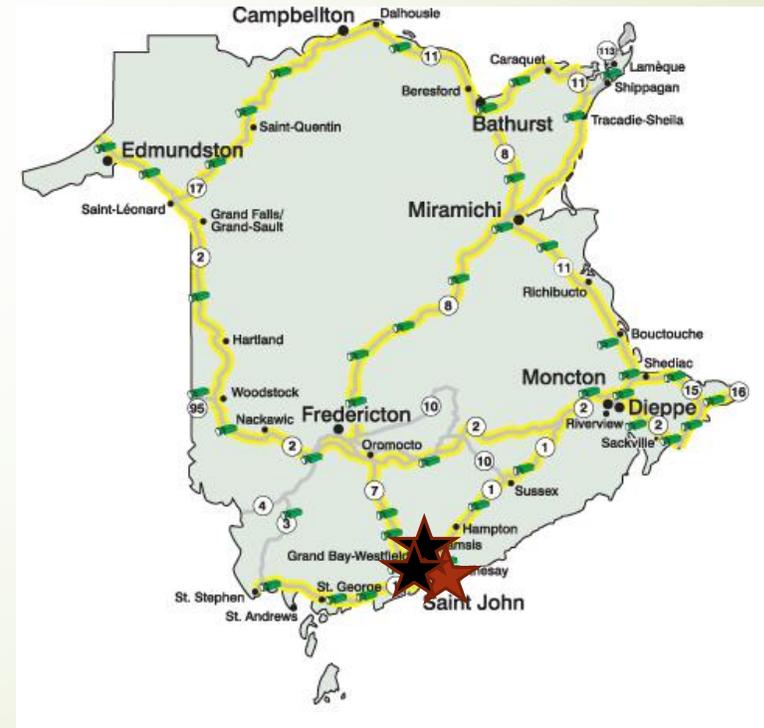
- ▶ The problems with antipsychotic drugs:
 - ▶ not the best strategy for managing dementia
 - ▶ associated with cognitive decline
 - ▶ can cause serious harm, including premature death
 - ▶ prescriptions are expensive
 - ▶ associated complications are even more expensive
- ▶ 27.5 % of LTC residents were inappropriately prescribed antipsychotic medication
- ▶ **More than one in four people** in long-term care who could benefit from AP reduction programs in New Brunswick



- \$1 invested prevents \$4.24 in health-care costs
- Nation-wide program would lower falls by at least 20 %

Two provinces with strong ties and different motivations

- ▶ A Collaborative Intervention for Streamlining Medication Appropriateness and Deprescribing within Integrated Health-Care Teams
- ▶ Melissa Andrew, MD, FRCPC, PhD
- ▶ Pamela Jarrett MD, FRCPC
- ▶ Jennifer Isenor PharmD



What do the people want?

- ▶ A study in Quebec, Canada explored community-dwelling older individuals' attitudes and perceptions towards deprescribing

Table 1
Participant characteristics (*n* = 129)

Characteristics	Number of individuals (%)
Age (years) (median; interquartile range)	76 (71-80)
Sex	
Male	48 (37,2%)
Female	81 (62,8%)
Number of daily medications (median; interquartile range) ^a	6 (3-8)
Drug administration aid users	56 (43,4%)
Medication management	
Self-management	114 (88,4%)
Spouse	6 (4,7%)
Family	4 (3,1%)
Other	4 (3,1%)
Missing data	1 (0,8%)

^a Data was missing for 6 individuals.

