



Ontario Acquired Brain Injury (ABI) Dataset Project

Waterloo Wellington 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 and nTBI in Waterloo Wellington LHIN was 1.6 per 1000. The rate of TBI was lower than the provincial average (1.8 per 1000) while the rate of nTBI was the same.

Alternate Level of Care (ALC) Days

- ❖ In 2009/10, 22% of TBI and 21% 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 decreased from 34 to 26 days and from 16 to 12 days among nTBI patients. Waterloo Wellington LHIN had the third highest percentage of TBI acute care episodes and the second highest percentage of nTBI acute care episodes with ALC days.
- ❖ The majority of patients with ALC days were 65 years and older (TBI – 69%, nTBI – 68%). Among TBI patients, 42% had psychiatric comorbidities and among nTBI patients, 22% had psychiatric comorbidities. Waterloo Wellington LHIN had the second highest percentage of TBI patients with ALC days who had psychiatric comorbidities.

Emergency Department (ED) Visits

- ❖ Between 2003/04 and 2009/10, there were 5,454 TBI and 4,192 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.
- ❖ The mean length of stay (LOS) in the ED among TBI and nTBI patients remained relatively steady from 2003/04 to 2009/10 (4 hours and 6 hours respectively). 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 (84%) compared to 37% of nTBI patients. Half of nTBI patients were admitted to acute care compared to 12% of TBI patients.

Acute Care Admissions

- ❖ Between 2003/04 and 2009/10, there were 1,231 TBI and 4,486 nTBI cases in acute care. From 2007/08 to 2009/10, there were more nTBI than TBI episodes. During this period, 33% of TBI and 28% of nTBI admissions occurred in the 75+ years age group.

- ❖ The mean LOS in acute care among TBI patients increased from 7 to 13 days and decreased from 13 to 12 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 increased from 4 to 5 days among TBI patients and from 5 to 7 days among nTBI patients from 2003/04 to 2009/10. The median number of special care days among TBI patients was 2 days and among nTBI patients, it was 4 days.
- ❖ From 2007/08 to 2009/10, 50% of TBI patients were discharged home, 21% were transferred to long term care, and 10% died. Among nTBI patients, 29% were discharged home, 23% were transferred to long term care, and 23% died. Waterloo Wellington LHIN had the highest percentage of nTBI patients discharged to long term care and the lowest percentage discharged home. The percentage of nTBI patients discharged home was lower than the percentage in Ontario (40%) while the percentage discharged to long term care was higher than the percentage in Ontario (15%).
- ❖ 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 to 2009/10, there were 333 cases coded with brain dysfunction in inpatient rehabilitation. From 2007/08 to 2009/10, 40% were aged 75+ years.
- ❖ The mean LOS among patients with brain dysfunction in inpatient rehabilitation decreased from 31 to 23 days from 2003/04 to 2009/10. The median number of days in 2009/10 was 21 days. The mean and median LOS in Waterloo Wellington LHIN were lower 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 was 95% in ED and in acute care and was 100% in inpatient rehabilitation, which were higher than the provincial percentage (ED – 85%, acute care – 78%, inpatient rehabilitation – 61%).