**Impacts of Residents First, Public Reporting and Long-Term Care Homes Act on Restraint and Antipsychotic Use in Ontario Long-Term Care Homes**

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**CONTEXT and OBJECTIVES**

The MOHLTC introduced the LTCHA to refocus attention on quality of long-term care (LTC). Health Quality Ontario is also publicly reporting on LTC quality indicators and implemented a province-wide Quality Improvement (QI) initiative called Residents First. These three initiatives are system-level programs aiming to improve the quality of Ontario’s LTC homes. Legislation sets a minimum standard of care; Public Reporting is designed to enable the public to choose high-quality homes, thereby, motivating providers to improve quality; QI programs could provide effective guidance on how to improve quality.

An examination of the impact of LTCHA, Residents First and Public Reporting and should be of interest to multiple stakeholders. Restraint use has been identified as an opportunity for quality improvement and is one of the quality indicators that has been addressed by two of the above mentioned initiatives. Antipsychotic use is used as a balancing measure; it could be related to similar resident conditions as restraint use but is not specifically addressed in these initiatives.

This study aims to evaluate the impact of the LTCHA, Residents First and Public Reporting on the use of restraints and antipsychotic in Ontario LTC Homes.

**DATA SOURCES & STUDY POPULATION**

The study used data from all residents of Ontario’s LTC homes from 2008 to 2012 on whom RAI-MDS assessments were reported (at the end of 2008 there were 215 homes reporting, by the end of 2009, nearly all homes were reporting RAI-MDS data). 1.2 million assessments were used from 167,170 residents.

**MEASURES & ANALYSES**

**Measures**

- Dependent variables: Restraint use, Antipsychotic Use.
- Independent variables: An array of indicator variables (0/1) that capture whether the observation is before or after July 1, 2010 (Act implementation), or associated with a home participating in Residents First and Public Reporting.

**Adjustment applied**

- Facility-level covariates: An array of home-level variables such as size, profit status, ownership type and staffing level.
- Individual-level covariates: An array of resident-level outcome-specific measures including age, sex, diagnoses, length of stay, Depression Rating Scale, Aggressive Behavior Scale, Cognitive Performance Scale, Activity of Daily Living, etc.

**Analyses**

- Sophisticated statistical models (Generalized Estimating Equations) were used to predict outcomes.
- Analyses controlled for resident and facility characteristics.

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**RESULTS**

**Table 1: Estimates of the effect of RF, PR, & LTCHA on Antipsychotic Use**

<table>
<thead>
<tr>
<th>Ownership Type (Reference: Not-For-Profit)</th>
<th>LTCHA</th>
<th>Residents First</th>
<th>Public Reporting</th>
<th>Municipal</th>
<th>For-Profit</th>
<th>Staffing</th>
<th>Skills Mix: RN</th>
<th>Hours per Resident Day</th>
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<td>1.07</td>
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**Table 2: Estimates of the effect of RF, PR, & LTCHA on Restraint Use**

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**KEY FINDINGS**

- **Residents First**
  - The odds of restraint use was 18% lower for residents residing in homes participating in Residents First.
  - There was no significant relationship between antipsychotic use and Residents First (at the 5% level of significance).

- **Public Reporting**
  - The odds of restraint use was 11% lower after homes started participating in Public Reporting.
  - There was no significant relationship between antipsychotic use and Public Reporting (at the 5% level of significance).

- **LTCHA**
  - The LTCHA was found to have smaller but positive effect (higher prevalence) on both restraints and antipsychotic use.

- **Ownership Type**
  - The odds of restraint use was 22% lower in For-Profit homes while it was 15% higher in Charitable compared to Not-For-Profit homes.
  - The odds of antipsychotic use was 13% lower in Charitable homes while it was 6% and 9% higher in For-Profit and Municipal, respectively, compared to Not-For-Profit homes.

- **Staffing**
  - A 1% increase in the proportion of total direct care hours provided by RNs was associated with a 3% decrease in the odds of restraint use, but total hours of direct care per resident day was associated with a higher likelihood of restraint use. There was no observed significant association between staffing and antipsychotic use.

**IMPLICATIONS**

The likelihood of restraint use was found to be lower after homes started participating in Public Reporting or Residents First, respectively. Antipsychotic use was neither the focus of Public Reporting nor Residents First and no significant relationship was found between the two initiatives and the use of antipsychotic medications. Further studies will evaluate the impacts of Public Reporting, Residents First and LTCHA on other quality indicators such as falls, prevalence of pressure ulcer, unexpected weight loss, and prevalence of daily pain in long-term care homes in Ontario.

**ACKNOWLEDGMENTS**

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**Additional information**

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