Table 3

Results from questions 11 to 15 of the French version of the Patients' Attitudes Towards Deprescribing questionnaire⁷

Question	Answer	<i>N</i> (%)
Have you ever tried to stop a regular medication?	No	78 (60.5)
	Yes and was able to remain off the medication	14 (10.9)
	Yes but had to restart the medication	32 (24.8)
	Yes but had to start a different medication	2 (1.6)
	Unsure	1 (0.8)
How many different tablets or capsules per day would you consider to be a lot? (<i>N</i> = 85)	Median: 5; range: 0-20	
How comfortable would you be if a pharmacist was involved in stopping one or more of your regular medications and provided the follow-up (informing your doctor of the progress)?	Comfortable	66 (51.2)
	Unsure	32 (24.8)
	Uncomfortable	25 (19.4)
How comfortable would you be if a nurse was involved in stopping one or more of your regular medications and provided the follow-up (informing your doctor of the progress)?	Comfortable	55 (42.6)
	Unsure	29 (22.5)
	Uncomfortable	40 (31.0)
If one of your regular medications was stopped, what follow-up would you like?	Face-to-face appointment	96 (74.4)
	Telephone call(s)	16 (12.4)
	Written information sent in the mail	3 (2.3)
	Written information sent by e-mail	5 (3.9)
	No planned follow-up needed	9 (7.0)
	Other	2 (1.6)



What Do We Do Right Now

- Numerous tools exist that can be used to identify Potentially Inappropriate Medications (PIM) including;
 - Beer's list, STOPP/START, PRISCUS, LAROCHE, Medication Appropriateness Index (MAI), Drug Burden Index, Anticholinergic Drug Scale, Anticholinergic Cognitive Burden Scale, and numerous deprescribing tools from the Canadian Deprescribing Network
- The implementation of these tools is not as high as it could or should be
- So we have work to do



Research questions



1. What is the impact of the integration of the pharmacist and framework/tool on medication appropriateness, polypharmacy, cost of medications used, complexity of the drug regimen, the patient/caregiver quality of life, and number of emergency department visits or hospitalizations?
2. Is there differential effect of the intervention based on patient-specific characteristics such as frailty, age, sex & gender?
3. What are the barriers and enablers to the successful implementation of the tool from the perspectives of the pharmacists, prescribers and patients/caregivers?

Live Day, June 25, 26, 2018 Saint John, NB

Topic A: Medications

- How are we going to choose what drugs to target? Do we select a list of drugs to target or do we rely on expertise of pharmacists?
- Are there differences depending on whether a caregiver/patient chooses the medications to eliminate versus the healthcare provider?

Topic B: Patients

- What patients to target?
- Who is appropriate for deprescribing?
- Is there an age limit?
- Is there a minimum level of frailty?
- What about those taking specific medications?

Topic C: Decision-Making Process

- What is the decision-making process?
- How are the deprescribing decisions made?
- Who makes that decision?
- Will physician screen first and send to the pharmacist? Should the pharmacist select patients?
- Will the decision be made by medication use?

Topic D: Evaluation and Communication

- How often should patients see the pharmacist? The physician?
- How independent can/should pharmacist be?
- How can the tool be used to communicate information back to patients? The providers?
- Framework for communicating deprescribing process with: patients and/or caregivers, with those who prescribed the medications and other healthcare providers



Findings from our live day introduced by our patient advisors

- Remove age restriction
 - Multiple methods of referral
 - Toolbox
- 



Timeline

- ▶ **Phase 1:** collaborative development of a framework and communication tool

1. Ways to identify a patient appropriate for deprescribing which will include frailty assessment
 2. Ways to identify Potentially Inappropriate Medications
 3. Ways to prioritize medications for deprescribing
 4. Ways to discuss deprescribing with patients using a patient-centred process
 5. Ways to communicate effectively with prescribers
 6. A draft framework for deprescribing in our project
- ▶ 6. A draft tool for documenting and communicating progress through deprescribing with prescribers
 - ▶ Three rounds of revisions remotely

- ▶ **Phase 2:** implementation/pilot of the tool in three integrated primary healthcare teams and two nursing homes in NS and NB

- ▶ **Phase 3:** evaluation of the tool by prescribers, pharmacists, and patients



Still to come

- Complete tool development
- Research Ethics at NSHA and Horizon Health
- Implementation (12 weeks) of tool in **three** integrated health teams January-April 2019
- Implementation (12 weeks) tool in **two** LTCF January-April 2019
- Data analysis April-June 2019
- Final Reports July 2019

Questions

Thank you for your attention

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