# CENTRAL LHIN

Ranked 1 or 2 of 14 LHINs
Ranked 13 or 14 of 14 LHINs

| No | Indicator | LHIN 2018/19-2019/20 | Ontario 2018/19-2019/20 | Rank |
|---|---|---|---|---|
| 1 | Annual age- and sex-adjusted incidence rate per 1,000 population for: a) moderate to severe TBI | 2 | 2.5 | 2 |
| | b) concussion/mild TBI | 7.8 | 9.1 | 2 |
| 2 | Risk-adjusted TBI mortality rate within 30 days of admission to hospital per 100 patients | 13 | 13.7 | 2 |
| 3 | Proportion of ALC days to total LOS in acute care (%) | 19.2 | 25.2 | 5 |
| 4 | Proportion of acute patients with TBI (%) discharged from acute care and admitted to: a) general inpatient rehabilitation | 7.4 | 6 | 5 |
| | b) specialized ABI inpatient rehabilitation | 7.6 | 7.5 | 5 |
| 5 | Median number of days from TBI onset and admission to: a) general inpatient rehabilitation | 10 (7-17) | 13 (8-23) | 1 |
| | b) specialized ABI inpatient rehabilitation | 19.5 (9-33) | 25 (12-44) | 4 |
| 6 | Median FIM change of: a) general inpatient rehabilitation | 26 | 25 | 4 |
| | b) specialized ABI inpatient rehabilitation | 33 | 25 | 1 |
| | Median FIM efficiency of: c) general inpatient rehabilitation | 1.1 | 1.1 | 5 |
| | d) specialized ABI inpatient rehabilitation | 1.1 | 0.8 | 2 |
| 7 | Median time from discharge from acute care/inpatient rehabilitation to first HCC visit for: a) physiotherapy | 18 (5-69) | 15 (5-59 | 8 |
| | b) occupational therapy | 13 (4-59) | 11 (4-46) | 9 |
| | c) speech language pathology | 44 (9-153) | 55 (13-144) | 4 |
| | d) social work | 145 (33-168) | 52 (18-127.5) | 13 |
| 8 | Median number of HCC visits within 60 days of discharge from acute care/inpatient rehabilitation for: a) physiotherapy | 3 (2-6) | 4 (2-5) | 2 |
| | b) occupational therapy | 2 (1-3) | 2 (1-3) | 7 |
| | c) speech language pathology | 2 (1-2) | 2 (1-2) | 7 |
| | d) social work | - | 2 (1-3) | NR |
| 9 | Proportion of patients with TBI (%) discharged from inpatient rehabilitation with a follow-up assessment within 30 days, 180 days, 365 days by a: a) GP/FP (any reason) | 78.8, 97.5, 98.9 | 75.1, 93.1, 95.5 | 3* |
| | b) GP/FP (mental health-related reason) | 8.1, 22.2, 29.6 | 7.2, 21.2, 28.5 | 5† |
| | c) Specialist (physical medicine, neurosurgeon, neurology) | 35.4, 64.1, 68.8 | 36.8, 66.3, 70.9 | 7† |
| | d) Specialist (psychiatry) | 4, 13.1, 16.9 | 4, 12.8, 17 | 5‡ |
| | e) No GP/FP or specialist follow-up assessment within 30 days | 13.6, NA, NA | 16.5, NA, NA | 4 |
| 10 | Proportion of patients with a TBI (%) discharged from acute care to: a) complex continuing care (CCC) | 3.8 | 3.6 | 10 |
| | b) long-term care (LTC) | 0.8 | 1.6 | 5 |
| 11 | Age- and sex-adjusted all-cause readmission rate at 30 days for patients with TBI per 100 patients | 4.1 | 4.1 | 8 |
| 12 | Total number of patients with TBI discharged from inpatient rehabilitation: a) complex continuing care (CCC) | NA | 23 | NR |
| | b) long-term care (LTC) | NA | 16 | NR |

*Ranking determined at 30 days
†Ranking determined at 180 days
‡Ranking determined at 365 days

NR denotes No Ranking

# Regional Context: Central

**Population: 1,874,900 (13.6% of Ontario population)**

**Health Services:**

## Acute Care

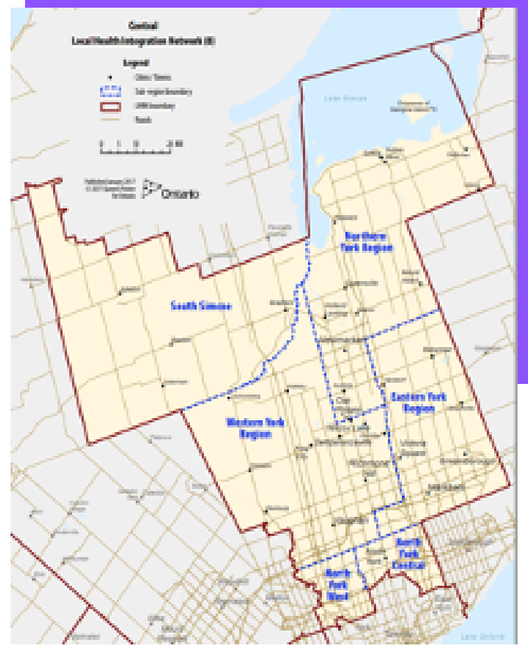
| | |
|---|---|
| **Level 1 Trauma Centre** | No |
| **Acute Hospitals with Neuro-Capacity** | No |
| **Other Acute Hospitals** | Mackenzie Health (Richmond Hill and Vaughan sites)<br>Stevenson Memorial (Alliston)<br>North York General (Toronto)<br>Markham Stouffville (Markham and Uxbridge sites)<br>Southlake RHC (Newmarket)<br>Humber River Hospital (Toronto) |

