

Antipsychotic Drug Therapy in Older Adults

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Objectives

- Describe antipsychotic drug therapies
- Explore antipsychotic drug use in older adults
- Discuss alternative management strategies

Conflicts of Interest

- None

Discussion about antipsychotic drug therapy is timely...

Looking for Balance

Antipsychotic medication
use in Ontario long-term
care homes



Describe Antipsychotic Drug Therapies

Concern about antipsychotic drugs
isn't new...

Atypical Antipsychotic Therapy

- Began as niche drug for Schizophrenia and later bipolar disorder
- Atypical antipsychotic therapy introduced in 1990's as an alternative to typical therapies



Atypical Antipsychotic Therapy

Therapies important
in moving patients
from institutions to
community settings



**Asylum for the Insane,
Queen Street West, Toronto**

Atypical Antipsychotic Therapy

Therapies important in moving patients from institutions to community settings



**Asylum for the Insane,
Queen Street West, Toronto**



Behavioural and Psychological Symptoms of Dementia

- Restlessness, disruptive vocalizations, physical aggression are distressing manifestations of dementia
 - May occur in up to 90%
- Leads to
 - Increased caregiver burden
 - Premature admission to long-term care
 - Symptomatic treatment with medication

Antipsychotic Drug Therapy

Atypical

- Olanzapine
- Risperidone
- Quetiapine

Typical

- Haloperidol
- Loxapine
- Thioridazine

Clinical Context

Drug Therapy	Labeled Indication	Benefit	Risk	Year of introduction
Clinical Indication: Schizophrenia & Bipolar Disorders				
Olanzapine	✓	Yes	Less	1996
Risperidone	✓	Yes	Less	1993
Quetiapine	✓	Yes	Less	1997

Clinical Indication: Behavioural Problems with Dementia

Olanzapine	✗	Unclear	Unclear
Risperidone	✓	Unclear	Unclear
Quetiapine	✗	Not evaluated	Unclear





Risperidone - Restriction of the Dementia Indication

Starting date: February 18, 2015
Posting date: February 18, 2015
Type of communication: Dear Healthcare Professional Letter
Subcategory: Drugs
Source of recall: Health Canada
Issue: Important Safety Information

[Report a Concern](#)

“The indication for risperidone in dementia has been **restricted to the short-term symptomatic management of aggression or psychotic symptoms** in patients with severe dementia of the Alzheimer type, unresponsive to non-pharmacological approaches and when there is a risk of harm to self or others. The indication no longer includes the treatment of other types of dementia such as vascular and mixed types of dementia.”

Antipsychotic Drug Use



The NEW ENGLAND JOURNAL *of* MEDICINE

ESTABLISHED IN 1812

OCTOBER 12, 2006

VOL. 355 NO. 15

Effectiveness of Atypical Antipsychotic Drugs in Patients with Alzheimer's Disease

Lon S. Schneider, M.D., Pierre N. Tariot, M.D., Karen S. Dagerman, M.S., Sonia M. Davis, Dr.P.H.,
John K. Hsiao, M.D., M. Saleem Ismail, M.D., Barry D. Lebowitz, Ph.D., Constantine G. Lyketsos, M.D., M.H.S.,
J. Michael Ryan, M.D., T. Scott Stroup, M.D., David L. Sultzer, M.D., Daniel Weintraub, M.D.,
and Jeffrey A. Lieberman, M.D., for the CATIE-AD Study Group*

ABSTRACT

BACKGROUND

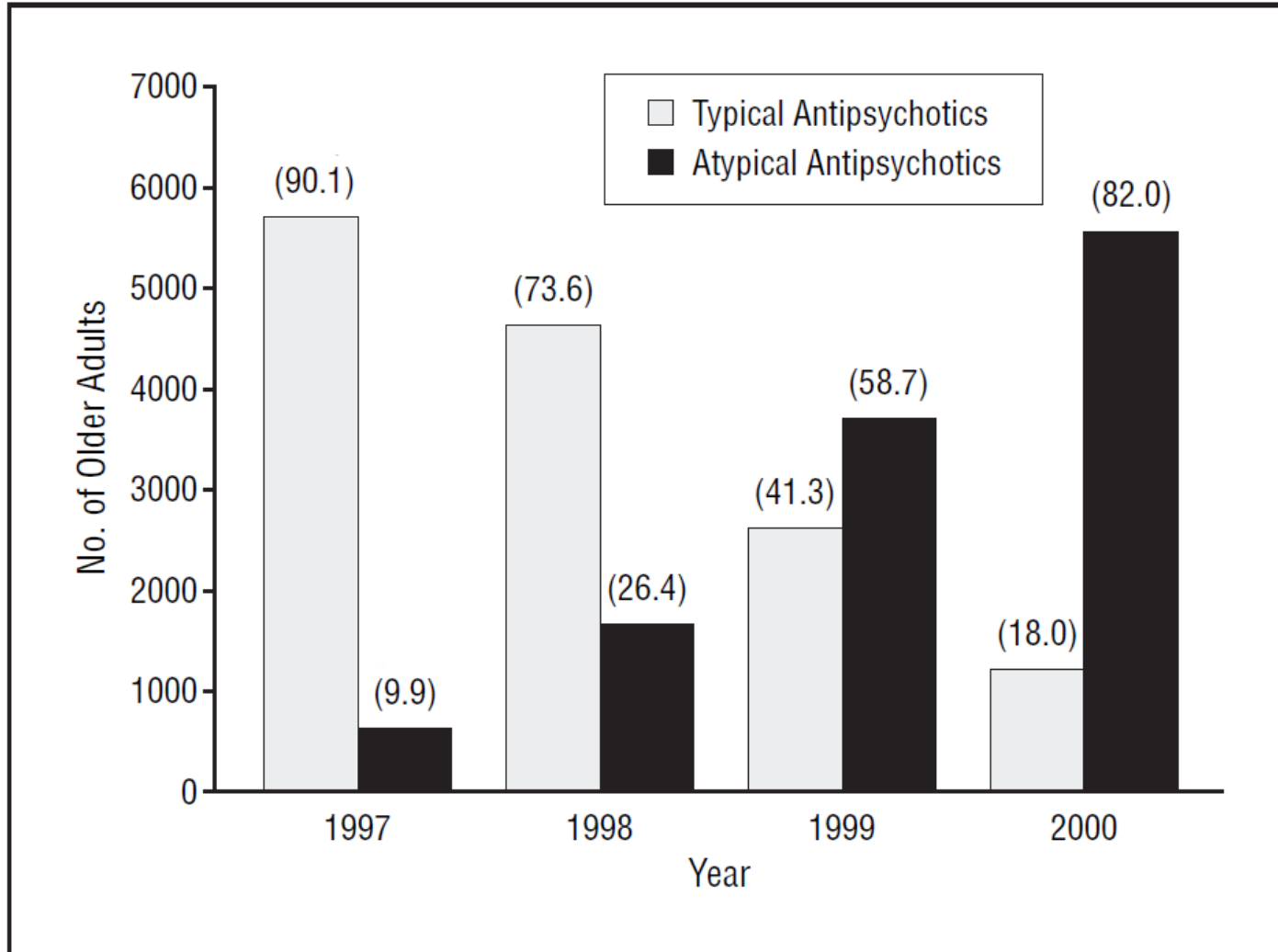
Second-generation (atypical) antipsychotic drugs are widely used to treat psychosis, aggression, and agitation in patients with Alzheimer's disease, but their benefits are uncertain and concerns about safety have emerged. We assessed the effectiveness of atypical antipsychotic drugs in outpatients with Alzheimer's disease.

METHODS

In this 42-site, double-blind, placebo-controlled trial, 421 outpatients with Alzheimer's disease and psychosis, aggression, or agitation were randomly assigned to re-

From the Keck School of Medicine, University of Southern California, Los Angeles (L.S.S., K.S.D.); the Banner Alzheimer's Institute, Phoenix, AZ (P.N.T.); Quintiles, Research Triangle Park, NC (S.M.D.); the National Institute of Mental Health, National Institutes of Health, Bethesda, MD (J.K.H.); the University of Rochester Medical Center, Rochester, NY (M.S.I., T.S.S.); and the University of California, San Diego, San Diego, CA (D.L.S.).

Prescribing shift to atypical antipsychotics



Use in Long-Term Care

- Frailest among older adult population.
- On average 85 years old, most women, most with dementia, often multiple chronic illness
- **20%** of residents are on **10 or more** different drugs

US National Nursing Home Survey (2004)

- 25% prescribed antipsychotic therapy
 - 3%: Schizophrenia
 - 1%: Bipolar disorders

- **21%: Off label**
 - Primarily for management of behavioural problems in dementia



Widespread Use

- Antipsychotic drugs are widely used in LTC
- Within one year of admission, almost ¼ of residents received new antipsychotic therapy without evidence of psychiatric disorder.

Bronskill SE, Anderson GM, Sykora K, Wodchis W, Gill S, Shulman KI, Rochon PA. Neuroleptic Drug Therapy in Older Adults newly admitted to nursing homes: Incidence, Dose and Specialist Contact. *JAGS* 2004.

