

# **Mild Traumatic Brain Injury Program of Care**

## Reference Guide

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## Acknowledgements

The following regulated health professional associations made significant contributions to the development of the revisions to the Mild Traumatic Brain Injury Program of Care (mTBI POC).

- Ontario Association of Speech-Language Pathologists and Audiologists
- Ontario Chiropractic Association
- Ontario Dental Association
- Ontario Physiotherapy Association
- Ontario Psychological Association
- Ontario Society of Occupational Therapists
- Registered Massage Therapists' Association of Ontario
- Registered Nurses Association of Ontario.

The WSIB acknowledges and appreciates their participation.

If you have general questions about the program, please call the Health Professional Access Line at 1-800-569-7919 or 416-344-4526.

## Introduction

The WSIB is here to help people who were injured or made ill at work receive the health care they need to recover and return to work. Through our programs of care, we work with community health care providers to deliver evidence-based health care for specific illnesses and injuries, including mild traumatic brain injuries (mTBI).

The mTBI POC is a community health care program based on current evidence-informed care guided by the best evidence, expert consensus standards and guidelines for mTBI. It has been developed for the assessment and treatment of injured people with mild traumatic brain injuries. The mTBI POC can be delivered by regulated health professionals (RHP), either as a sole providers or as parts of interdisciplinary teams, who are able to within their scope of practice, knowledge, skill and judgement. This includes the ability to deliver all of the recommended interventions, with the exception of vestibular rehabilitation.

Vestibular rehabilitation is recognized as an important intervention for people who require a formalized program in early mTBI treatment. However, requiring all providers to be able to deliver this intervention may limit access to care. Vestibular rehabilitation is included in the mTBI POC as an additional intervention. When clinically required and available, it can be delivered by those RHPs who are able to within their scope of practice, knowledge, skill and judgement.

The mTBI POC is not intended to replace regulatory college requirements (e.g. consent, documentation) of RHPs in practice or the professional judgement of the treating RHP.

The mTBI POC will be evaluated following implementation to continuously monitor the quality of services, including recovery and return-to-work outcomes.

## The evidence

The mTBI POC is based on the principles of Evidence-Based Medicine (EBM), defined as “the conscientious, explicit and judicious use of current best evidence” (Sackett, 1996), in making decisions about the care of injured persons.

The foundational evidence for the mTBI POC comes from the Ontario Neurotrauma Foundation’s (ONF) *Guidelines for Concussion/mTBI and Persistent Symptoms: Third Edition* (ONF, 2018), the Ontario Neurotrauma Foundation’s *Standards for Post-Concussion Care from diagnosis to the interdisciplinary concussion clinic* (ONF, 2017), and a literature review with input from the participating health professional associations noted in the acknowledgements, in collaboration with the WSIB. The ONF evidence was graded according to the ONF guideline’s grading criteria, and the supplemental evidence was graded using Sackett’s level of evidence as noted above.

## Program objectives

The objectives of the mTBI POC include:

- facilitating timely access to evidence-informed, individualized mTBI assessment and treatment
- facilitating recovery of overall function with specific focus on safe, timely and sustained return to occupational function
- monitoring and identifying the abilities, limitations and accommodations for return-to-work planning
- preventing ongoing/prolonged symptoms
- identifying injured persons who are not responding to the mTBI POC treatment and recommending appropriate assessment and intervention
- providing information for Case Management Teams through reporting and discussion
- improving communication and satisfaction among injured persons, health care providers and other stakeholders

## Target population and admission criteria

The mTBI POC is for injured persons:

- who have an allowed WSIB claim
- have been diagnosed with mTBI by a physician or nurse practitioner
- who have negative findings on all neuroimaging studies, if completed
- are 18 years of age or older
- are within three months of their date of injury.

The mTBI POC is not recommended for injured persons:

- with moderate or severe brain injuries
- with identified risk factors
- with a pre-existing diagnosed psychiatric disorder/psychopathology such that treatment would interfere with this condition
- with reported and observed psychological symptoms that would likely interfere with engagement in the mTBI POC
- with physical impairments or concurrent injuries or conditions that would prevent the injured person from being assessed and participating in the mTBI POC
- who are under the age of 18

Contact the WSIB if the injured person is not within the target population.

## Assessment of risk factors

Some injured persons may have risk factors that could indicate the need for urgent care or specialized services. The RHP may identify risk factors during the initial assessment or during the course of treatment. As soon as the risk factors are identified, the RHP must immediately call the WSIB Case Management Team to notify them and discuss possible referral to specialized services or, where indicated, emergency care.

