Undertriage of Older Adults with a Low-Acuity Triage Score in the Emergency Department

Objective

To identify and describe characteristics and outcomes of older adults (≥65 years) who present to the emergency department (ED) with a low-acuity triage score.

Practice Points

1. Newfoundland and Labrador (NL) has the highest proportion of older adults (≥65 years) in Canada (CA). By 2036, 31% of Newfoundlanders and Labradorians will be older adults compared to 23.7% across CA.

2. Older adults likely experience undertriage (i.e., mis-classified into a lower triage category even though criteria are met for urgency and additional resources) in the ED compared to younger adults, especially those ≥85 years.

3. There is a need to update current triage tools in the ED to include age, frailty, multimorbidity, polypharmacy, and daily function.

4. Collaboration with social work and other services (i.e. internal medicine, geriatric medicine, etc.) should be encouraged and with resources allocated to create more comprehensive care in the ED for this complex population.

Methods (PIs: Drs. K. Furlong, S. Mercer, M. Parsons)

1. A retrospective cohort study was performed on ED visits of patients assigned a Canadian Triage and Acuity Score (CTAS) of 4 or 5, considered 'low acuity', between 1 Jul – 30 Sep, 2019 at the Health Sciences Centre (HSC) and at St. Clare's Mercy Hospital in St. John's, NL.

2. All patients aged ≥65 years were selected for this study, and were then divided into age subgroups of 65 to 74 years, 75 to 84 years, and ≥85 years. Patients aged 40 to 55 years were selected as controls.

3. The primary outcome was admission to the hospital at initial ED visit.

Results

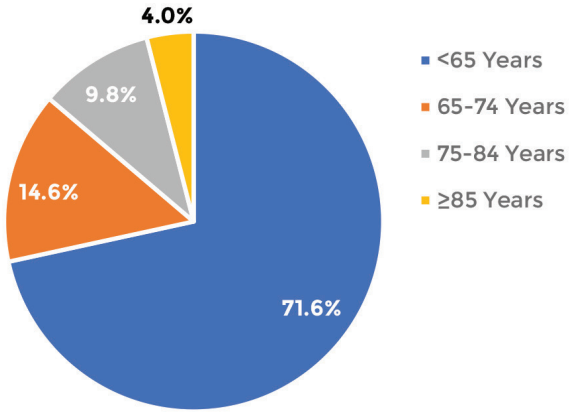

Figure 1. Percent of ED Visits at HSC and St. Clare's Mercy Hospital, Jul – Sep 2019

- Older adults accounted for 28.4% of ED visits from 1 Jul – 30 Sep 2019.

Table 1. Patient Characteristics of Older and Younger Adults, Jul – Sep 2019

	Younger Adults (n=84)	Older Adults (n=462)
Age (Years) [Mean ± SD]	46.8 ± [4.4]	78.5 ± [8.5]
Range (Years)	40 – 55	65 – 102
Sex – Female (%)	48 (57.1)	285 (61.7)
Location		
Urban (%)	74 (88.1)	387 (83.8)
Rural (%)	10 (11.9)	75 (16.2)
CTAS on Presentation		
CTAS 4	78 (92.9)	445 (96.3)
CTAS 5	6 (7.1)	17 (3.7)
Triage Location		
Ambulatory Care	52 (61.9)	296 (64.1)
Bedded Unit	10 (11.9)	86 (18.6)

p>0.05 for all

- Patient characteristics did not differ between older adults and younger adults.

- Older adults had more frequent ED visits and hospital admissions in the previous six months (p<0.05).

- Rate of admission was not higher in low-acuity older adults (1.1%) compared to their younger counterparts (0%, p>0.05).
- Older adults were more likely to arrive via ambulance, and present with genitourinary complaints and falls/mobility issues compared to younger counterparts (p<0.05 for all).