## Inpatient Rehabilitation

| | |
|---|---|
| **Specialized ABI** | St. John's Rehab – Stroke and Neurological<br>Markham Stouffville – Integrated Stroke Unit<br>North York General – Neurology and Stroke Program<br>Mackenzie Health – Integrated Stroke Unit |
| **General** | Southlake RHC – Medical Complex Care<br>Markham Stouffville – CCC and LTLD (low tolerance, long duration) and short-term rehab<br>Mackenzie Health – CCC and Pediatric<br>Humber River – General and Pediatric |

## Outpatient Rehabilitation

| | |
|---|---|
| **Specialized ABI** | Southlake RHC – Neurological Rehabilitation<br>Markham Stouffville – Stroke Prevention Clinic<br>Mackenzie Health – Stroke Prevention Clinic<br>North York General – Stroke Prevention Clinic<br>Humber River – Stroke Prevention Clinic<br>Boomerang Health (SickKids) – Pediatric Neurology Clinic<br>York Region Concussion Clinic |
| **General** | Markham Stouffville<br>Mackenzie Health |




| **Access to Specialist:** | |
|---|---|
| **Physiatrist** | ✓ |
| **Psychiatrist** | x |
| **Neuropsychiatrist** | ✓ |
| **Behavioural psychologist** | ✓ |
| **Speech-language pathologist** | ✓ |
| **Paediatric specialist** | ✓ |
| **Other: Neuropsychologist, psychologist, psychotherapist, social worker** | ✓ |

# Regional Context: Central

## Community-based Services

**Rehabilitation by registered professionals**
Home and Community Care
Various senior programs
Community Health Centres (i.e., Black Creek)

**Brain Injury Organizations**
Community Head Injury Resource Services (Residential, Community Outreach, Neuropsychology, Clinical Groups, Day Program)
March of Dimes Canada (Residential, Community Outreach, Day Program, After Stroke Program, Aphasia and Communication Disabilities Program)
York Simcoe Brain Injury Services (Community Outreach, Day Program)
Cota (Case Management)

## What works well in Central LHIN

- Good referral system to move from acute to rehabilitation to community.
- New hospital (Mackenzie Health) built in Vaughan that may offer inpatient and outpatient rehabilitation.
- Currently the last LHIN to have 2 HCC ABI specific case coordinators.

## What are some gaps, opportunities or drivers in Central LHIN

- Education on available brain injury services lacking.
- Tremendous population growth within the LHIN, but no significant changes to rehabilitation opportunities.
- HCC LHIN case coordinator position exists, but their case load was expanded to include mental health in addition to ABI.
- Most services are centered along the Yonge Street corridor. Day programs help to off-set this.
- Transportation (e.g., lack of public transit) and cost issues for those outside the core areas.
- Lack of respite or transitional beds.
- Housing and home supports are not available on an immediate basis and long wait lists for ABI residential support.
- Lack of acute and inpatient care services within LHIN.
- ALC beds at Markham Stouffville, Mackenzie Health, North York General Hospital and Southlake HSC, but not ABI-specific.
- Lack of behavioural supports to assist with transfer/ongoing support to LTC/non-ABI Group Home and/or to home setting.
- Lack of affordable accessible housing.
- Difficulty in attendant care options due to cognitive deficits.
- Insufficient home supports to allow for safe return home (e.g., limited hours, limited specialized professionals, focus on physical vs. cognitive).

# Regional Context: Central

## Client Vignette

**CASE 1 – Ideal Service Pathway**

- Male at time of injury was age 52 and was living with his wife and 2 teenage children. He was initially taken to Sunnybrook Hospital for acute care. He was transferred directly to Toronto Rehab for inpatient care and then transferred directly to outpatient therapy through Toronto Rehab. The individual was transferred home with home and community care in place. The Occupational Therapist with home and community care initiated a referral to Community ABI resources for case management and day programming. The individual was placed on a waiting list with Community Head Injury Resource Services (CHIRS) for case management and was offered day programming. The client was working at time of accident and had access to some insurance funds, so he was able to supplement home and community care with some private rehabilitation. The individual has remained actively engaged in day programming while waiting on the case management waiting list, which has included access to recreation and social activities, Clinical Groups and access to family supports for his wife and children. The client's name came up on the case management waiting list with CHIRS and he was offered services. The client can continue to access day programming while receiving case management.

**CASE 2 – Identification of Gaps**

- Male at time of injury was age 39. He experienced an anoxic injury secondary to assault. He was initially taken to St. Michael's Hospital for acute care. Due to behaviours (verbal/physical aggression) and high care needs, he was not accepted for inpatient rehabilitation in Toronto as it was felt that he was not ready for rehabilitation. He was then admitted to the inpatient neurobehavioural unit at Hamilton Health Sciences (HHS). The individual made progress and HHS attempted to find a placement for him back in Toronto with an ABI agency or rehabilitation unit that could continue to offer him a structured environment. There were not any options available due to waitlists and/or insufficient services to address the ongoing behavioural interventions/high care needs. The individual was repatriated back to St. Mike's where he experienced setbacks and most rehabilitation goals were lost. The client was referred to community ABI day programming; the requirement was that he needed to have support to attend the programs. Given that the individual resided at a hospital, the support fell to his family, which they could not provide. The individual was eventually discharged to a LTC home with no access to ABI-specific care.