These risk factors may include, for example:

- indication of deteriorating neurological function
- indication of significant cervical spine injury
- worsening of symptoms or increasing number of symptoms
- other risk factors not otherwise listed

## Program structure and duration

The mTBI POC is up to eight weeks in length and consists of two blocks of care. The first block includes the initial assessment and four weeks of treatment. The second block comprises four weeks of treatment. A minimum number of visits is required to be provided in each block.

## Initial assessment and report

Prior to initiating treatment, the treating RHP conducts an assessment. The components of the assessment will conform to the professional guidelines and standards of practice within each regulated health profession, and within the framework of evidence-informed practice and expert consensus guidelines for the treatment of mTBI. The length of a typical initial assessment for workers with an mTBI will vary for each injured person, and may take longer than the initial visit.

The assessment should include the following key elements:

- history including the identification of pre-existing conditions that may impact the injured person's recovery
- identification of the injured person's specific mTBI symptoms
- summary of the physical findings including the testing completed
- screen for risk and other barriers to recovery and return to work
- administer outcomes measures for baseline scores related to symptoms and function
- establish functional level with respect to activities of daily living and/or work
- determine the injured person's current abilities, limitations and accommodations for return to work planning
- develop a treatment plan

## mTBI initial assessment report

The mTBI initial assessment report must be completed and submitted to WSIB within two business days of the assessment. If after the assessment the RHP determines the injured person is not suitable for the mTBI POC or identifies risk factors, the RHP must contact WSIB.

## Treatment and reporting

### Block 1

In addition to initial assessment, block 1 includes four weeks of treatment. A **mid-point report** must be completed the end of block 1 to re-administer the Patient-Specific Functional Scale (PSFS) and provide a brief update on progress and any changes to the treatment plan. This should be submitted to WSIB within two business days of the last treatment session in block 1.

➡ A call to the WSIB is required if there is a less-than-detectable change on the PSFS and/or vestibular rehabilitation is being recommended as an intervention.

### Block 2

Block 2 includes another four weeks of treatment. A **care & outcomes summary** must be completed at the end of the program. This should be submitted to WSIB within two business days of the date of discharge.

➡ A call to the WSIB is required one week prior to the completion of block 2 if the injured person is not expected to meet their recovery and return-to-work goals.

The injured person can be discharged, and the care & outcomes summary submitted, at any time during the POC if recovery and return-to-work goals have been met.

If at any time during the program the injured person is not progressing as expected, the WSIB should be contacted to discuss options for specialized assessment.

## Recommended evidence-informed interventions

The recommended treatment interventions chosen for an injured person should be based on the clinical judgement of the treating RHP and take into consideration the injured person's functional recovery needs. To deliver the mTBI POC, the RHP, as a sole provider or part of an interdisciplinary team, must be able to deliver all interventions with the exception of vestibular rehabilitation. Vestibular rehabilitation is included as an additional intervention within the mTBI POC that, when required and where the provider is able, can be delivered in the blocks of treatment.

## Education

Education is a required intervention for all injured persons in the mTBI POC. Treatment session duration and frequency are left to the clinical judgement of the treating RHP.

Regardless of the time of entry into the mTBI POC, the first treatment for the injured person should consist of education about mTBI, potential interventions and self-management strategies for symptoms related to the mTBI.

The following information should be included in the mTBI POC education sessions:

- reassurance that symptoms are to be expected and will usually resolve over time
- explanation about the typical timeframes and pattern of recovery
- education about the gradual reintegration of appropriate physical activities, activities of daily living, and home work activities
- progression of functional tolerances as tolerated and guided by sub-symptom thresholds
- importance of the balance between cognitive and physical rest and activity
- techniques for coping with common symptoms:
  - sleep hygiene
  - stress management
  - cognitive strategies including education regarding the pacing and planning of activities
- education related to specific symptom management
- appropriate adult education methods (i.e. verbal and written), including an opportunity to ask questions

### **Gradual integration of activity**

The optimal timing for the gradual integration of usual activities is guided by the injured person's symptom-limited tolerance. The resumption of high-impact activities that may expose the person to a secondary mTBI should be carefully evaluated.

### **Progressive exercise therapy**

Emerging evidence supports the use of physical exercise to improve concussion symptoms. The progression of exercise and activity may be guided by sub-symptom thresholds, determined using graded treadmill exercise testing such as the Buffalo Concussion Treadmill Test.

Gradual integration of activity and exercise therapy may include:

- sub-symptom: aerobic exercise, monitored increase in activity and therapeutic exercise
- head and neck exercises e.g., ROM, strengthening, endurance
- balance and coordination exercises

It is important to note that balance and coordination exercises are included in exercise therapy. A formalized vestibular rehabilitation program is not required to deliver this type of exercise.

