SAFETY REQUIRES TEAMWORK
AN EMERGENCY ACTION PLAN FOR HOCKEY

The coach, manager and hockey trainer should initiate a meeting at the beginning of the season to ensure they have the volunteers required for their Emergency Action Plan.

Equipment Locations

Please locate and identify area on map:

Legend
Phone ..... P
Exits ..... E
First aid... FA
AED. ..... AED

Arena Information

Arena/Facility Name: _____

Address: _____

Telephone Number: _____

Emergency Telephone Numbers

Emergency: _____

Ambulance: _____

Fire Dept: _____

Hospital: _____

Police: _____

General: _____

Roles

Hockey Trainer / Charge Person

- Initially takes control of the situation.
- Instructs player to lay still and bystanders, such as other players, not to move player.
- Do not move the athlete.
- Assess injury status of player, decide if an ambulance/medical care is required.
- If the injury is serious and warrants immediate attention that you are not qualified to provide, make your pre-determined signal to your call person, control person and your pre-determined first aid/medical person.

Call Person

- Makes call when emergency assistance required (tests their cell phone in the facility to ensure it will work).
- Know location of alternate phones in the facility being played in. Have change or a phone card if necessary.
- Ideally at all games and practices and not involved on the bench.
- Has a list of emergency phone numbers in the area of the facility.
- Has a diagram displaying specific directions and best route to the arena facility.

Control Person

- Pre-determine the location of the AED and other emergency equipment in the facility.
- Retrieving the AED and/or first aid kit and bringing to the injured player if requested.
- Seek highly-trained medical personnel in the facility if requested by the Charge Person.
- Ensure teammates, other participants and spectators are not in the way of the charge person.
- Advise opponents, on-ice officials, arena staff and parents of the steps being taken.
- Ensure the quickest and best route for the ambulance crew to the ice surface is clear and accessible.
- Meet the ambulance on its arrival and direct EMS to the injured player.

IMPORTANT REMINDERS

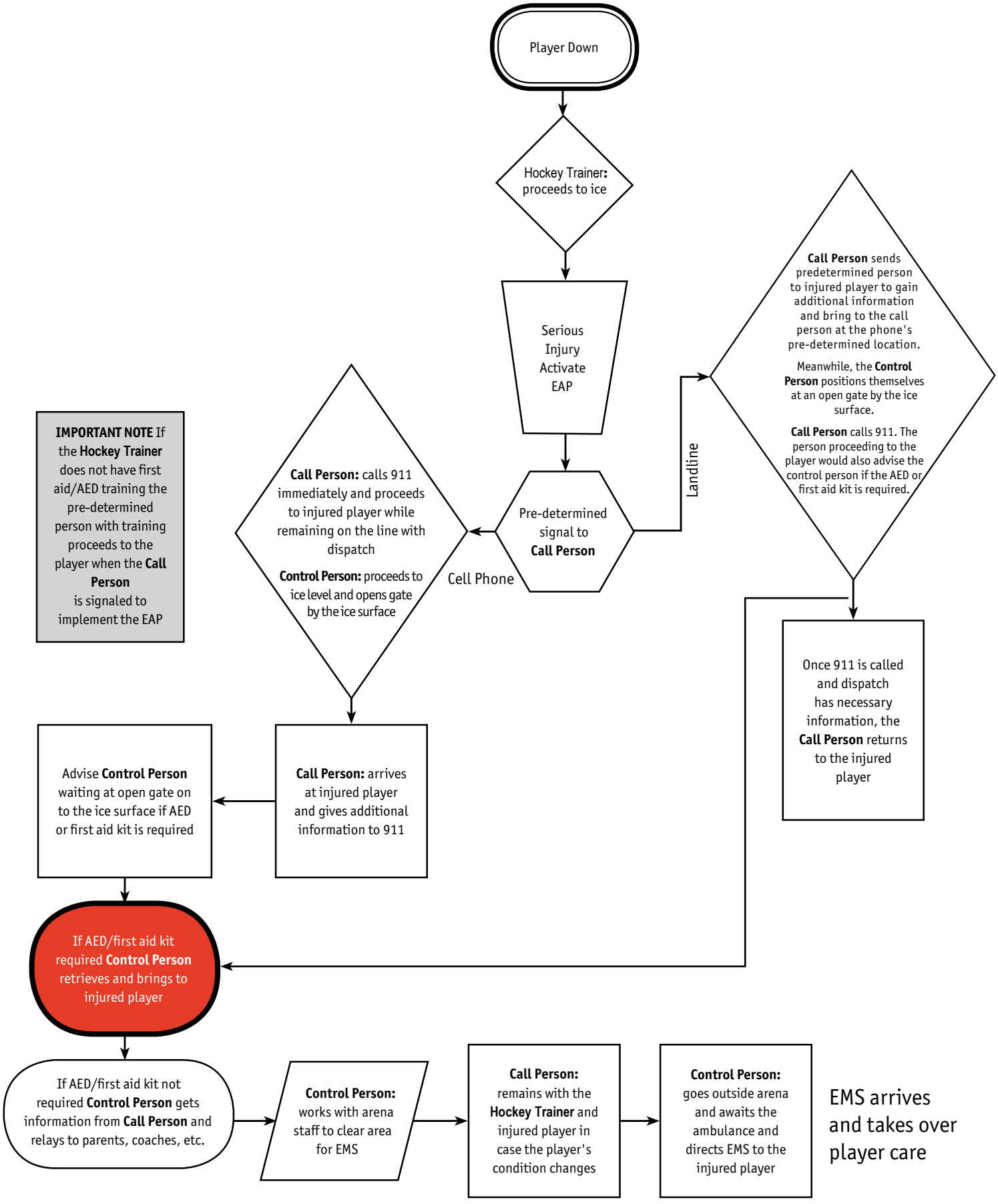
The game official continues to assume the role of being in charge of the overall environment.

