No Evidence of Quality Issues for Eastern Zone Emergency Department Patients with Emergent Health Conditions

Objective

To investigate whether patients who revisit the emergency department (ED) in the two Eastern health zones (Urban and Rural) of Newfoundland and Labrador (NL) with emergent health conditions have been experiencing issues with care quality.

Practice Points

1. Given the constant pressure put on EDs due to patient volume, clinicians may not have enough time to debrief with other health professionals and caregivers, follow up after a case is admitted, or learn from previous mistakes from shift to shift.

2. If a patient is discharged and returns unplanned with the same or similar complaint, there may have been missed opportunities to intervene and provide treatment.

3. In the context of emergent conditions, missed opportunities could have negative effects on mortality and morbidity and contribute to further health problems and system costs.

4. Return visits could be avoided with improved discharge planning and adequate patient education and follow up.

Methods

1. Data on ED visits in the Eastern-Urban and Eastern-Rural zones were obtained from Meditech and made available by Newfoundland and Labrador Health Services for the period from 1 Jan 2021–31 Mar 2024. The resultant ED cohort was linked to the Provincial Discharge Abstract Database and the Client Registry to provide information about hospitalizations and patient demographics, respectively.

2. Patterns of ED utilization at the Health Sciences Centre (HSC), St. Clare's Mercy Hospital (SCM), Carbonear General Hospital (CGH), Dr. G. B. Cross Memorial Hospital (GBC), and Burin Peninsula Health Centre (BUR) were analyzed according to patients who were diagnosed with emergent conditions (high acuity patients) and who returned multiple times within a short period (i.e. <7 days) before being admitted, potentially having had early warning signs for specific conditions.

3. High acuity patients are those who were admitted via the ED with a diagnosis of:

   - ST-elevation myocardial infarction (STEMI)
   - Non-STEMI (NSTEMI)
   - Stroke/Cerebrovascular Accident (CVA)
   - Pulmonary embolism
   - Necrotizing fasciitis
   - Ischemic colitis/ischemic bowel

4. Visits where the presenting complaint was deemed to be related to a planned return were excluded from this analysis.

Results

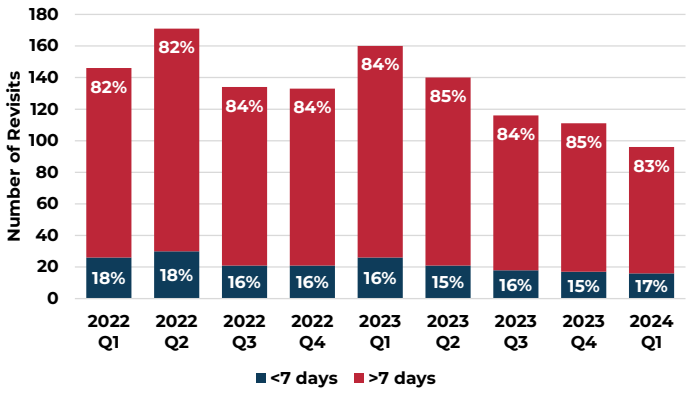

Figure 1A. High Acuity Revisits Analyzed by Previous Visit in Eastern Urban Zone, Jan 2022-Mar 2024

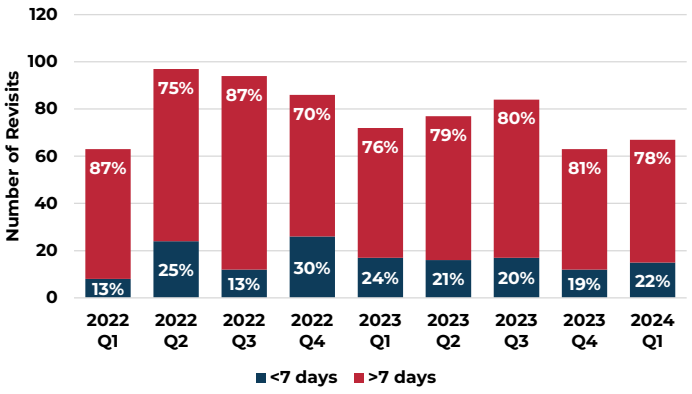

Figure 1B. High Acuity Revisits Analyzed by Previous Visit in Eastern-Rural Zone, Jan 2022-Mar 2024

- The number of revisits by high acuity patients was slightly greater in Eastern-Urban (HSC and SCM) compared to Eastern-Rural, although the proportion of high acuity patients who had a previous visit within 7 days prior to admission was slightly greater in Eastern-Rural.

Table 1. Characteristics of High Acuity Revisits Analyzed by Previous Visit, Jan 2021-Mar 2024

	Previous visit <7 days (n=515)	Previous visit >7 days (n=2,577)
Age – 18-64 years-N (%)	158 (31)	786 (31)
Sex – Female-N (%)	235 (46)	1,157 (45)
Health Zone		
Eastern Urban-N (%)	316 (61)	1,737 (67)
ED Length of Stay (LoS)*		
Median LoS (hours)	10.47	10.92
Median LoS previous visit (hours)	5.43	5.22

*Refers to LoS in the Emergency Department

- The length of stay (LoS) in the ED at the previous visit was the same for patients who had a previous visit within 7 days prior to being admitted.

