



## Ontario Acquired Brain Injury (ABI) Dataset Project

### Hamilton Niagara Haldimand Brant Local Health Integration Network (LHIN)

#### Key Findings

#### Highlights:

Alternate Level of Care (ALC) Days, Length of Stay, Discharge Disposition of ABI Patients, Number of Episodes of Care, and LHIN Concordance



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- ❖ In 2009/10, the rate of TBI and nTBI in Hamilton Niagara Haldimand Brant LHIN was 1.9 per 1000 and were higher than the provincial average (TBI – 1.8 per 1000, nTBI – 1.6 per 1000).

#### **Alternate Level of Care (ALC) Days**

- ❖ In 2009/10, 18% of TBI and nTBI acute care episodes had ALC days. From 2003/04 to 2009/10, the mean number of ALC days per ALC episode for TBI patients decreased from 34 to 18 days and from 22 to 18 days among nTBI patients.
- ❖ The majority of patients with ALC days were 65 years and older (TBI and nTBI – 67%). Among TBI patients, 31% had psychiatric comorbidities and among nTBI patients, 20% had psychiatric comorbidities.

#### **Emergency Department (ED) Visits**

- ❖ Between 2003/04 and 2009/10, there were 13,707 TBI and 10,280 nTBI cases recorded in the ED. From 2007/08 to 2009/10, there were more TBI episodes than nTBI episodes. During this period, 31% of TBI ED visits occurred in the <18 years age group and 30% of nTBI ED visits occurred in the 35 – 54 years age group.
- ❖ The mean length of stay (LOS) in the ED among TBI patients remained relatively steady (4 hours) and among nTBI patients, it increased from 6 to 7 hours from 2003/04 to 2009/10. The median LOS in 2009/10 was 3 hours for TBI patients and 5 hours for nTBI patients.
- ❖ From 2007/08 to 2009/10, the majority of TBI patients were discharged from the ED (75%) compared to 37% of nTBI patients. More than 50% of nTBI patients were admitted to acute care compared to 21% of TBI patients.

#### **Acute Care Admissions**

- ❖ Between 2003/04 and 2009/10, there were 5,705 TBI and 15,008 nTBI cases in acute care. From 2007/08 to 2009/10, there were substantially more nTBI than TBI episodes. During this period, 28% of TBI admissions occurred in the 75+ years age group and 23% of nTBI patients were between the ages of 35 – 54 years.
- ❖ The mean LOS in acute care among TBI patients decreased from 16 to 12 days and from 15 to 14 days among nTBI patients from 2003/04 to

2009/10. The median number of days among TBI patients in 2009/10 was 5 days and among nTBI patients, it was 7 days.

- ❖ Special care days is the sum of all days in all intensive care units. The mean number of special care days among TBI and nTBI patients remained relatively steady (7 and 8 days respectively) from 2003/04 to 2009/10. The median number of special care days among TBI patients was 3 days and among nTBI patients, it was 4 days in 2009/10.
- ❖ From 2007/08 to 2009/10, 52% of TBI patients were discharged home, 15% were transferred to long term care, and 13% died. Among nTBI patients, 40% were discharged home, 14% were transferred to long term care, and 19% died.
- ❖ The percentage of nTBI patients (9%) readmitted to acute care within one month was more than twice the percentage of TBI patients (4%) from 2007/08 to 2009/10.

#### **Inpatient Rehabilitation**

- ❖ Between 2003/04 to 2009/10, there were 1,458 cases coded with brain dysfunction in inpatient rehabilitation. From 2007/08 to 2009/10, 42% were between the ages of 40 to 64 years.
- ❖ The mean LOS among patients with brain dysfunction in inpatient rehabilitation decreased from 61 to 57 days from 2003/04 to 2009/10. The median number of days in 2009/10 was 45 days. The mean and median LOS in Hamilton Niagara Haldimand Brant LHIN were higher than the provincial mean (51 days) and median (38 days) LOS in 2009/10.

#### **LHIN Concordance**

- ❖ The percentage of episodes within the LHIN of patients' residence in 2009/10 in ED was 94%, 88% in acute care, and 77% in inpatient rehabilitation, which were higher than the percentages observed in Ontario (ED – 85%, acute care – 78%, and inpatient rehabilitation – 61%).