It is important for officials to note that if the hockey trainer makes the signal for assistance that there may be a number of pre-determined people who will respond and will require access to the ice.

Once the ambulance is called, the officials should send both teams to their dressing rooms.

See flow chart on reverse

Emergency Action Plan Flow Chart



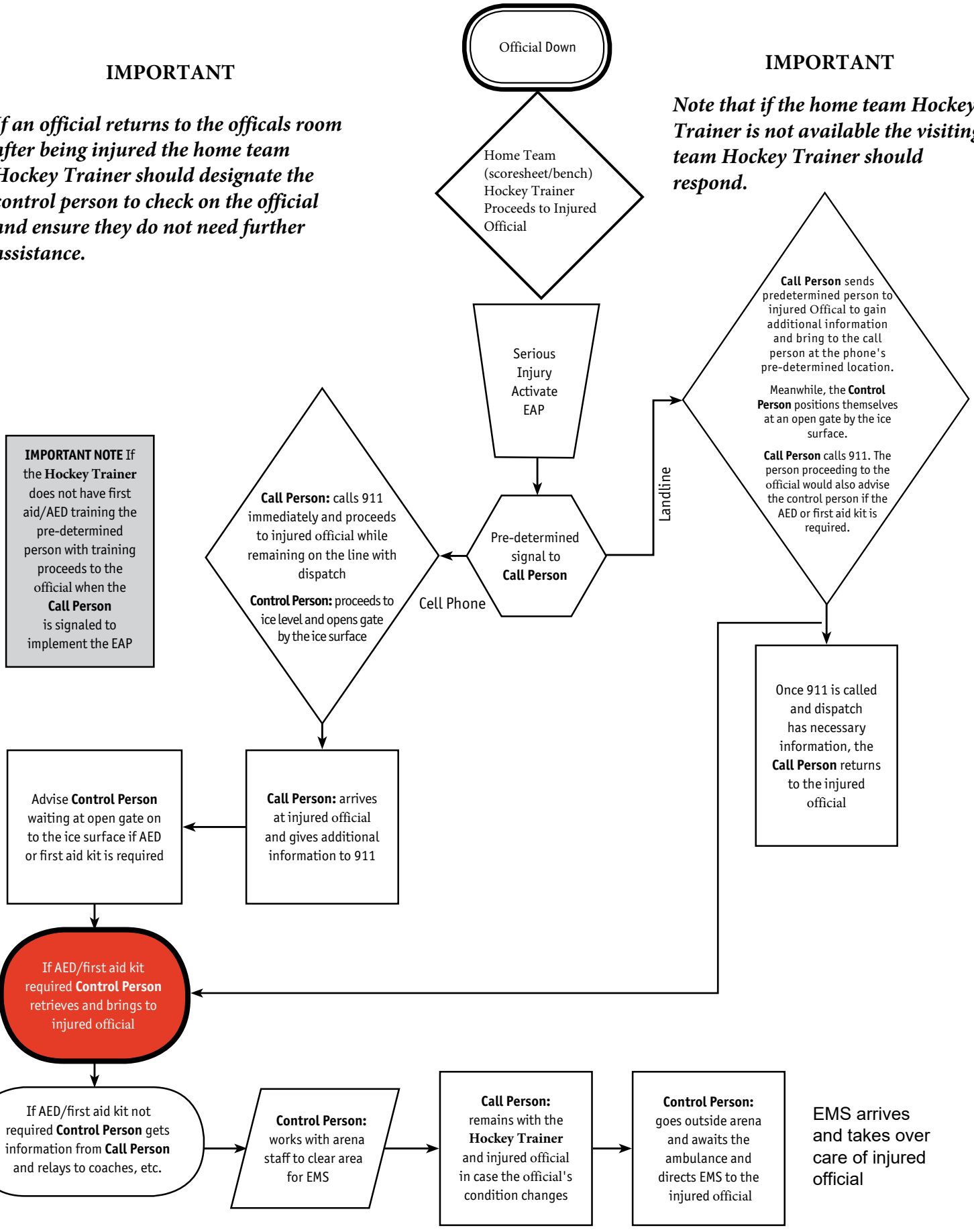
Emergency Action Plan Flow Chart

IMPORTANT

If an official returns to the officals room after being injured the home team Hockey Trainer should designate the control person to check on the official and ensure they do not need further assistance.

IMPORTANT

Note that if the home team Hockey Trainer is not available the visiting team Hockey Trainer should respond.



MEDICAL INFORMATION SHEET

Name: _____

Date of birth: Day _____ Month _____ Year _____

Address: _____

Postal Code: _____

Telephone: (____) _____ Cell: (____) _____

Provincial Health Number (optional): _____

Parent/Guardian #1: Name _____

Business Phone Number:(____) _____

Parent/Guardian #2: Name _____

Business Phone Number:(____) _____

Alternate emergency contact (if parents are not available)

Name: _____

Relationship to Player: _____

Telephone: (____) _____ Cell: (____) _____

Doctor's Name: _____

Telephone: (_____) _____