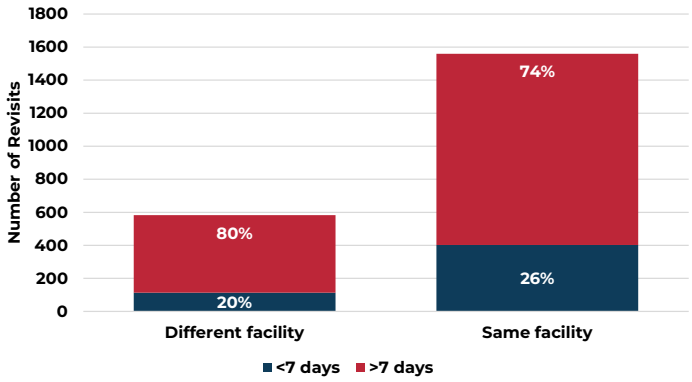

Figure 2. High Acuity Revisits to a Different Site Analyzed by Previous Visit, Jan 2022-Mar 2024

- The number and proportion of patients who returned within 7 days to a different site than their previous visit was slightly lower than those who visited the same site.

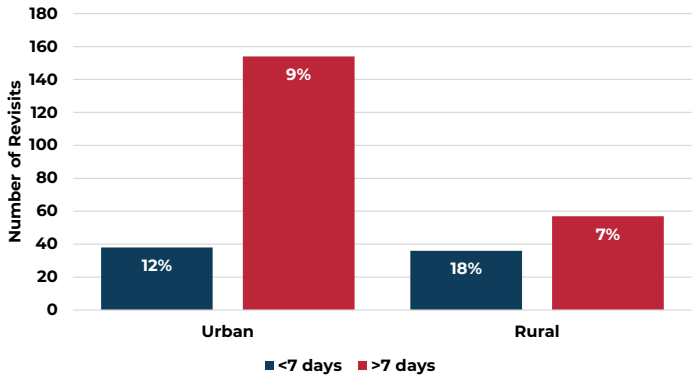

Figure 3. Hospital Mortality Rate of High Acuity Revisits Analyzed by Previous Visit and Eastern Health Zone, Jan 2021-Mar 2024

- The percentage of visits that resulted in death in the hospital for admitted high acuity patients was slightly higher for those who had a previous visit within 7 days in both Eastern zones.

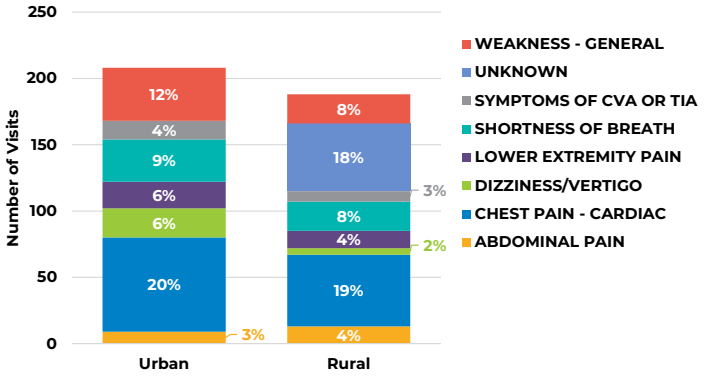

Figure 4. Symptoms from Previous Visits (Within 6 Months) Analyzed by Eastern Health Zone, Jan 2021-Mar 2024

- Chest pain – cardiac was the most common symptom at patients' previous visit(s), followed by general weakness and shortness of breath, for those who had less than 7 days between visits and were diagnosed with Stroke/CVA or NSTEMI.

- There was a higher proportion of unknown symptoms in rural settings, which could reflect incompleteness or insufficient charting of health records.

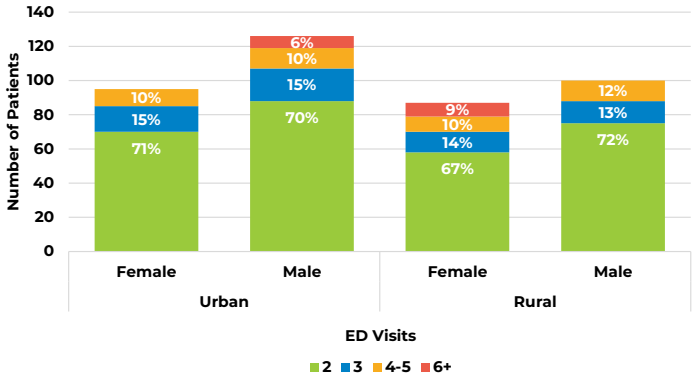

Figure 5. Number of Patients by ED Visits in the Past 6 Months Analyzed by Sex and Eastern Health Zone, Oct 2021-Mar 2024

- The number of ED visits per patient in the past 6 months by high acuity patients who had a previous visit within 7 days was slightly higher for females in Eastern-Urban; vice versa in Eastern-Rural.

Conclusions

1. The investigation of Eastern zone EDs found no indication of care quality issues for high acuity patients who return to the ED in a short period of time.

2. High acuity patients present with a range of symptoms that are indicative of multiple overlapping health conditions.

3. Patients who returned within 7 days were slightly less prevalent among those who travelled to a different ED compared to those who visited the same ED.