

Understanding Patterns of Emergency Department (ED) Use over time in Ontario to plan new EDs for the future

Dvorani, E¹, Graves, E², Ishiguro, L¹, Schull, M¹, and Sivilotti, M³

¹Institute of Clinical Evaluative Sciences

²ICES Central

³Queen's University

Introduction

The Applied Health Research Question (AHRQ) portfolio is an initiative funded by the Ontario Ministry of Health and Long-Term Care, leveraging the linked data and scientific expertise at ICES to answer questions that directly impact healthcare policy, planning or practice.

efficiency and patient care quality. This has been used to inform the redesign of the ED at the Kingston Health Sciences Centre to ensure it will meet the needs of the community.

Objectives and Approach

The objective of this project was to evaluate historical patterns of emergency department (ED) use to better plan for a new emergency Department in Kingston and to better understand the factors contributing to increasing ED utilization.

Emergency departments across Ontario continue to see consistent increases in volume at rates exceeding expected volume growth due to population growth alone. Some hospitals across the province observe significantly higher volume increases compared to the provincial average.

Results

From 2006/07 to 2016/17, rate and volume of emergency department visits in Ontario increased 8.82% and 19.87% respectively. Throughout the same period, emergency department visit rate and volume at Kingston General Hospital increased 20.70%, and 27.2%. Using historical data and projected population growth by age and sex, we were able to estimate that emergency department volume would increase at least 11.94% by 2025 due to estimated shifts in population size and distribution (by age and sex) alone. From 2006/07 to 2016/17, the greatest rate of increase in reason for ED visits was mental/behavioral problems. Throughout this period the increase in volume and rate of ED visits due to mental/behavioural problems was 274.46% and 259.59% respectively.

Conclusion/Implications

Population-specific volume projections and historical trends in ED use can be utilized for planning ED operations to improve