Dentist's Name: _____

Telephone: (_____) _____

Date of last complete physical examination: _____

Before a player participates in a hockey program it is recommended that they have a medical and that they also have any medical condition or injury problem checked by their family physician

Please check the appropriate response and provide details below if you answer "Yes" to any of the questions.

Yes ❑ No ❑ Medication

Yes ❑ No ❑ Allergies

Yes ❑ No ❑ Previous history of concussions

Yes ❑ No ❑ Fainting or seizure during or after physical activity

Yes ❑ No ❑ Near fainting or Brownouts

Yes ❑ No ❑ Seizures and/or epilepsy

Yes ❑ No ❑ Wears glasses

Yes ❑ No ❑ Are lenses shatterproof

Yes ❑ No ❑ Wears contact lenses

Yes ❑ No ❑ Wears dental appliance

Yes ❑ No ❑ Hearing problem

Yes ❑ No ❑ Asthma

Yes ❑ No ❑ Trouble breathing during exercise

Yes ❑ No ❑ Heart Condition

Yes ❑ No ❑ Palpitations or Racing Heart

Yes ❑ No ❑ Family history of heart disease

Yes ❑ No ❑ Family history of unexpected death during physical activity

Yes ❑ No ❑ Family history of unexplained death of a young person

Yes ❑ No ❑ Diabetes – Type 1_____ Type 2_____

Yes ❑ No ❑ Wears medical information bracelet/necklace
For what purpose? _____

Yes ❑ No ❑ Health problem that would interfere with participation on a hockey team