Why Drug Prescribing is Important

Physician cannot change

- The patient's age
- The patient's chronic medical conditions



“... the decision whether to prescribe any drug, the choice of drug, and the manner in which it is to be used... are all factors that are under control of the prescriber.”

Preventable Adverse Drug Events in Older Adults

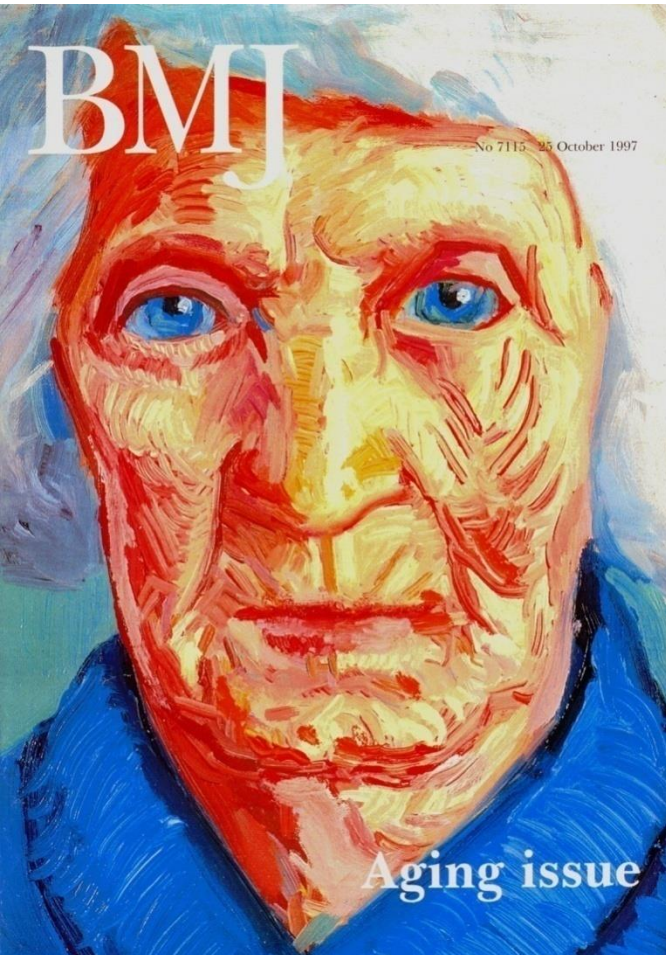
- Adverse drug event are one of the most serious consequences of inappropriate prescribing
- Well over half of the more serious events are preventable.

Use in Long-Term Care

- The **top 3** drug therapies most associated with adverse drug events in long-term care:
 - Warfarin
 - Atypical antipsychotics
 - Loop diuretics

**Are Adverse Drug Events
always easily recognizable?**

Unrecognized Adverse Events

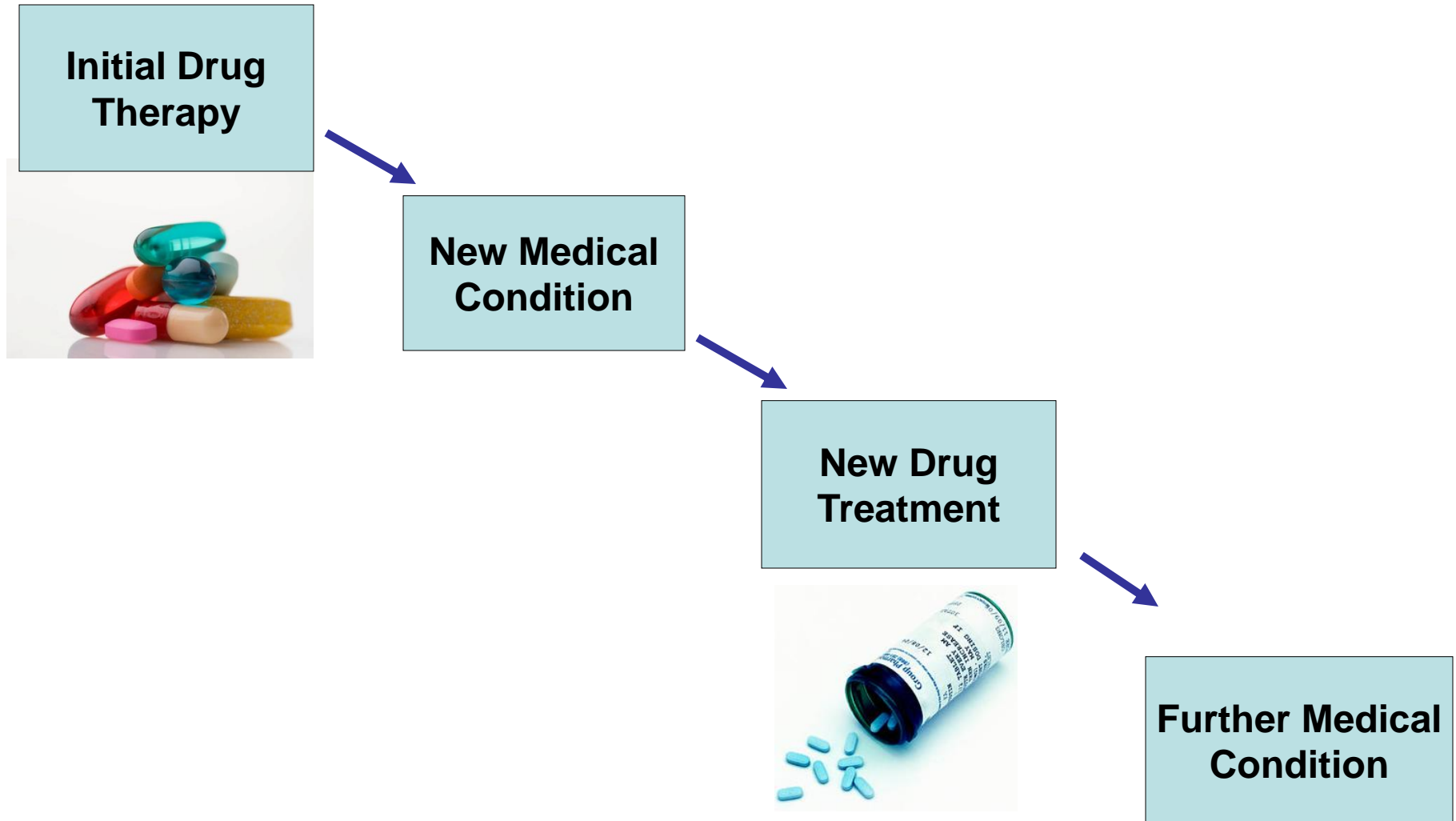


A "prescribing cascade" begins when an adverse drug reaction is misinterpreted as a new medical condition

