

# **Ontario Acquired Brain Injury (ABI) Dataset Project**

# **Champlain 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







#### **Research Team**

Angela Colantonio, Principal Investigator
Senior Research Scientist, Toronto Rehabilitation Institute
Professor of Occupational Science and Occupational Therapy,
University of Toronto
416-978-1098, angela.colantonio@utoronto.ca
Lab: 416-946-8575, Fax: 416-946-8570

Vincy Chan, Research Analyst
Daria Parsons, Consultant
Rika Vander Laan, Consultant
Brandon Zagorski, Statistical Consultant

## **Acknowledgements:**

This study was funded by the Ontario Neurotrauma Foundation. We wish to acknowledge support from the Ontario Ministry of Health and Long Term Care, the Toronto Rehabilitation Institute, and the University of Toronto.

❖ In 2009/10, the rate of TBI in Champlain LHIN was 2.2 per 1000 and the rate of nTBI was 1.7 per 1000, which was higher than the provincial average (TBI − 1.8 per 1000, nTBI − 1.6 per 1000).

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

- ❖ In 2009/10, 17% of TBI and 10% of 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 increased from 20 to 36 days and from 20 to 26 days among nTBI patients. Champlain LHIN had the second lowest percentage of nTBI acute care episodes with ALC days and in 2009/10, the mean number of ALC days per ALC episode was higher than the provincial average (TBI − 24 days, nTBI − 20 days).
- ❖ The majority of patients with ALC days were 65 years and older (TBI 66%, nTBI 69%). Champlain had the second highest percentage of TBI patients (41%) and the highest percentage of nTBI patients (35%) with ALC days who had psychiatric comorbidities.

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

- ❖ Between 2003/04 and 2009/10, there were 14,911 TBI and 8,789 nTBI cases recorded in the ED. From 2007/08 to 2009/10, there were more TBI episodes than nTBI episodes. During this period, 36% of TBI ED visits occurred in the <18 years age group and 26% of nTBI ED visits occurred in the 35 54 years age group.</p>
- ❖ The mean length of stay (LOS) among TBI patients increased from 4 to 6 hours and from 8 to 9 hours among nTBI patients from 2003/04 to 2009/10. The median LOS among TBI patients in 2009/10 was 3 hours and for nTBI patients, it was 5 hours.
- ❖ The majority of TBI patients were discharged from the ED (82%) compared to 39% of nTBI patients. The majority of nTBI patients were admitted from the ED (53%) compared to 15% of TBI patients.

#### **Acute Care Admissions**

❖ Between 2003/04 and 2009/10, there were 3,548 TBI and 14,113 nTBI cases in acute are. From 2007/08 to 2009/10, there were substantially more nTBI than TBI cases. During this period, 31% of TBI and 25% of nTBI admissions occurred in the 75+ years age group.

- ❖ The mean LOS among TBI patients increased from 15 to 18 days and from 16 to 18 days among nTBI patients from 2003/04 to 2009/10. Champlain LHIN had the highest median LOS among TBI patients (7 days) and nTBI patients (9 days) in 2009/10.
- Special care days is the sum of all days in all intensive care units. The mean number of special care days increased from 8 to 10 days among TBI patients and from 6 to 9 days among nTBI patients from 2003/04 to 2009/10. The median number of days in 2009/10 was 5 days for TBI patients and was 4 days among nTBI patients.
- ❖ From 2007/08 to 2009/10, among TBI patients, 51% were discharged home, 18% were transferred to long term care, and 13% died. Among nTBI patients, 38% were discharged home, 13% were transferred to long term care, and 23% died.
- ❖ The percentage of nTBI patients (9%) readmitted to acute care within one month was three times the percentage of TBI patients (3%) from 2007/08 to 2009/10.

### **Inpatient Rehabilitation**

- ❖ Between 2003/04 and 2009/10, there were 1,312 cases coded with brain dysfunction in inpatient rehabilitation. From 2007/08 to 2009/10, 40% was between the ages of 40 − 64 years.
- ❖ The mean LOS among patients increased from 48 to 52 days from 2003/04 to 2009/10. The median LOS was 40 days in 2009/10. In 2009/10, the mean LOS was lower than the provincial average (51 days) in 2009/10.

#### **LHIN Concordance**

❖ The percentage of episodes within LHIN of patients' residence in 2009/10 was at least 93% across all three health care settings.