Yes ❑ No ❑ Has had an illness that lasted more than a week and required medical attention in the past year

Yes ❑ No ❑ Has had injuries requiring medical attention in the past year

Yes ❑ No ❑ Been admitted to hospital in the last year

Yes ❑ No ❑ Surgery in the last year

Yes ❑ No ❑ Presently injured
Injured body part: _____

Yes ❑ No ❑ Vaccinations up to date
Date of last Tetanus Shot:_____

Yes ❑ No ❑ Hepatitis B vaccination

Please give details if you answered "Yes" to any of the above. (Use separate sheet if necessary)

_____

_____

_____

Medications:_____

Allergies: _____

Medical conditions: _____

Recent injuries: _____

Any information not covered above: _____

_____

I understand that it is my responsibility to keep the team Safety Person advised of any change in the above information as soon as possible. In the event of a medical emergency and that no one can be contacted, team management will arrange to take my child to the hospital or a physician if deemed necessary. I hereby authorize the physician and nursing staff to undertake examination, investigation and necessary treatment of my child. I also authorize release of information to appropriate people (coach, physician) as deemed necessary.

Date: _____ Signature of Player: _____

Date: _____ Signature of Parent or Guardian: _____

Disclaimer: Personal information used, disclosed, secured or retained by Hockey Canada will be held solely for the purposes for which we collected it and in accordance with the National Privacy Principles contained in the Personal Information Protection and Electronic Documents Act as well as Hockey Canada's own Privacy Policy.

HOCKEY TRAINERS CERTIFICATION PROGRAM
Player / Team Injury Log

Player/Team: _____ Hockey Trainer: _____

Date	Name	Injury Description	Management (ice/bandage/tape)	Follow-up/ Recomendations	Hockey Canada Injury Report and HTCP IDCP Report Form Submitted	Return to play form		Hockey Trainers Initials
						Requested	Received	

Note: This log should report, **at minimum**, each time;

- A player is removed for the remainder of the game due to an injury sustained during play.
- A player is injured during a practice whether on or off ice.
- A player is forced to leave a game or practice for unknown medical reasons.
- A player is injured during a hockey related event.

Note: If an injury requires medical referral and/or hospitalization, complete and submit a Hockey Canada Injury Report.

HOCKEY CANADA INJURY REPORT

See reverse for mailing address.

Forms must be filled out in full or form will be returned. This form must be completed for each case where an injury is sustained by a player, spectator or any other person at a sanctioned hockey activity.

CLAIMS MUST BE PRESENTED WITHIN 90 DAYS OF THE INJURY DATE. DATE OF INJURY: __/__/__ (Mo. Day Yr.)

INJURED PARTICIPANT: ◉ Player ◉ Team Official ◉ Game Official ☐ Spectator

Name: _____ Birthdate: __/__/__ (Mo. Day Yr.) Gender: ☐ M ◉ F

Address: _____

City / Town: _____ Province: _____ Postal Code: _____ Phone: (___) _____

Parent / Guardian: _____ Email Address: _____

AGE DIVISION

☐ Under-7 ◉ Under-9 ◉ Under-11 ◉ Under-13 ◉ Adult Rec
◉ Under-15 ◉ Under-18 ◉ Under-21 ◉ Junior ◉ Senior

CATEGORY

☐ AAA ◉ A ◉ BB ◉ CC ◉ DD ◉ House ◉ Minor Junior
◉ AA ◉ B ◉ C ◉ D ◉ E ◉ Major Junior ◉ Other _____