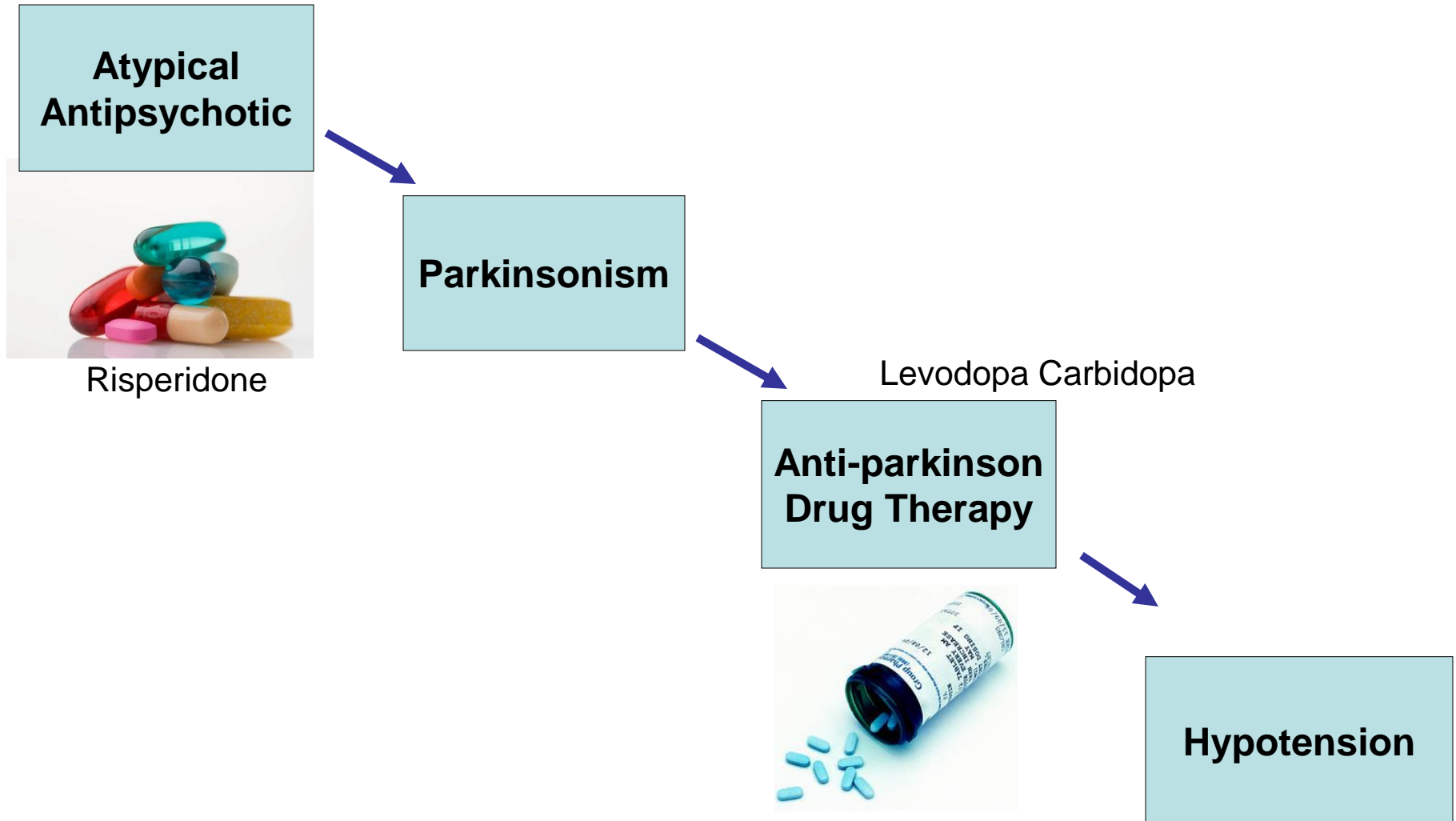
Rochon PA, Gurwitz JH. BMJ 1997



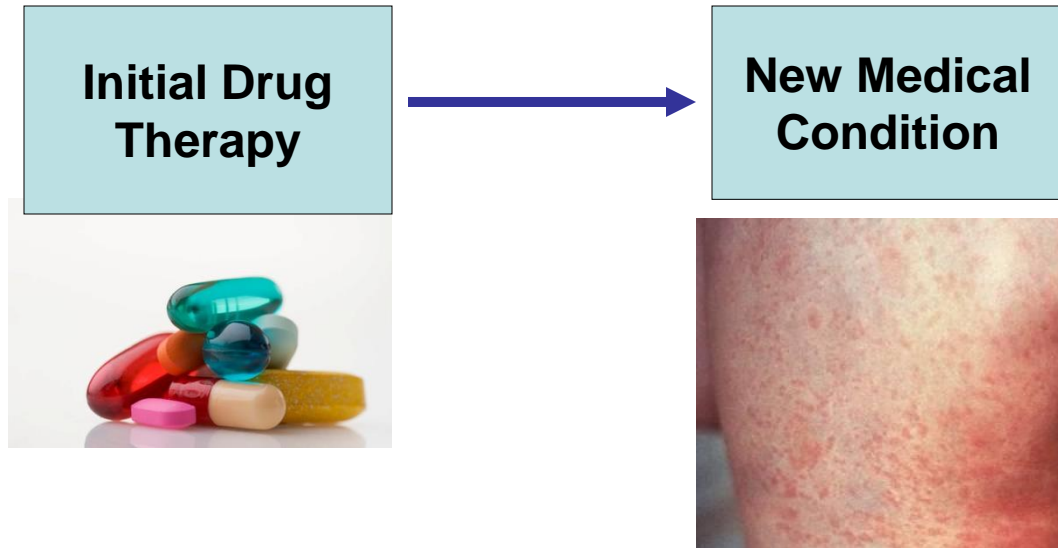
What is a Prescribing Cascade?



Mrs A's Prescribing Cascade



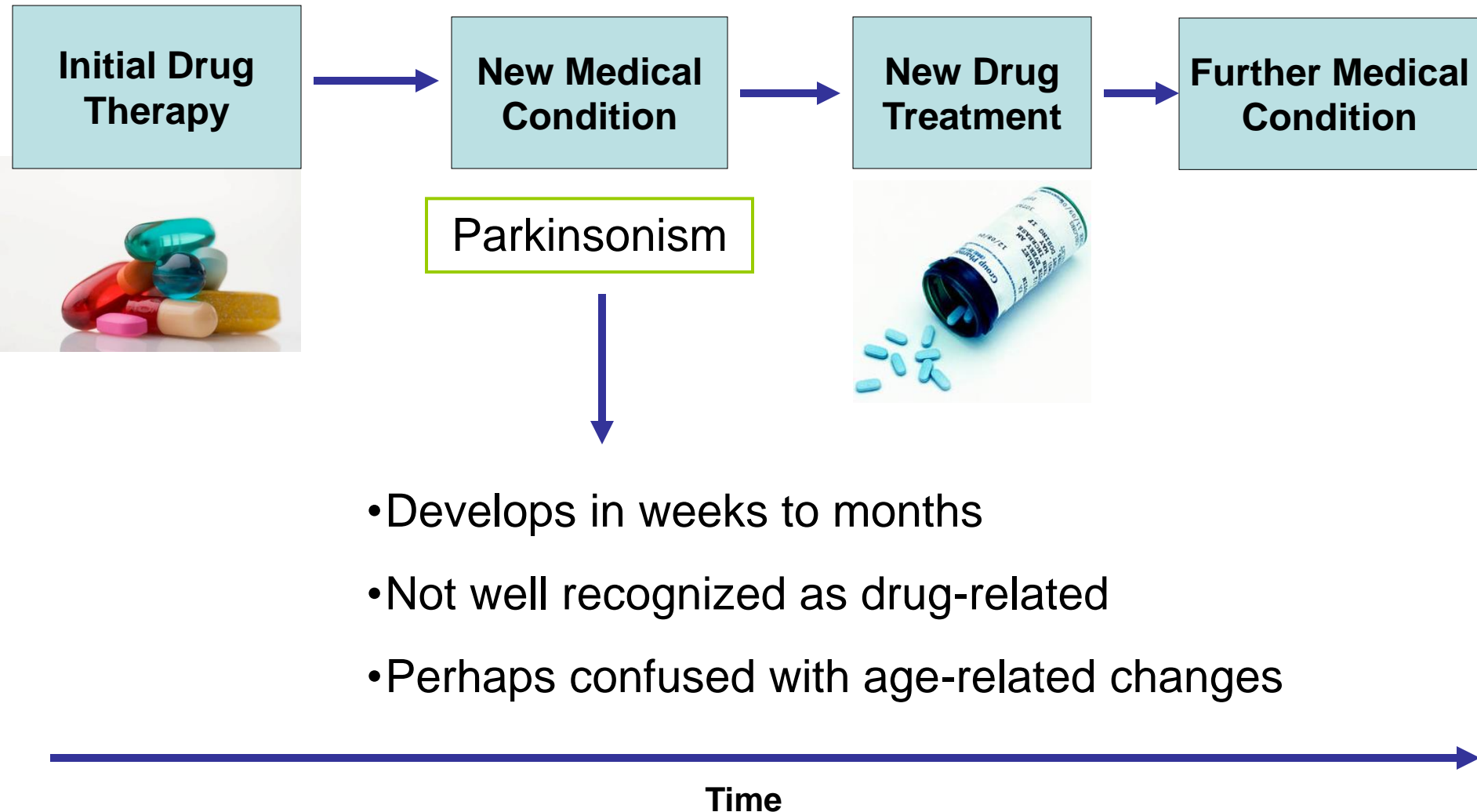
Why are Prescribing Cascades not Recognized?



- Develops in hours or days
- Well-recognized as drug-related



What is a Prescribing Cascade?



Adverse Drug Events and the Prescribing Cascade

Prescribing cascades are examples of **adverse drug events** which have **gone unnoticed** and can be prevented