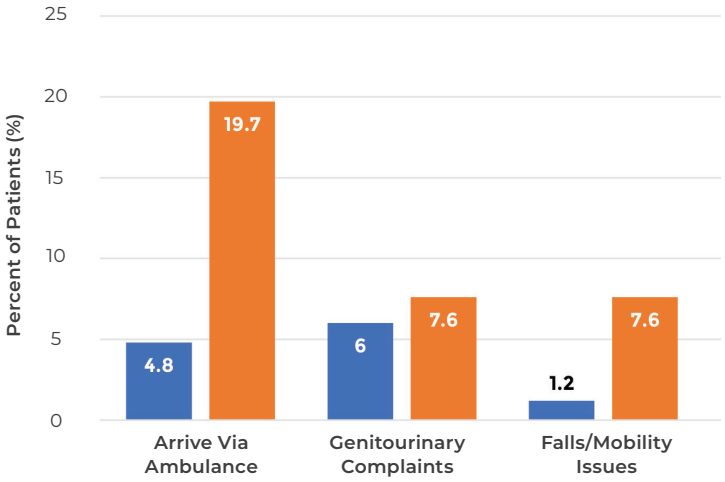

Figure 2. Percent of Patients by Age Group, Jul – Sep 2019

- Older adults also received a social work consultation more frequently than younger adults (4.9% vs 0% p<0.05).
- Older adults ≥85 years were more likely to present with social complaints, require IV fluids, and IV antibiotics (p<0.05 for all).

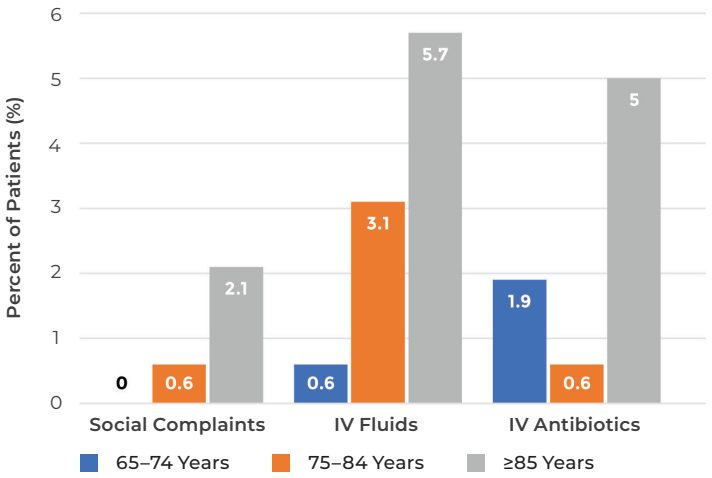

Figure 3. Percent of Patient by Age Subgroup for Social Complaints, IV Fluids, and IV Antibiotics, Jul – Sep 2019

- Older adults ≥85 years were more likely to be triaged in a bedded unit and receive consultation for admission (p<0.05 for both).

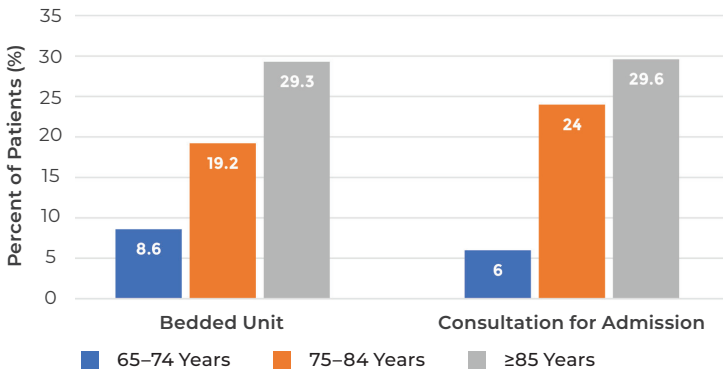

Figure 4. Percent of Patient by Age Subgroup for Bedded Unit and Admission, Jul – Sep 2019

Conclusions

1. Older adults account for nearly one-third of patients who visit the EDs in St. John's, NL
2. Older adults have more frequent ED visits and hospital admissions in the six months prior to an ED visit compared to younger adults.
3. Despite a similar low-acuity triage score, compared to younger adults, older adults are more likely to arrive by ambulance, present with falls or mobility issues, and require a social work consultation. This may represent the undertriage of older adults in the ED by current triage tools.
4. Those ≥85 years are more likely to present with social complaints, require IV fluids, IV antibiotics, require a bed in the ED, and be consulted for hospital admission than adults 65 to 84 years. This may represent undertriage in the 'oldest' old compared to those <85 years.