BODY PART INJURED

Arm: Left	Arm: Right	Leg: Left	Leg: Right
☐ Shoulder	☐ Shoulder	☐ Shin	☐ Shin
☐ Upper arm	☐ Upper arm	☐ Knee	☐ Knee
☐ Collarbone	☐ Collarbone	☐ Toe	☐ Toe
☐ Elbow	☐ Elbow	☐ Thigh	☐ Thigh
☐ Hand/Finger	☐ Hand/Finger	☐ Foot	☐ Foot
☐ Forearm/Wrist	☐ Forearm/Wrist		

Head: ☐ Eye Area ☐ Face ☐ Throat ☐ Skull ☐ Dental

Trunk: ☐ Abdomen ☐ Chest ☐ Ribs

Back: ☐ Neck ☐ Lower ☐ Upper

Pelvis: ☐ Hip ☐ Groin

Other:

NATURE OF CONDITION

☐ Concussion ☐ Laceration ☐ Fracture
☐ Sprain ☐ Strain ☐ Contusion
☐ Dislocation ☐ Separation ☐ Internal Organ Injury

ON-SITE CARE

☐ On-Site Care Only ☐ Refused Care

Sent to Hospital by: ☐ Ambulance ☐ Car

INJURY CONDITIONS

Name of arena/location: _____

☐ Exhibition/Regular Season ☐ Period #2
☐ Playoffs/Tournament ☐ Period #3
☐ Practice ☐ Overtime: _____
☐ Try-outs ☐ Dry Land Training
☐ Other ☐ Gradual Onset
☐ Warm-up ☐ Other Sport
☐ Period #1 ☐ Other: _____

CAUSE OF INJURY

☐ Hit by Puck
☐ Collision with Boards
☐ Non-Contact Injury
☐ Hit by Stick
☐ Collision on Open Ice
☐ Collision with Opponent
☐ Fall on Ice
☐ Checked from Behind
☐ Collision with Net
☐ Fight
☐ Blindsiding

Was the injured player in the correct league and level for their age group?
☐ Yes ◉ No

Was this a sanctioned Hockey Canada activity?
☐ Yes ◉ No

LOCATION

☐ Defensive Zone ☐ Offensive Zone ☐ Neutral Zone
☐ Behind the Net ☐ 3 ft. from Boards ☐ Spectator Area
☐ Parking Lot ☐ Dressing Room ☐ Bench
☐ Other: _____

WEARING WHEN INJURED

☐ Full Face Mask
☐ Helmet/No Face Shield
☐ No Helmet/No Face Shield
☐ Intra-Oral Mouth Guard
☐ Half Face Shield/Visor
☐ Throat Protector
☐ Short Gloves
☐ Long Gloves

ADDITIONAL INFORMATION

Has the player sustained this injury before? ☐ Yes ◉ No

If "Yes" how long ago? _____

Was a penalty called as a result of the incident? ☐ Yes ◉ No

Estimated absence from hockey?
☐ 1 week ◉ 1-3 weeks ◉ 3+ weeks

DESCRIBE HOW INCIDENT HAPPENED

(Attached additional page if necessary)

I hereby authorize any Health Care Facility, Physician, Dentist or other person who has attended or examined me/my child, to furnish Hockey Canada any and all information with respect to any illness or injury, medical history, consultation, prescriptions or treatment and copies of all dental, hospital, and medical records. A photo static/electronic copy of this authorization shall be considered as effective and valid as the original.