Mrs A's Prescribing Cascade

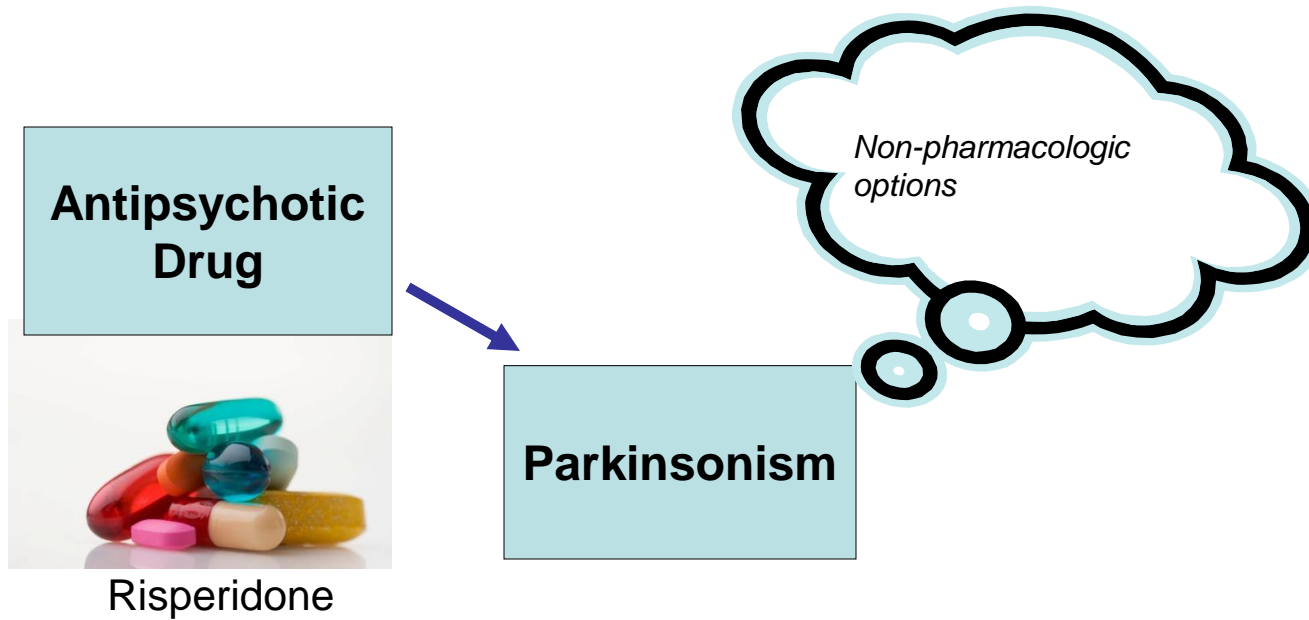
Re-evaluate need
Re-evaluate dose

**Antipsychotic
Drug**

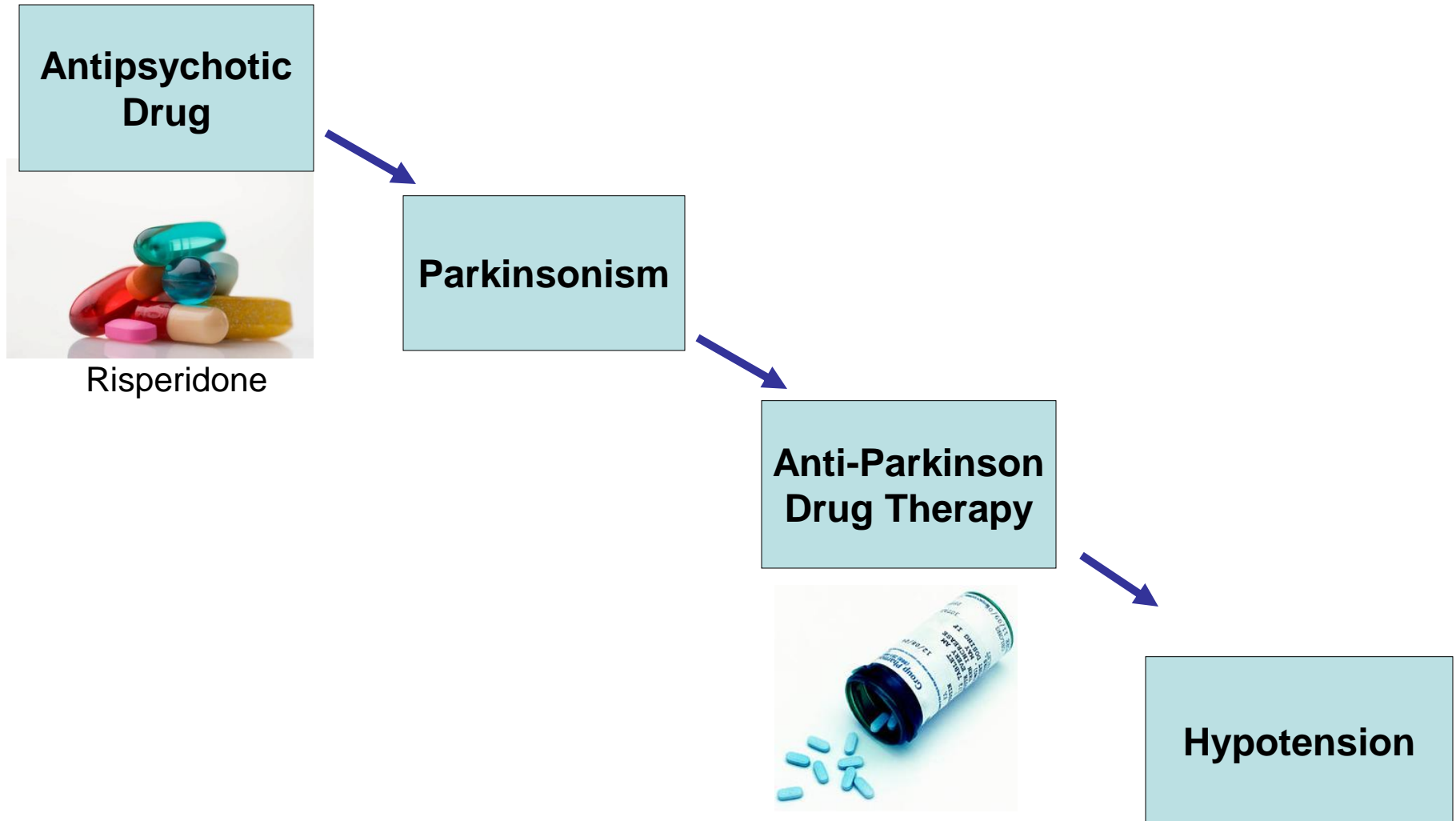


Risperidone

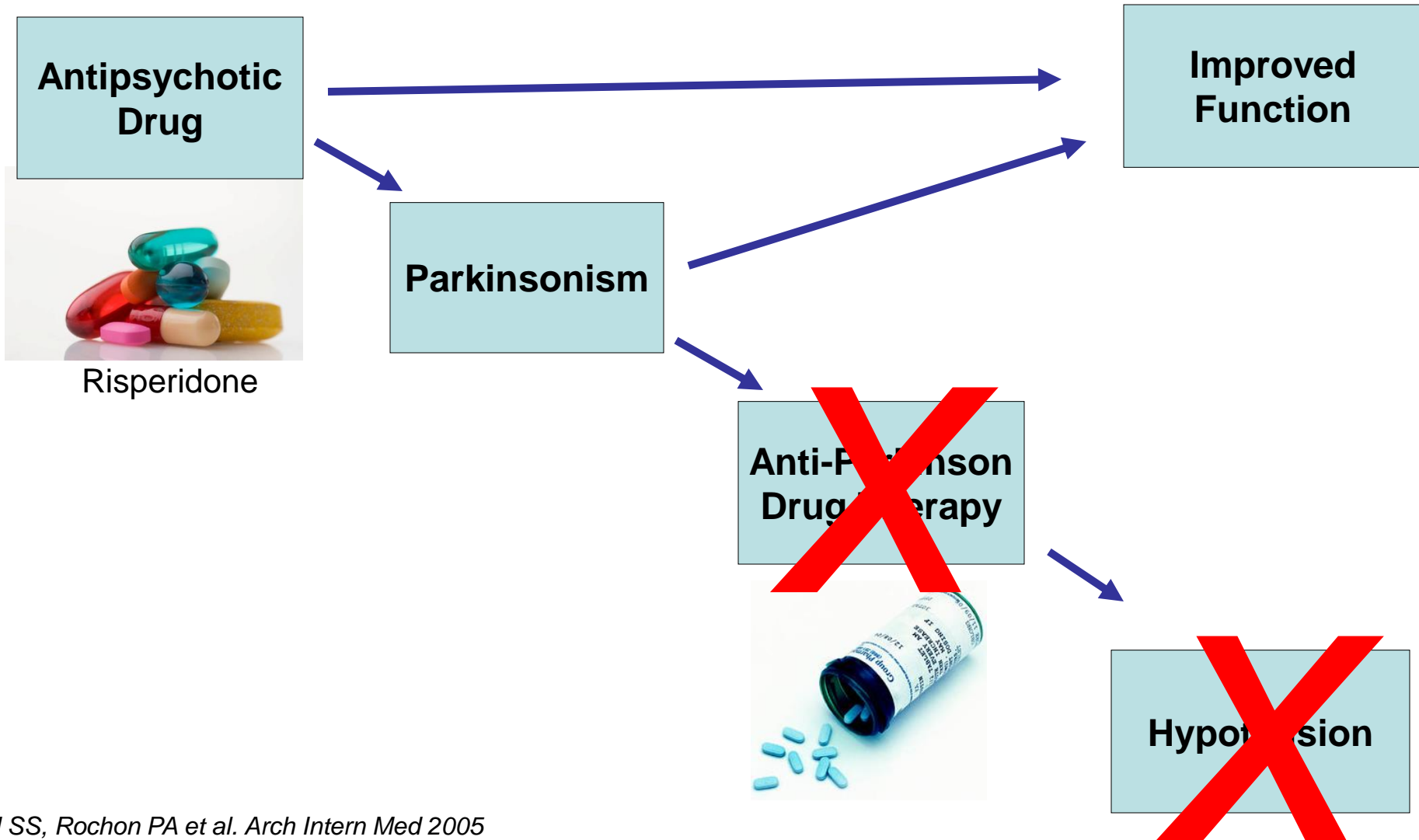
Mrs A's Prescribing Cascade



Mrs A's Prescribing Cascade



Mrs A's Prescribing Cascade



Parkinsonism

Are atypical antipsychotics associated with Parkinsonism?