## Manual therapy

Manipulation, mobilization and localized massage techniques may help regain flexibility and movement, and reduce neck pain, dizziness and headache associated with a soft-tissue injury to the cervical spine. Manual therapy may include:

- manipulation
- mobilization
- massage

Modalities may be included to reduce pain associated with musculoskeletal symptoms such as cervicogenic headaches and neck discomfort.

Modalities for pain reduction may include:

- acupuncture
- ice, heat, and electrotherapy

## Vestibular rehabilitation

Assessment of vestibular function will identify vestibular deficits, which may benefit from evidence-informed interventions. To determine if vestibular rehabilitation is a required intervention, evaluation should at minimum include a balance screen, the Dix-Hallpike maneuver and VOR screening. Balance testing should reference normal values to document impairment. The testing completed should be outlined in reporting, and recommendations for a vestibular rehabilitation program should be supported by these objective findings. It should be clear how the injured person requires intervention beyond balance and coordination exercises.

If an injured person is identified as requiring vestibular rehabilitation but the treating RHP does not have the scope of practice to deliver it, the RHP should call the WSIB so that specialized, interdisciplinary services can be considered.

## Interventions not within mTBI POC scope

Both cognitive rehabilitation and vision therapy are noted as interventions that could be required in the treatment of mTBI, however it is recognized that symptoms of cognitive and/or vision impairment are often a result of the primary symptoms. If any persistent cognitive or vision issues do not resolve after primary symptoms are treated, the RHP should contact the WSIB so that specialized, interdisciplinary services can be considered.

Similarly, mental health interventions could be required as mental health disorders can follow an mTBI. Early education, reassurance and treatment focused on symptom management are important; however, if symptoms persistent, the RHP should contact the WSIB so that mental health services can be considered.

## Additional treatment: supplementary block

On occasion, additional treatment through the mTBI POC may be warranted. Further community treatment through the mTBI POC may also be recommended after an injured person accesses an mTBI assessment through the WSIB Occupational Health Assessment Program or Neurology Specialty Program.

In these instances, a four-week supplementary block of treatment can be used when approved by the WSIB. A supplementary report is required at the end of the supplementary block.

## Outcome measures

At both initial assessment and discharge, the following outcome measures are required in the mTBI POC (other outcome measures may be used as deemed appropriate by the RHP):

- Patient-Specific Functional Scale (PSFS)
  - To measure functional improvement throughout the mTBI POC
- Rivermead Post-Concussion Symptoms Questionnaire (RPQ)
  - To rate severity of symptoms assisting with treatment planning as well as identification and monitoring of symptoms that may require intervention beyond the scope of the mTBI POC (e.g. psychological impairment, cognitive impairment)

The PSFS must also be completed and documented in the mid-point report.

## Staying at or returning to work

Staying at work or returning to work enhances recovery and is part of the rehabilitation process. An appropriately timed return to work is important in the injured person's progress toward functional recovery and a successful and sustained return to work.

Full recovery is not a requirement for return to work. In most cases, return to work will require a phased approach based on the injured person's recovery and type of employment. The role of the RHP delivering the mTBI POC is to identify the injured person's abilities, limitations and required accommodations to assist in informing return to work opportunities.

## Communication and reporting

Timely and effective communication is an important element in the success of the mTBI POC. Communication includes written reports, telephone conversations and one-on-one discussions. The frequency of communication will vary from case to case depending on the individual circumstances of the injured person and the extent of progress achieved.

Communication and education with the injured person should be ongoing throughout the POC. The RHP may also communicate with the following during the mTBI POC:

- family physician or general practitioner
- WSIB Case Management Team: Case Manager Nurse Consultant, Return to Work Specialist
- WSIB Clinical Expert
- other treating health professionals
- employer via the Functional Abilities Form (FAF)

Key communication points and reporting that are required during the mTBI POC include:

- Initial assessment report – two business days after completion of initial assessment
- Mid-point report – two business days after last treatment session in block 1
  - Required call to WSIB if less than detectable change on the PSFS and/or vestibular rehabilitation is being recommended
- Care & outcomes summary – two business days after discharge
  - Required call to WSIB one week prior to program completion if the injured person is not expected to meet their recovery and return-to-work goals

## Referrals

In some cases, an injured person may benefit from additional assessment, treatment, and/or interventions. These can be recommended in reporting and/or through a telephone call to WSIB. Referrals include but are not limited to:

- Return to Work Specialist – WSIB personnel who can visit worksites and help coordinate return to work planning in conjunction with recommended abilities, limitations and accommodations
- Occupational Health Assessment Program (mTBI Assessment) – expedited access to interdisciplinary assessment services
- Neurology Specialty Program – expedited access to assessments and/or treatment services with an interdisciplinary team, including physician specialists
- Community Mental Health Program – timely access to psychological assessment and treatment in the community

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