

# Patterns in antipsychotic dispensation to residents of long-term care facilities in Nova Scotia, Canada including after a fall-related hospitalization

Shanna Trenaman BScH, BScPharm, MAHSR, ACPR, PhD; Maia von Maltzahn, MD; Ingrid Sketris, Pharm.D, MPA(HSA); Hala Tamim, PhD; Yan Wang, MSc; Samuel A Stewart, PhD

## Objectives

To describe antipsychotic medication dispensing patterns to Nova Scotia Seniors' Pharmacare Beneficiaries (NSSPB) in long term care facilities (LTCF) and assess factors associated with continuation of an antipsychotic after a fall-related hospitalization in LTCF residents.

## Methods

Retrospective cohort study of NSSPB aged 66 years and older, who resided in a LTCF in the province of Nova Scotia and received at least one dispensation of an antipsychotic.

Linked administrative claims data identified those with at least one antipsychotic dispensation and any with a fall-related hospitalization in any of the eight fiscal years from April 1, 2009 to March 31, 2017

Predictors for continuation of an antipsychotic after a fall-related hospitalization (sex, length of stay, days supplied, age, year of admission, rural/urban) were analyzed with multivariate logistic regression using SAS version 9.3.

## Acknowledgement

The data used in this report were made available by Health Data Nova Scotia of Dalhousie University. Although this research is based on data obtained from the Nova Scotia Department of Health and Wellness, the observations and opinions expressed are those of the authors and do not represent those of either Health Data Nova Scotia or the Department of Health and Wellness.

## Results

**Table 1:** Specific antipsychotic dispensations to Nova Scotia Seniors Pharmacare Beneficiaries residing in a long-term care facility for first antipsychotic dispensation for fiscal years 2009 through 2016

Year	2009 N (%)	2010 N (%)	2011 N (%)	2012 N (%)	2013 N (%)	2014 N (%)	2015 N (%)	2016 N (%)
NSSBPD	2,697	2,756	2,725	2,673	2,637	2,642	2,620	2,525
Risperidone	1,166 (43.0)	1,064 (38.0)	980 (36.0)	911 (34.0)	878 (33.3)	905 (34.3)	850 (32.4)	845 (33.5)
Quetiapine	911 (33.8)	1,029 (37.3)	1,103 (40.5)	1,082 (40.5)	1,086 (41.2)	1,057 (40.0)	1,079 (41.2)	1,011 (40.0)
Olanzapine	198 (7.3)	196 (7.1)	207 (7.6)	207 (7.7)	199 (7.6)	208 (7.9)	193 (7.4)	202 (8.0)
Other second-generation antipsychotics*	<5	<5	<10	<10	12 (0.5)	13 (0.5)	12 (0.5)	14 (0.5)
all second-generation antipsychotics	2,275 (84.4)	2,289 (83.1)	2,296 (84.3)	2,206 (82.5)	2,175 (82.5)	2,183 (82.6)	2,134 (81.5)	2,072 (82.1)
Haloperidol	144 (5.3)	190 (6.9)	176 (6.5)	221 (8.3)	241 (9.1)	250 (9.5)	253 (9.7)	230 (9.1)
Other first-generation antipsychotics*	273 (10.1)	237 (8.6)	250 (9.2)	244 (9.1)	216 (8.2)	201 (7.6)	230 (8.8)	220 (8.7)
all first-generation antipsychotics*	417 (15.5)	427 (15.5)	426 (15.6)	465 (17.4)	457 (17.3)	451 (17.1)	483 (18.4)	450 (17.8)

\*clozapine, aripiprazole or paliperidone

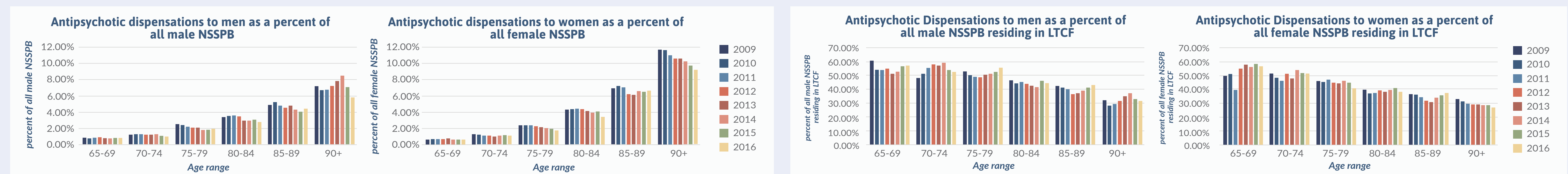
\*\*levopromazine, loxapine, perphenazine, chlorpromazine, triluoperazine, prochlorperazine, flupentixol, fluphenazine, periciazine, zuclopenthixol, pimozide

**Table 2:** Characteristics associated with continuation of an antipsychotic after a fall-related hospitalization (multivariate logistic regression and models stratified by sex).

Variable	Female		Male	
	OR	95%CI	OR	95%CI
<b>Age</b>				
66-69 years	2.76	[0.6, 13]	49.03	[3.3, >999]
70-74 years	1.63	[0.5, 4.9]	14.21	[1.6, 185.9]
75-79 years	2.51	[1, 6.3]	16.19	[1.9, 198.8]
80-84 years	3.2	[1.4, 7.1]	11.46	[1.4, 131.7]
85-89 years	1.16	[0.6, 2.2]	6.52	[0.9, 71]
90+ years (referent)	1.0		1.0	
<b>Urban</b>				
Days Supply	0.89	[0.5, 1.5]	1.06	[0.4, 2.8]
<b>Days Supply</b>				
< 30 days (referent)	1.0		1.0	
30-59 days	0.91	[0.5, 1.6]	3.56	[1.3, 10.8]
60-89 days	0.46	[0.1, 2.9]	8.94	[0.4, 375.1]
90+ days	1.2	[0.2, 6]	0.58	[0, 18.6]
<b>Year</b>				
Length of Stay	0.94	[0.8, 1.1]	0.96	[0.8, 1.2]
<b>Length of Stay</b>				
0-7 days (referent)	1.0		1.0	
7-14 days	0.71	[0.4, 1.3]	0.97	[0.3, 3.2]
14+ days	0.95	[0.5, 2]	5.86	[1.4, 41.5]

Of the 544 NSSPB residing in LTCF who survived a fall-related hospitalization, 439 (80.7%) continued an antipsychotic after hospital discharge.

**Figure 1:** Proportion of eligible male and female Nova Scotia Seniors' Pharmacare Program Beneficiaries (NSSPB) and NSSPB residing in long-term care facility (LTCF), by age category, receiving at least 1 antipsychotic drug dispensation per year, 2009-2016



## Conclusion

Nearly 90% of antipsychotic dispensations to NSSPB are to residents of LTCF. 80% of NSSPB residing in LTCF who had a fall-related hospitalization continued an antipsychotic after the fall.