Our question almost a decade ago with the introduction of atypical antipsychotics

Antipsychotic Drug Therapy

Atypical

- Lower potency
 - Olanzapine
 - Risperidone
 - Quetiapine

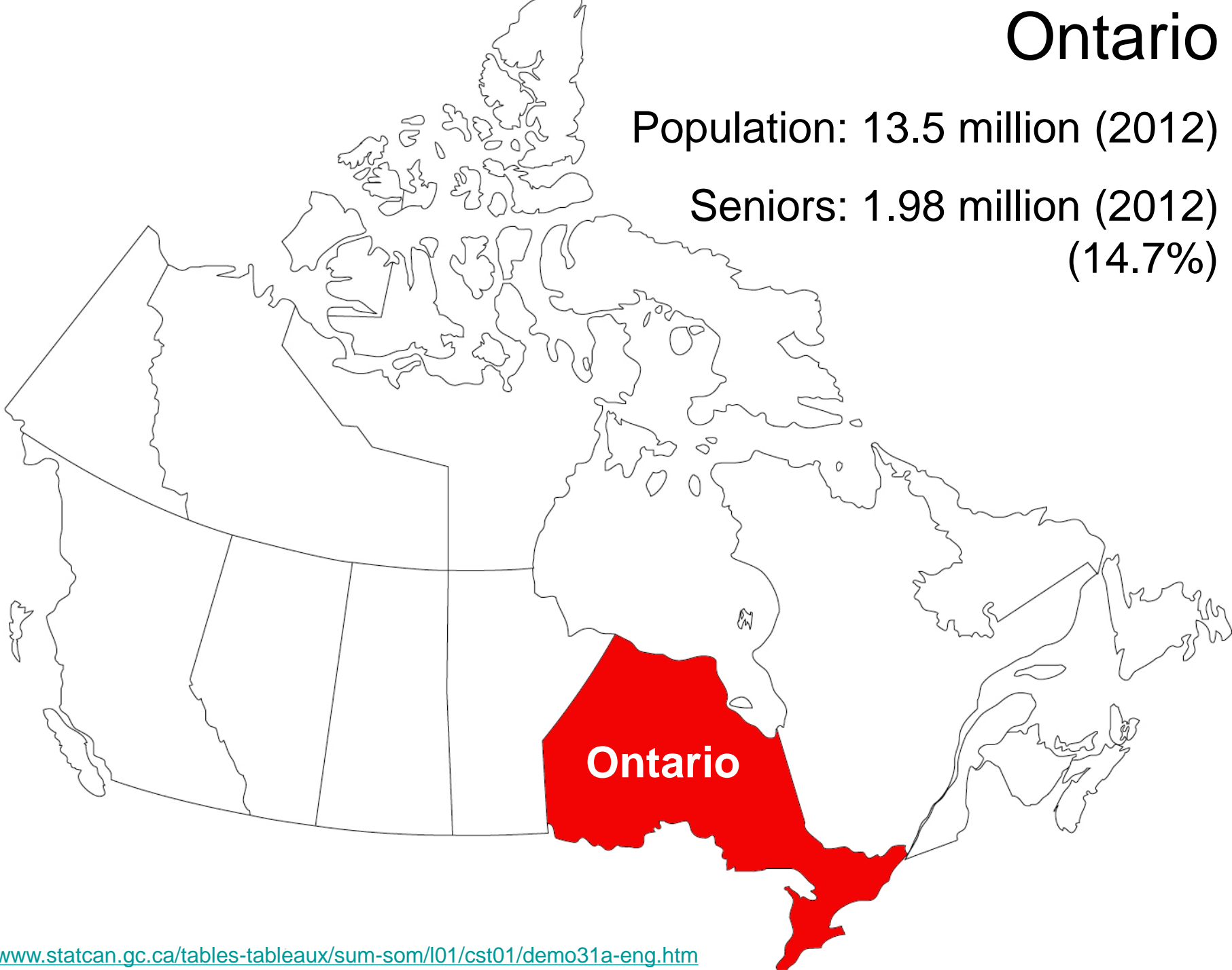
Typical

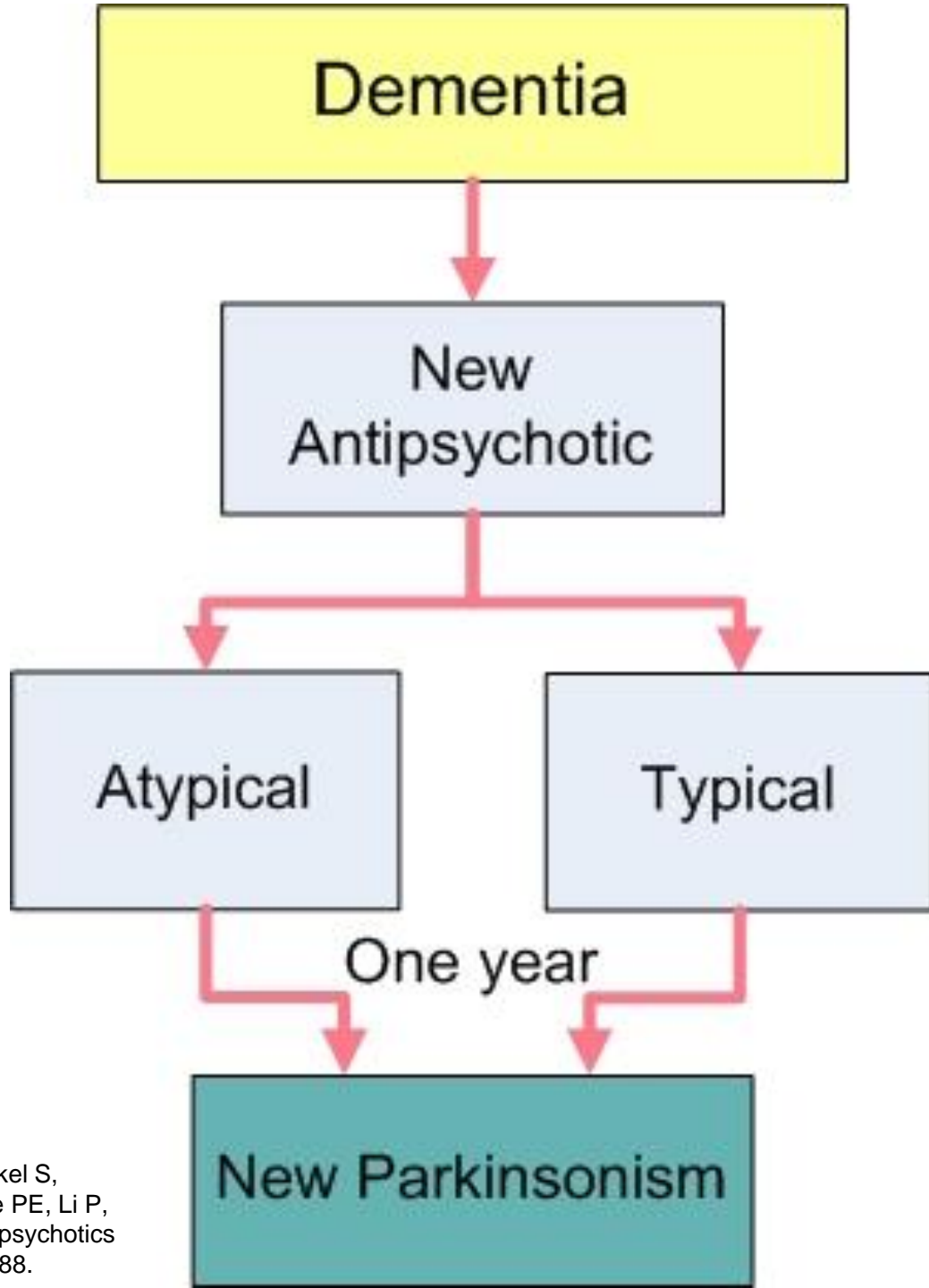
- Lower potency
 - Thioridazine
- Higher Potency
 - Haloperidol
 - Loxapine

Ontario

Population: 13.5 million (2012)

Seniors: 1.98 million (2012)
(14.7%)





Rochon PA, Stukel TA, Sykora K, Gill SS, Garfinkel S, Anderson GM, Normand SLT, Mamdani MM, Lee PE, Li P, Bronskill SE, Marras C, Gurwitz JH. Atypical Antipsychotics and Parkinsonism. *Arch Intern Med* 165:1882-1888.