Signed: _____
(Parent/Guardian if under 18 years of age)

Date: _____

TEAM INFORMATION

(To be completed by a Team Official)

Association: _____

Team Name: _____

Team Official (Print): _____

Team Official Position: _____

Signature: _____

Date: _____

HEALTH INSURANCE INFORMATION

THIS MUST BE FILLED OUT IN FULL OR FORM PROCESSING WILL BE DELAYED

Occupation: ☐ Employed Full-time ◉ Employed Part-time ◉ Unemployed ◉ Full-Time Student

Employer (If minor, list parent's employer): _____

1. Do you have provincial health coverage? ☐ Yes ◉ No Province: _____

2. Do you have other insurance? ☐ Yes ◉ No
(IF "YES", PLEASE SUBMIT CLAIM TO YOUR PRIMARY HEALTH INSURER.)

3. Has a claim been submitted? ☐ Yes ◉ No
(IF "YES", PLEASE FORWARD PRIMARY INSURER EXPLANATIONS OF BENEFITS.)

Make Claim Payable To: ☐ Injured Person ◉ Parent ◉ Team ◉ Other: _____

MEMBER APPROVAL

HOCKEY CANADA INJURY REPORT

Participant's name: _____

PHYSICIAN'S STATEMENT

Physician: _____ Address: _____ Tel: (_____)_____

Name of Hospital / Clinic: _____ Address: _____

Nature of Injury:

Date of First Attendance: _____

Claimant will be totally disabled:
From: _____ To: _____

Is the injury permanent and irrecoverable? ☉ No ☐ Yes

Give the details of injury (degree):

Prognosis for recovery:

Did any disease or previous injury contribute to the current injury?
◉ No ◉ Yes (describe):

Was the claimant hospitalized? ☐ No ◉ Yes
(give hospital name, address and date admitted):

Names and addresses of other physicians or surgeons, if any, who attended claimant:

I certify that the above information is correct and to the best of my knowledge,

Signed: _____ Date: _____

DENTIST STATEMENT

Limits of coverage: $1,250 per tooth, $3,000 per accident. Treatment must be completed within 52 weeks of accident. (Effective September 1st, 2018)

UNIQUE NO. SPEC. PATIENT'S OFFICIAL ACCOUNT NO.

Patient

Last name Given name

Address

City / Town Province Postal Code

Dentist

Phone No

I hereby assign my benefits payable from this claim directly to the named dentist and authorize payment directly to him / her

SIGNATURE OF SUBSCRIBER

For dentist use only – for additional information, diagnosis, procedures or special consideration.

DUPLICATE FORM ☐

I understand that the fees listed in this claim may not be covered by or may exceed my plan benefits. I understand that I am financially responsible to my dentist for the entire treatment. I acknowledge that the total fee of $_____ is accurate and has been charged to me for the services rendered.
I authorize release of the information contained in this claim form to my insuring company/plan administrator.

SIGNATURE OF (PATIENT/GUARDIAN) OFFICE VERIFICATION

DATE OF SERVICE MO. / DAY / YR.	PROCEDURE	INITIAL TOOTH CODE	TOOTH SURFACE	DENTIST'S FEE	LAB CHARGE	TOTAL CHARGE

This is an accurate statement of services performed and the total fee due and payable & oe.
NOTE: All benefits subject to insurer payor status, provisions of the policy, Hockey Canada sanctioned events.

TOTAL FEE SUBMITTED

Mail completed form to: **ONTARIO WOMEN'S HOCKEY ASSOCIATION**
225 WATLINE AVENUE
MISSISSAUGA, ON
L4Z 1P3
TEL: (905) 282-9980
FAX: (905) 282-9982
INSURANCE@OWHA.ON.CA
OWHA.ON.CA

HOCKEY TRAINERS CERTIFICATION PROGRAM RETURN TO PLAY

_____
Name of Player

is able to return to play following injuries sustained on

_____
Date

Considerations /restrictions with respect to return to play:

_____

_____

_____

_____

_____

_____

_____

_____

_____ _____
Name of Medical Authority Type of Medical Authority

Date: _____ _____
Signature

This information is strictly confidential and will only be used to assist in the player's safe return to play. All records will be returned to the player.

NOTE: The HTCP recommends that this be completed by a physician, chiropractor, physiotherapist or nurse practitioner for muscular or skeletal injuries (excluding fractures). Fractures as well as all neurologicial injuries including spinal injuries and concussions must be signed off by a physician.

