

Submission Id: 6093

Title

Declines in intensive care unit admissions in early COVID-19 pandemic among persons with dementia in three Canadian provinces

Priority 1 (Research Category)

Acute and emergency care

Presenters

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Abstract

Context: Providing critical care for people living with dementia (PLWD) during the COVID-19 pandemic outbreak was raised as a global concern. A task force commissioned by the Alzheimer Society of Canada published 7 principles to consider when planning access to scarce resources to ensure that respect for the dignity of PLWD is preserved. Objective: To measure the impact of the first two waves of the pandemic on intensive care unit (ICU) use among PLWD. Study Design: Retrospective historically controlled cohort study using population-level administrative health data. Setting: Alberta, Ontario, Quebec. Population: PLWD aged 65+. Methods: We identified two closed cohorts of PLWD on March 3, 2019 (pre-pandemic) and March 1, 2020 (pandemic) and stratified them by community and nursing home settings. Outcome measures: Rates of intensive care unit admissions. Analysis: We used a 2-step meta-analytical approach. Step 1: Compared rates of ICU admissions in three 2020 periods (1st wave; interim period; 2nd wave) to the corresponding 2019 periods. Step 2: Conducted random effect meta-analyses on the provincial incident rate ratios (IRR) and 95% CIs. Results: Community cohorts included 160,288 (pre-pandemic) and 166,392 (pandemic) individuals. Nursing home cohorts included 91,646 (pre-pandemic) and 90,727 (pandemic) individuals. The rates of ICU admissions in the community were 25% (IRR=0.75 [0.69–0.82]) lower in the interim period and 24% lower in the second wave (IRR=0.76 [0.74–0.78]). Pre-pandemic rates of ICU admissions from nursing homes were higher than expected, showing differences between provinces (from 0.01 to 0.06 per 100-person week). In nursing homes, rates of ICU admissions were lower throughout the pandemic year: 29% (IRR=0.71 [0.69–0.73]) less in the first wave, 32% (IRR=0.68 [0.57–0.82]) less in the interim period, and 24% (IRR=0.76, [0.63–0.93]) less in the second wave. Conclusions: There is a need for a single hospital/ICU triage protocol,

particularly for very frail older adults such as PLWD. Pre-pandemic high use of ICU from nursing homes is unexpected given that PLWD have advanced stage of dementia. This speaks to the need for better practices for advance care planning and for a global consensus on the level of frailty making the use of ICU futile. In the community, lower ICU admissions during the pandemic periods are surprising given that PLWD had more severe COVID infections. Future studies should explore provincial practices and policies.

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