Results

- 57,838 older adults
 - 20% receiving atypical antipsychotic
 - 25% receiving typical antipsychotic
 - 55% receiving neither

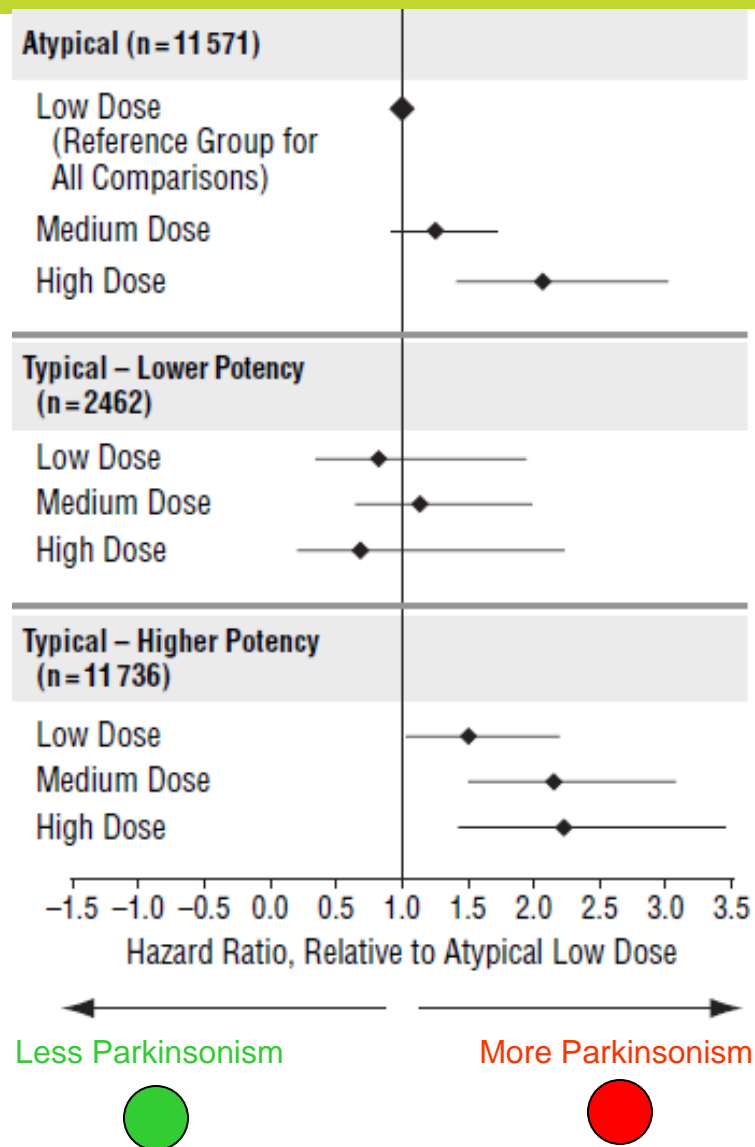
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Antipsychotic-Induced Parkinsonism

	Adjusted HR (95% CI)
Non-antipsychotic comparison group	0.40 (0.29-0.43)
Atypical antipsychotic group	1.00 (Reference)
Typical antipsychotic group	1.30 (1.04-1.58)

Rochon PA, Stukel TA, Sykora K, Gill SS, Garfinkel S, Anderson GM, Normand SLT, Mamdani MM, Lee PE, Li P, Bronskill SE, Marras C, Gurwitz JH. Atypical Antipsychotics and Parkinsonism. *Arch Intern Med* 2005

The Hazards of High Dose



Less Parkinsonism

More Parkinsonism



Parkinsonism

Are atypical antipsychotics associated with Parkinsonism?

The evidence appears to be ‘yes’, and at high doses have a similar risk to typicals.

If not atypical antipsychotics, what drug should we prescribe?

No safe drug alternative



Are non-pharmacologic approaches possible?

Non-pharmacologic approaches

- Decision to prescribe may be related to the nursing home environment.
- Some environments may be more permissive about use of antipsychotic therapy.

Talking about antipsychotic
drug therapy is timely, but isn't
new

Looking for Balance

Antipsychotic medication
use in Ontario long-term
care homes





Care homes vary wildly in prescription of antipsychotics, study finds

ANDRÉ PICARD - PUBLIC HEALTH REPORTER

The Globe and Mail

Published Wednesday, May. 20 2015, 12:01 AM EDT

Wild variations in the number of residents in long-term care who are prescribed antipsychotic medications are focusing new attention on how and why these powerful drugs, which can have serious side effects, are used so routinely.

A study of 604 long-term-care homes in Ontario, to be released Wednesday, found that anywhere from zero to 67 per cent of residents over the age of 65 are treated with antipsychotics after a diagnosis of psychosis, dementia or other conditions that can leave them highly agitated.

While the drugs are calming, the side effects include a higher risk of falls, profound drowsiness, lessened quality of life, and a slightly increased risk of death. There are even complaints that the drugs are used to “chemically restrain” patients in long-term care.

But Joshua Tepper, president and CEO of Health Quality Ontario which conducted the study, said it’s not as simple as saying the drugs are

The Gazette

10 April 2007

**Seniors given needless antipsychotic drugs;
Doctors too quick to medicate, author says**

THE CANADIAN PRESS



**Minister says bill will address drugging
of nursing-home seniors**

OTTAWA  **CITIZEN**

**Ontario nursing homes too quick to give seniors
antipsychotic drugs they don't need, study finds**

Are antipsychotics prescribed differently in different long-term care homes?

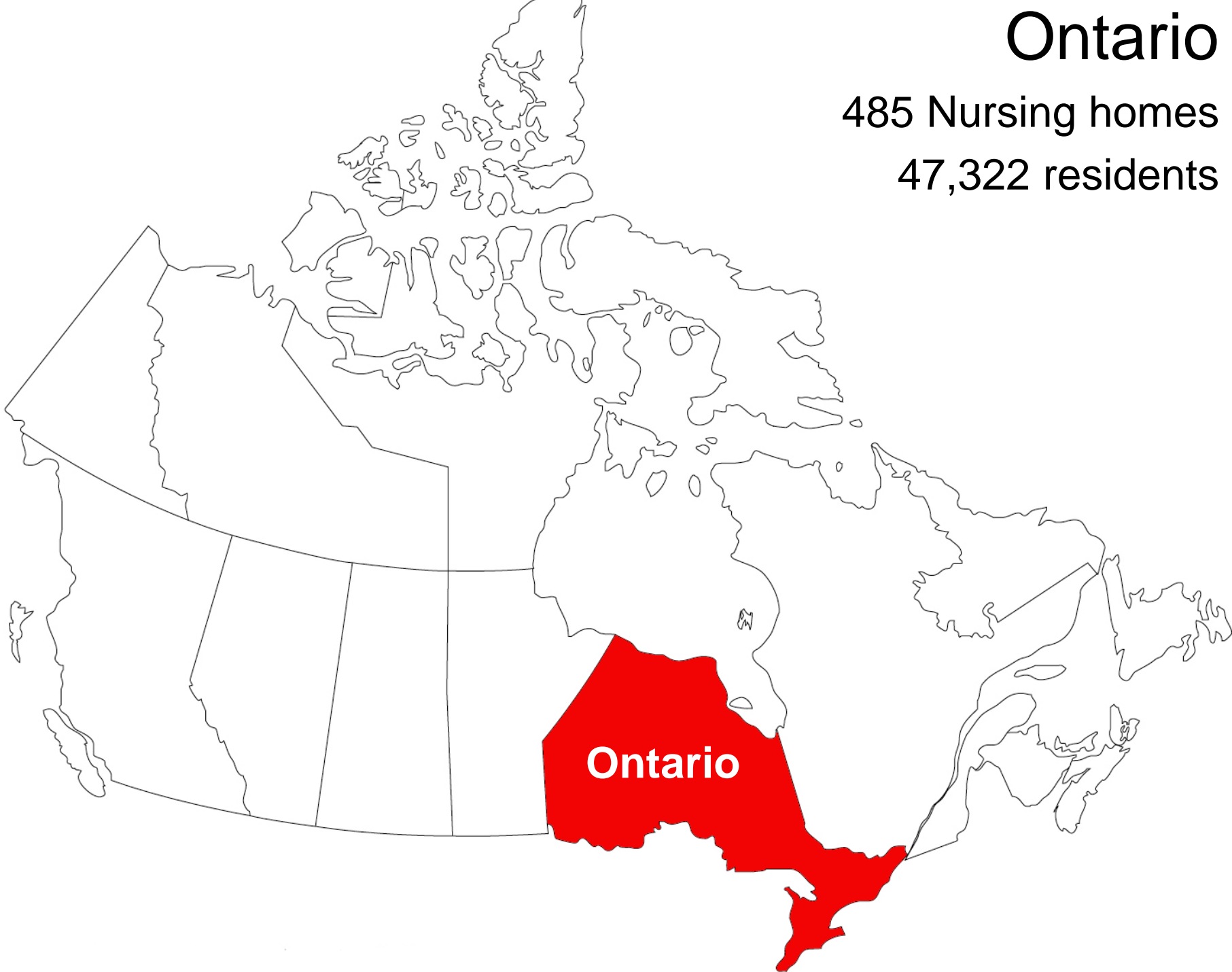


Rochon PA et al. Variation in Nursing Home Antipsychotic Prescribing Rates. *Archives of Internal Medicine* 2007;167(7):676-683.

