

The impact of the first wave of the COVID-19 pandemic on health service use by persons with dementia in Ontario, Canada: A population-based time series analysis

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Abstract

Background: Little has been quantified, at a population-level, about the magnitude of health service disruption to persons living with dementia in community settings during the COVID-19 pandemic. Sustained access to health care services is particularly important for persons with dementia and other neurodegenerative diseases as they are vulnerable to decline.

Method: Health administrative data from Ontario, Canada were used to examine patterns of health service use among all persons with Alzheimer disease and related dementias (dementia) who were alive and living in the community. This cohort was compared to persons with Parkinson's disease (PD) as well as all older adults (age 65+ years) without neurodegenerative diseases. Rates of all-cause hospital admissions, emergency department visits, primary care and specialist physician visits and home care visits were analyzed for all individuals alive and eligible for provincial health insurance at the start of each weekly period from March 1, 2020 to September 20, 2020 (pandemic period) and from March 3, 2019 to September 22, 2019 (pre-pandemic period). Rates of health service use during specific weeks in the pandemic period (i.e., lowest week, last available week) were compared to corresponding weeks in the pre-pandemic period within each cohort using percent changes.

Results: On March 1, 2020, 128,696 persons with dementia, 30,099 with PD and 2,460,358 older adults were eligible for provincial health services. Across cohorts and services, dramatic declines in use of health services were observed at the lowest week: hospitalization (-38.7% dementia, -72.3% PD, -44.2% older adults); emergency department (-54.9% dementia, -57.7% PD, -53.6% older adults); home care (-14.8% dementia, -19.4% PD, -7.4% older adults). Health services varied in how quickly they rebounded to pre-pandemic levels within cohorts; notably, by the end of the study period, emergency department visits had increased to a level higher than corresponding 2019 weekly rates (24.2% dementia, 15.2% PD, 7.4% older adults).

Conclusions: The first wave of the COVID-19 pandemic meaningfully and immediately disrupted use of health care services for persons living with dementia and PD and may have resulted in long-term consequences that should be monitored.