



Ontario Acquired Brain Injury (ABI) Dataset Project

Central 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, Central LHIN had the second lowest rate of TBI (1.4 per 1000) and the third lowest rate of nTBI (1.3 per 1000) across the LHINs. The rates of TBI and nTBI were also lower than the provincial average (TBI – 1.8 per 1000, nTBI – 1.6 per 1000).

Alternate Level of Care (ALC) Days

- ❖ In 2009/10, Central LHIN had one of the highest percentage of TBI acute care episodes with ALC days (25%) and the third highest percentage among nTBI patients (19%). From 2003/04 to 2009/10, the mean number of ALC days per ALC episode for TBI patients decreased from 22 to 21 days and from 23 days to 18 days for nTBI patients.
- ❖ The majority of patients with ALC days were 65 years and older (TBI – 88%, nTBI – 71%), which was higher than the provincial average (TBI – 63%, nTBI – 65%). A notable percentage of TBI and nTBI patients had psychiatric comorbidities (33% and 28% respectively).

Emergency Department (ED) Visits

- ❖ Between 2003/04 and 2009/10, there were 8,800 TBI and 5,972 nTBI cases recorded in the ED. From 2007/08 to 2009/10, there were more TBI episodes than nTBI episodes. During this period, 35% of TBI ED visits occurred in the <18 years age group and 25% 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 stable (4 hours) and increased from 7 to 8 hours among nTBI patients from 2003/04 to 2009/10. The median LOS among TBI patients in 2009/10 was 3 hours and was 6 hours for nTBI patients.
- ❖ The majority of TBI patients were discharged from the ED (86%) compared to 38% of nTBI patients. Among nTBI patients, 52% were admitted from acute care compared to 11% of TBI patients.

Acute Care Admissions

- ❖ Between 2003/04 and 2009/10, there were 1,726 TBI and 7,146 nTBI cases in acute care. From 2007/08 to 2009/10, there were substantially more nTBI than TBI episodes. During this period, 46% of TBI and 35% of nTBI admissions occurred in the 75+ years age group, which was higher than the percentage found in Ontario (TBI – 30%, nTBI – 23%).

- ❖ The mean LOS in acute care among TBI patients decreased from 15 to 13 days from 2003/04 to 2009/10. The mean LOS among nTBI patients remained steady (16 days). The median LOS among TBI patients in 2009/10 was 6 days and 8 days for nTBI patients.
- ❖ Special care days is the sum of all days in all intensive care units. The mean number of special care days among TBI patients decreased from 8 to 7 days and increased from 7 to 10 days among nTBI patients from 2003/04 to 2009/10. The median number of days in 2009/10 was 3 days for TBI patients and was 4 days for nTBI patients.
- ❖ From 2007/08 to 2009/10, among TBI patients, 51% were discharged home, 24% were transferred to long term care, and 11% died. Among nTBI patients, 35% were discharged home, 19% were transferred to long term care, and 31% died. Central LHIN had the second highest percentage of deaths in acute care and the third highest percentage transferred to long term care among nTBI patients. Central LHIN also had one of the highest percentages transferred to long term care among TBI patients.
- ❖ From 2007/08 to 2009/10, the percentage of TBI patients readmitted to acute care within one month was 4% and among nTBI patients, it was 6%.

Inpatient Rehabilitation

- ❖ Between 2003/04 and 2009/10, there were 1,442 cases coded with brain dysfunction in inpatient rehabilitation. From 2007/08 to 2009/10, 40% of brain dysfunction occurred in the 40 – 64 years age group.
- ❖ The mean LOS among patients with brain dysfunction in inpatient rehabilitation decreased from 2003/04 (47 days) to 2009/10 (33 days). The median LOS was 27 days in 2009/10. The mean and median LOS in Central LHIN was lower than the provincial average (mean – 51, median – 38) in 2009/10.

LHIN Concordance

- ❖ The percentage of episodes within LHIN of patients' residence in 2009/10 was 81% in ED, 80% in acute care, and 44% in inpatient rehabilitation. Concordance for inpatient rehabilitation was much lower than the province (61%).