Ontario

485 Nursing homes

47,322 residents



Non-pharmacologic approaches

- One-third of residents are prescribed an antipsychotic therapy
- Use varies greatly across long-term care homes
- Residents looked similar across homes

Table 2. Characteristics According to Nursing Home Antipsychotic Drug Therapy Prescribing Rates

Characteristic	Overall	Quintile			Rate Ratio (Q5/Q1) (95% CI)
		Q1	Q3	Q5	
Antipsychotic prescribing rates, range	32.4%	3.3-25.5%	30.7-34.3%	39.3-66.7%	NA
Facilities	485	21.4%	17.3%	22.3%	NA
Residents	47322	19.9%	19.6%	19.5%	NA
Resident-Level Characteristics					
Demographic					
Age, mean, y	84.4	85.0	84.2	84.0	0.99 (0.99-0.99)
Comorbidity					
Charlson index, mean, score	1.7	1.7	1.8	1.7	0.97 (0.94-1.01)
Drug count, mean, No.	10.7	10.4	10.6	10.6	1.02 (1.00-1.03)
Clinical groups					
Potential clinical indication for antipsychotic therapy					
Psychoses, with or without dementia	21.7%	17.5%	23.4%	22.9%	1.31 (1.26-1.35)
Dementia, without psychoses	61.6%	63.1%	58.9%	61.6%	0.98 (0.95-1.00)
No potential clinical indication for antipsychotic therapy: without psychoses or dementia	17.0%	19.4%	17.7%	15.5%	0.80 (0.72-0.88)

Table 4. Resident-Level Use of Antipsychotic Therapy by Clinical Group by Facility-Level Intensity of Antipsychotic Therapy Use

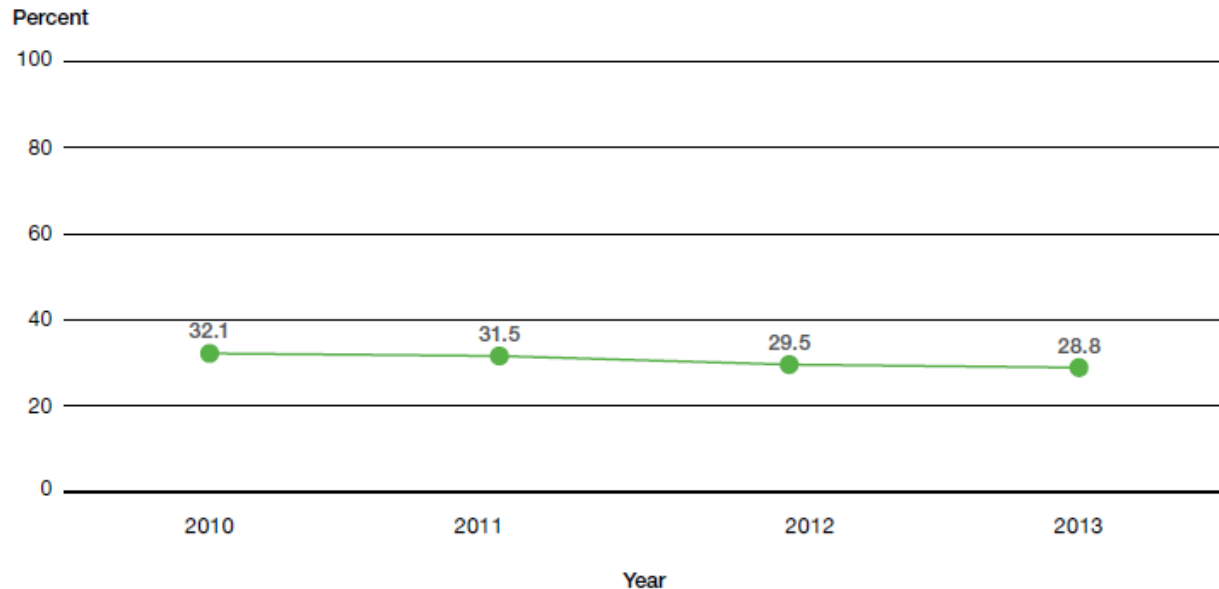
Clinical Groups	Residents, No. (%)	Unadjusted Model, OR (95% CI)	Adjusted Model, AOR (95% CI)
All clinical groups			
Quintile 1*	1965 (4.2)	1 [Reference]	1 [Reference]
Quintile 2	2685 (5.7)	1.5 (1.36-1.54)	1.4 (1.32-1.53)
Quintile 3	3002 (6.3)	1.8 (1.70-1.90)	1.8 (1.65-1.91)
Quintile 4	3581 (7.6)	2.0 (1.96-2.22)	2.1 (1.93-2.21)
Quintile 5†	4084 (8.6)	3.0 (2.77-3.16)	3.0 (2.74-3.19)
Total	15 317 (32.4)		

Residents in homes with highest antipsychotic prescribing rates were **3 times more likely** to be prescribed an antipsychotic

The 2010 baseline rate reported by HQO is virtually identical to a rate of 32.4% in 2003.

FIGURE 2.1

Percentage of long-term care home residents 65 years or older using an antipsychotic medication on March 31 of each year, 2010 to 2013, in Ontario



Data sources: CCRS, DAD, ODB claims database and RPDB, provided by ICES. Notes: Values were adjusted for sex, age group and comorbidity. There was a statistically significant difference between the percentages in 2012 (29.5%) and 2013 (28.8%) and the percentage in 2010 (32.1%; reference). See the online technical appendix for descriptions of risk adjustment and statistical significance.


Sources: Rochon PA et al. Variation in Nursing Home Antipsychotic Prescribing Rates. *Archives of Internal Medicine* 2007;167(7):676-683.


Health Quality Ontario. Looking for Balance: Antipsychotic medication use in Ontario long-term care homes. Toronto: Queen's Printer for Ontario; 2015.


FIGURE 3.2


Percentage of long-term care home residents 65 years or older who were using antipsychotic medication with a diagnosis of a specific medical condition on March 31, 2013, in Ontario



 Residents with psychosis

 Residents with dementia (without psychosis)

 Residents without documented diagnosis of psychosis or dementia

 With a prescription for an antipsychotic medication

Data sources: CCRS, DAD, ODB claims database, OHIP claims database, OMHRS and RPDB, provided by ICES. Notes: Antipsychotic use values were adjusted for sex, age group and comorbidity. Residents were identified as having a documented diagnosis of psychosis or dementia based on physician, drug and hospital claims data (DAD, ODB claims database, OHIP claims database and OMHRS). Residents with neither psychosis nor dementia according to the administrative sources listed above may have a diagnosis of psychosis or dementia noted in other data sources, such as the RAI-MDS data in the CCRS. See the online technical appendix for more information.

Source: Health Quality Ontario. Looking for Balance: Antipsychotic medication use in Ontario long-term care homes. Toronto: Queen's Printer for Ontario; 2015.

Are antipsychotics
prescribed differently
in different long-term care
homes?

Yes, indicating cultures in homes
differ, and an opportunity for
non-pharmacologic
approaches



OBRA-87 – US Federal Regulations

- OBRA-87 regulations introduced to restrict the use of antipsychotic therapy in US nursing homes.
- Introduced when ~25% of residents were dispensed typical antipsychotic therapies.
- Post-OBRA, decreased to 17%
- Centres for Medicare and Medicaid Services have identified prescribing antipsychotic therapy to residents with no indication as measure of poor quality of care.

National Partnership to Improve Dementia Care exceeds goal to reduce use of antipsychotic medications in nursing homes: CMS announces new goal

September 19, 2014

The National Partnership to Improve Dementia Care, a public-private coalition, today established a new **national goal of reducing the use of antipsychotic medications in long-stay nursing home residents by 25 percent by the end of 2015, and 30 percent by the end of 2016**. The coalition includes the Centers for Medicare & Medicaid Services (CMS), consumers, advocacy organizations, providers and professional associations.

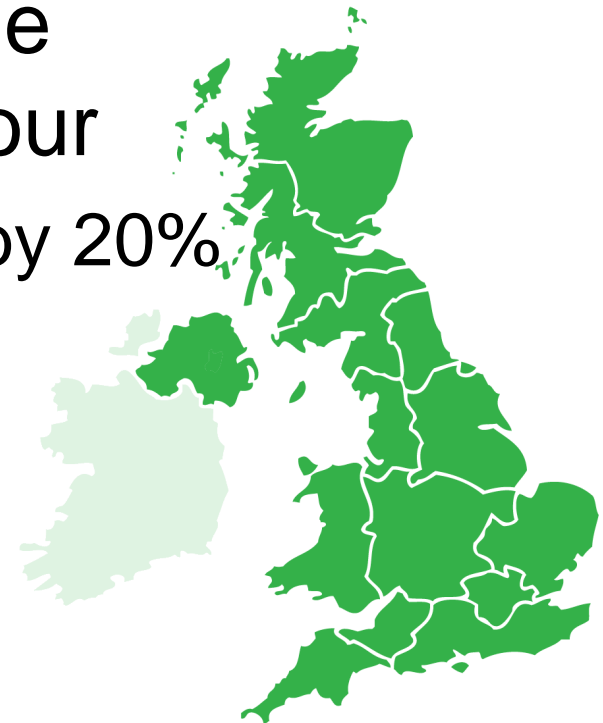
Between the end of 2011 and the end of 2013, the national prevalence of antipsychotic use in long-stay nursing home residents was reduced by 15.1 percent, decreasing from 23.8 percent to 20.2 percent nationwide. The National Partnership is now working with nursing homes to reduce that rate even further.

