

## Determining Potentially Avoidable Emergency Medical Services (EMS) Transports: A Population Level Study Using Linked Administrative Data in Alberta Health Services (AHS)

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### Introduction

Traditionally Emergency Medical Services (EMS) transports patients to Emergency Departments (EDs). However, some patients might be appropriately managed in alternative settings outside the ED. A number of non-traditional EMS programs have evolved in Alberta, in an attempt to provide quality care through a community-based care model.

### Objectives and Approach

The project aimed to identify and quantify potentially avoidable EMS transports to EDs in Alberta. We identified 911 responses by ground ambulance in Alberta between September 1, 2017 and December 31, 2017. Patients 18 years and over transported to EDs were linked to Alberta Provincial Registry for more accurate demographic information, and linked to Long Term Care (LTC) and ED data to capture patient characteristics and frequency of potentially avoidable EMS transports to EDs, defined as the Canadian Triage and Acuity Scale (CTAS) Level IV and Level V in EDs not requiring inpatient admission.

### Results

We identified 72,182 transports to EDs, of which 1 in 4 patients were rural residents. After excluding individuals <18 years and non-Alberta residents, we were able to match 58,137 of the 60,020 EMS transports to EDs (96.8%). Overall, 7,697 (13%) were triaged as less urgent with no hospital admission. Patients 65 years and over accounted for almost half (49%) of the transports in this cohort, 6% of which were for LTC clients. Percentage of potentially avoidable transports in LTC clients were similar to seniors living in the community (12%). Geographic visualization at the provincial level indicated variation across the province. In general, rural residents were more likely than urban residents to be transported to EDs with less urgent conditions (18% vs 12%).

### Conclusion/Implications

This is the first analysis exploring potentially avoidable EMS transports to EDs in Alberta, Canada, where a comprehensive, single source of EMS system data is currently available. The project suggests opportunities for future EMS research and policies focusing on enhancing community-based care.

