

International Journal of Population Data Science

Journal Website: www.ijpds.org



The Impact of the COVID-19 Pandemic on End-of-Life Prescribing in Ontario Nursing Homes.

Christina Milan¹, Colleen Webber², Anna Clarke³, Sarina Isenberg¹, James Downar², Daniel Kobewka², Amy Hsu¹, Jenny Lau⁴, Aynharan Sinnarajah⁵, Jessica Simon⁵, Kaitlyn Boese², Amit Arya⁶, Rhiannon Roberts², Luke Turcotte⁷, Michelle Howard⁸, Colleen Maxwell⁹, Benoit Robert¹⁰, and Peter Tanuseputro²

¹London School of Economics

²Ottawa Hospital Research Institute

³ICES

⁴University Health Network

⁵Alberta Health Services

⁶North York General Hospital

⁷Canadian Institute for Health Information

⁸McMaster University

⁹University of Waterloo

¹⁰Perley Health

Objectives

Our preliminary work revealed significant variations in the prescribing of end-of-life symptom management medications in nursing homes prior to the onset of the COVID-19 pandemic. In this study, we sought to explore whether the prescribing of end-of-life medications in nursing homes changed with the onset of the pandemic.

Approach

This was a retrospective cohort study of nursing home residents age 65+ who died in Ontario, Canada, divided into two time periods based on death date: pre-COVID-19 (January 1st, 2017 – March 17th, 2020) and during COVID-19 (March 18th, 2020 – March 31st, 2021). Using routinely collected health administrative data and our evidence-based end-of-life medications list, we linked resident data to prescription claims to identify whether residents were prescribed these medications in the last 14 days of life. We grouped homes into quintiles according to the proportion of decedents who received ≥ 1 prescription and examined changes in prescribing before and during COVID-19.

Results

Nursing homes in the lowest prescribing quintile prescribed, on average, 11.5% fewer end-of-life symptom management medications during COVID-19 compared to pre-pandemic. Conversely, homes in the highest quintile prescribed an average of 13.7% more medications during COVID-19. Nursing homes in the lowest quintile had more COVID-19-positive residents (33% of residents) compared to homes in the highest quintile (9% of residents). Additionally, nursing homes in the lowest prescribing quintile spent more time with active COVID-19 outbreaks compared to homes in the highest quintile (mean 72.7 days versus 24.1 days, respectively, standardized difference 0.819).

Conclusion

The COVID-19 pandemic has disproportionately impacted nursing homes across Canada. Our findings suggest that nursing homes with low rates of prescribing of end-of-life medications prior to the pandemic had even lower prescribing rates during the pandemic. These homes were also harder hit by COVID-19 infections and outbreaks.