If not a drug, then what?

United Kingdom

Introduction of training and support interventions in UK nursing homes that focus on alternatives to drug use for the management of agitated behaviour

- Reduced use of antipsychotics by 20%



Dementiaville - How an experimental new town is taking the elderly back to their happier and healthier pasts with astonishing results

It's a bit early for a cocktail – yet Lex Jacott and Henk de Rooy are enjoying a giggle over a glass of chilled port. Lex and Henk, aged 84 and 76, are residents of a place that has been dubbed 'Dementiaville' – the world's first and only village for dementia patients.



Sept, 2008

Norway

Dr. Kjell Krüger and his colleagues at Løvåsen nursing homes cut down on the use of antipsychotic drugs such as Risperdal, Zyprexa and Seroquel.

Today, fewer than five elderly patients with dementia in Løvåsen nursing homes take antipsychotics.

"I think that environment also plays a major role in the quality of dementia care", says Dr. Krüger. **Formerly, patients lived on units of 26 patients. Now, they live in groups of eight.** We have a better understanding of our patients. If someone gets upset, we see it and can calm them directly, perhaps with a short walk."



När dementia Laila Strand blir på dåligt humör får sjuksköterskan Cigdem Javid henne på andra tankar med ett skämt.

Det gick lika bra med

DN granskar. Studie i norska Bergen visar att psykosmedicin är onödigt för de flesta dementa.

BERGEN. Två av tre dementa som får antipsykotiska läkemedel behöver inte sin medicin, visar en norsk studie. Därför får färre dementa i Bergen medicinerna nu.



DEMENTA DRÖGS
DEL 3
TEXT OCH RESEARCHANNA BRATT
FOTO ÅRIL SJÄNSEN
RESEARCH FREDRIK HEDLUND

I SÄLLSKAPSRUMMET på Løvåsen sjukhus i Bergen står psykologerna

Åsen i en studie där forskarna ville se vad som händer om man tar bort de antipsykotiska läkemedlen till de dementa.

– Vi var redan beväpnade över mängden läkemedel som ges till de gamla. Vi ville verkligen vara med i den här studien, säger Kjell Krüger.

I STUDENTLOTTAS 55 dementa äldre kvinnor och män i Bergen och Oslo till två grupper. Den ena gruppen fortsatte att ta sina mediciner och den andra gruppen fick placebo när inget annat hjälper.

– Vi fokuserar på att minska användningen av medicinerna, säger Kjell Krüger, som är överläkare på

tidigare britisk studie med dubbla blinda många deltagare hade redan visat liknande resultat.

– Det betyder att patienterna inte behöver medicinerna. Tvärtom såg vi att många blev bättre när medicinerna togs bort. Särskilt de som lidit av oro och depression, säger Sabine Ruths, professor i folkhälsovetenskap vid Bergens universitet och en av forskarna bakom den norska studien.

Flera som hade fått sockerpiller i studien klarade sig också i fortsättningen utan medicin.

– Läkarna blev nog påverkade av resultaten i studien. Vi måste bli bättre på att regelbundet ta bort medicinerna och se om pa-

Hennes slutsats är att det bara är de dementa som verkligen är till fara för sig själva eller andra som ska ha läkemedel mot psykos.

– Och de är få, säger forskaren Sabine Ruths.

"Vi är inte fler inom personalen i dag, men vi får mer utbildning och det ger bättre vård"

Kjell Krüger och hans kolleger på Løvåsen sjukhus påverkades av studien och den uppmärksamhet den fick i de norska medierna. De började dra ned på användningen av läkemedel som Risperdal, Zyp-

The New York Times

Feb 15, 2011

United States

Awakenings Program

A Minnesota nursing home trained staff, including housekeepers and cooks, in tools to calm and reassure its residents, including exercise, activities, music, massage, and aromatherapy.



The New Old Age

Caring and Coping

February 15, 2011, 11:10 AM

Clearing the Fog in Nursing Homes

By PAULA SPAN

The woman, who was in her 90s, had lived for several years at the Ecumen Sunrise nursing home in Two Harbors, Minn., where the staff had grown accustomed to her grimaces and wordless cries. She took a potent cocktail of three psychotropic drugs: Ativan for anxiety and the antipsychotic Risperdal to calm her, plus an antidepressant. In all the time she'd lived at Sunrise, she hadn't spoken. It wasn't clear whether she could recognize her children when they came to visit.

The Two Harbors home happened to be where Ecumen, which operates 16 nonprofit Minnesota nursing homes, was preparing an experiment to see if behavioral rather than pharmacological approaches could help wean residents off antipsychotic medications. They called it the Awakenings program.

"What's people's biggest fear? Being a 'zombie' in a nursing home," said Laurel Baxter, the Awakenings project



Belinda Day Saylor

Eva Lanigan, right, director of nursing at the Ecumen nursing home in Two Harbors, Minn., with a resident, Marjorie Labrie, 94.



Improving the lives of patients at personal care homes in Winnipeg and beyond

Innovative approach finds major savings



The Problem

For years, healthcare providers at the Winnipeg Regional Health Authority (WRHA) have collected

The Impact

Puchniak and Sinclair discovered that facilities where residents with dementia reported markedly lower use of antipsychotic drugs, relied on the *'Physical, Intellectual, Emotional, Capabilities, Environment, and Social care model'* or P.I.E.C.E.S™. The P.I.E.C.E.S approach encourages staff to treat patients by looking at not only their health files, but also their personal histories, such as their former careers.

During the six-month improvement project, of the 70 residents already on antipsychotic medications, 27 percent (19 patients) were taken off of their medication. This translates to a 25 percent reduction of antipsychotic medications for the total resident population. This was also achieved without causing any increase in behavioural symptoms or rise in the use of physical restraints.

Behavioural Supports Ontario

Here you will find links to resources, tools and people related to **Behavioural Supports Ontario (BSO)**. The **RIGHT CARE** at the **RIGHT TIME** and in the **RIGHT PLACE**; BSO enhances the health care services of seniors across Ontario, their families and caregivers, who live and cope with responsive behaviours associated with dementia, mental illness, addictions and other neurological conditions, when they require it and wherever they live, at home, in long-term care or elsewhere.

I want to

Find resources

Discover new resources, knowledge and people you need to achieve your goals:

- Learn about the BSO Project
- Access information about the BSO Project
- Browse Responsive Behaviours and Complex Need resources
- Browse ALL Dementia related resources by topic
- View presentations
-

Get connected

Find answers to your questions, engage with others on topics, and make new things possible:

- Have a question? Ask the community*
- Join a Community of Practice or Collaborative
- Find YOUR Local BSO Lead
- Participate in events

* hosted
by dementiaknowledgebroker.ca

Stay updated

Receive *My AKE Connection* emails on updates, events and opportunities.
[sign-up](#) | [issue 27](#) | [BSO News Archive](#)

Featured Resources:

- [Capacity Building Suite / Decision Tree](#)
- [Complex Care Resolution For Older Adults with Responsive Behaviours](#)
- [Primary Care Strategic Elements](#)
- [National Behavioural Support Systems Guiding Principles and Recommended Components](#)

.....[ALL Responsive Behaviours and Complex Needs Resources](#)

Back to Basics

Consider non-pharmacologic approaches first

If a drug therapy is needed in addition to non pharmacologic approaches:

- Consider alternative drugs that might be safer
- Reduce the dose to the lowest effective dose
- Beware of prescribing cascades

– Re-evaluate ongoing need



Conclusion

- Described the importance of antipsychotic drug use in older adults
- Explored antipsychotic drugs and adverse events
- Discussed alternative management strategies

Acknowledgments

Ongoing financial support of our work has been made possible by several Canadian Institutes of Health Research grants, including:

- *Team Grant (OTG-88591) from the CIHR Institute of Nutrition, Metabolism and Diabetes.*
- *Interdisciplinary Capacity Enhancement grant (HOA-80075), from the CIHR Institute of Gender and Health and Institute of Aging.*



CIHR IRSC

Canadian Institutes of
Health Research

Instituts de recherche
en santé du Canada



UNIVERSITY OF
TORONTO

ICES Institute for Clinical
Evaluative Sciences

WCHI

WOMEN'S COLLEGE
RESEARCH INSTITUTE

Health care for women | REVOLUTIONIZED

new thinking

Questions?