

Reducing emergency department visits and hospital admissions

By Beatrise Edelstein and Marilyn ElBestawi

Even before the COVID-19 pandemic, we knew that targeted strategies to reduce avoidable hospital admissions and emergency department (ED) visits were valuable. Seniors residing in LTC are at increased risk of hospitalization due to increased frailty, multiple co-morbidities, complex medical history, cognitive impairment(s) including dementia, and/or limited ability to physiologically compensate for critical illness. That being said, many hospital admissions can be prevented. In fact, a CIHI report published in 2014 demonstrated one-third of ED visits from LTCs were avoidable. Transfers to the ED can increase the risk of adverse effects on residents, as well as result in unnecessary health resource utilization. The importance of preventing unnecessary hospital admissions became even more relevant during the pandemic when hospitals were over capacity and caring for COVID-19 patients.

Initiatives aimed at reducing preventable ED visits support the Quadruple Aim by improving resident care, outcomes, reduce costs, and enhance staff experience and capacity. In December 2020, Humber River Hospital (HRH), along with seven LTC Homes: Villa Colombo Toronto, West Park LTC, Village of Humber Heights, Downsview LTC, Ukrainian Canadian Centre, Weston Terrace and Norfinch, was awarded one-time funding by Ontario Health (OH) Central Region, to implement the LTC Remote Monitoring solution Preview-ED®, along with a supporting escalation pathway connecting high risk patients to a virtual interprofessional hospital based team via LTC+.

Preview-ED® is an observation-based clinical deterioration tool based on the NHS National Early Warning Score (NEWS) 2 scoring system, and is used daily by Care Aides/Personal Support Workers in LTC

to systematically detect early signs of decline in the health status of LTC residents. This tool is focused on and is sensitive to identifying early signs of decline relating to four conditions: urinary tract infection, pneumonia, dehydration, and congestive heart failure. Weighted scores are assigned to observations on each of the nine indicators, where the scores for each indicator are totaled to provide an aggregate score that helps identify residents with changes in their health status.

Patients who are identified in Preview-ED® with a deteriorating health status are connected with LTC+, a virtual interprofessional team situated in the hospital to help mitigate preventable ED visits, providing rapid access to a suite of virtual and in-person clinical and diagnostic care. At HRH, LTC+ includes weekday access to a general internal medicine physician/geriatrician for urgent virtual consults to the LTC home primary care provider, a nurse navigator to coordinate timely access to ambulatory and community-based resources, a Nursing Led Outreach Team (NLOT), and/or an ED physician for virtual visit.

The PREVIEW-ED® tool was initially piloted at Lakeside LTC in Toronto and subsequently in Fraser Health in British Columbia where it was implemented in 79 LTC homes (8063 residents). In 2019, Villa Colombo Toronto LTC in partnership with HRH implemented Preview-ED® and demonstrated an over 25 per cent decrease in ED transfers for tool sensitive conditions, including urinary tract infection, pneumonia, dehydration, and congestive heart failure. The program in 2021 was then scaled to six LTC homes in North West Toronto and included the LTC+ program, serving up to 1,577 residents. Implementation resources were provided by HRH and included regular engagement with LTC leadership, champions and medi-



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cal directors, data analysis/evaluation, and program reporting.

Initial outcomes included significant decreases in ED visits and hospitalizations from the participating LTCs with 49 per cent and 24 per cent reduction in ED visits for tool sensitive conditions and total ED Visits respectively, and 22 per cent and 25 per cent reduction in admissions for tool sensitive conditions and total hospital admissions respectively. These outcomes have resulted in 7.32 bed equivalents (all LTC transfers) and 1.65 bed equivalents (LTC transfers for tool sensitive conditions), increasing HRH capacity for acute patients. These results have been sustained six months post implementation.

The program had a positive impact on the LTC staff experience, with 79 per cent of 307 staff surveyed indicat-

ing they agree and strongly agree that Preview-ED® tool and process is useful to them and recommending PREVIEW-ED®. In addition, 85 per cent of staff reported that PREVIEW-ED® improved team communication and enhanced LTC staff capacity for early identification of residents' deteriorating status. Implementation of Preview-ED® resulted in early recognition of the critical role of collaborative relationships between LTCs and HRH in supporting the medical complexities experienced by LTC residents.

Building on successes and lessons learned from scale of PREVIEW-ED® to six LTCs, future directions include a focus on sustainability and spread of this valuable program to additional LTC homes. To learn more about PREVIEW-ED®, please visit www.previewedtool.ca **H**

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