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**Title**

*Are virtual visits in primary care associated with more emergency department use?*

**Priority 1 (Research Category)**

Healthcare Services, Delivery, and Financing

**Presenters**

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**Abstract**

Context: To improve access to care and continuity during the COVID-19 pandemic, family physicians increased their use of virtual care. However, there were concerns that having family physicians see fewer patients in-person was leading to an increase in emergency department (ED) use. Objective: We aimed to understand whether the use of virtual care in the primary care setting was associated with increased emergency department visits. Study Design and Analysis: Population-based study comparing the mean ED visits in Feb to Oct 2019 (pre-pandemic) with those in Feb to Oct 2021, stratified by the family physician's percent of care delivered virtually in 2021. Setting or Dataset: Linked health administrative data in Ontario, Canada where primary care and ED visits are fully insured and free at the point-of-care for all permanent residents. Population Studied: All family physicians with billings from February to October 2021 (n=15,155) and all patients living in Ontario and attached to a family physician as of March 31, 2021 (n=14,705,864). Outcome Measures: The mean number of ED visits among patients, stratified by the percent of care delivered virtually by their attached physician. Results: Mean total ED visits decreased by 15% from 299 per 1000 people in 2019 to 254 visits per 1000 people in 2021. From February to October 2021, 9.2% (n=1,395), 28.1% (n=4,262), 17.8% (n=2,691) and 2.6% (n=400) physicians provided 0%, >60-80%, >80-<100%, and 100% of care virtually, respectively. The largest proportion of patients were seen by physicians who provided >60-80% of care virtually (31.7%, n=4,657,341). Patients whose family physicians provided 100% of visits in-person had the highest mean number of ED visits (488 per 1000), while patients whose physicians delivered >80-<100% care virtually had the lowest volume of ED use (243 visits per 1000). Trends in ED use across physician virtual care strata were similar in 2019. Conclusions: Family physicians with a higher proportion of virtual encounters did not have higher rates of emergency department use among their patients. Differences observed in patient ED use across levels of physician virtual care provision were similar in 2019, suggesting pre-existing patterns unrelated to the expansion of virtual care during the pandemic.