Disclaimer: Personal information used, disclosed, secured or retained will be held solely for the purposes for which we collected it and in accordance with the National Privacy Principles contained in the Personal Information Protection and Electronic Documents Act.

MEDICAL ASSESSMENT LETTER

Date : _____ Athlete's Name : _____

To whom it may concern,

Athletes who sustain a suspected concussion should be managed according to the *the Canadian Guideline on Concussion in Sport, 2nd edition*. Accordingly, I have personally completed a Medical Assessment on this patient.

Results of Medical Assessment

☐ This patient has **not** been diagnosed with a concussion and can resume full participation in school, work, and sport activities without restriction.

☐ This patient has **not** been diagnosed with a concussion, but the assessment led to the following diagnosis and recommendations:

_____

_____

☐ This patient **has been diagnosed with a concussion**.

The goal of concussion management is to allow complete recovery of the patient's concussion by promoting a safe and gradual return to school, work and sport activities. The patient has been instructed to avoid activities that could potentially place them at risk of another concussion or head injury **until** they have been provided with a ***Medical Clearance Letter*** **from a medical doctor or nurse practitioner** in accordance with the *Canadian Guideline on Concussion in Sport*.

Other comments:

_____

_____

Thank-you very much in advance for your understanding.

Yours Sincerely,

Signature/print_____ M.D. / N.P.
(circle appropriate designation)*

We recommend that this document be provided to the athlete without charge.

**In rural, remote or northern regions, the Medical Assessment Letter may be completed by a nurse with pre-arranged access to a medical doctor or nurse practitioner. Forms completed by other licensed healthcare professionals should not otherwise be accepted.*

MEDICAL ASSESSMENT LETTER

Return-to-School Strategy

The *Return-to-School Strategy* should be used to help students make a gradual return to school activities. Progression through the steps will look different for each student. It is common for symptoms to worsen **mildly and briefly** with activity. If the student's symptoms worsen more than this, pause and adapt activities as needed.

Step	Activity	Description	Goal of each step
1	Activities of daily living and relative rest (first 24-48 hours)	Typical activities at home (e.g. preparing meals, social interactions, light walking). Minimize screen time.	Gradual reintroduction of typical activities
2	School activities with encouragement to return to school (as tolerated)	Homework, reading or other light cognitive activities at school or home. Take breaks and adapt activities as needed. Gradually resume screen time, as tolerated.	Increase tolerance to cognitive work and connect socially with peers
3	Part-time or full days at school with accommodations	Gradually reintroduce schoolwork. Part-time school days with access to breaks and other accommodations may be required. Gradually reduce accommodations related to the concussion and increase workload.	Increase academic activities
4	Return to school full-time	Return to full days at school and academic activities, without accommodations related to the concussion.	Return to full academic activities

Return-to-Sport Strategy

The *Return-to-Sport Strategy* should be used to help the athlete to make a gradual return to sport activities. The athlete should spend a minimum of 24 hours at each step before progressing to the next. It is common for symptoms to worsen **mildly and briefly** with activity and this is acceptable through steps 1 to 3. If the athlete's symptoms worsen more than this, they should stop the activity and try resuming the next day at the same step. **It is important that athletes return to full-time school activities, if applicable, and provide their coach with a *Medical Clearance Letter* before progressing to step 4.**

Step	Activity	Description	Goal of each step
1	Activities of daily living and relative rest (first 24-48 hours)	Typical activities at home (e.g. preparing meals, social interactions, light walking). Minimize screen time.	Gradual reintroduction of typical activities.
2	2A: Light effort aerobic exercise 2B: Moderate effort aerobic exercise	Walking or stationary cycling at slow to medium pace. May begin light resistance training. Gradually increase intensity of aerobic activities, such as stationary cycling and walking at a brisk pace.	Increase heart rate.
3	Individual sport-specific activities, without risk of inadvertent head impact	Add sport-specific activities (e.g., running, changing direction, individual drills). Perform activities individually and under supervision.	Increase the intensity of aerobic activities and introduce low-risk sport-specific movements.
MEDICAL CLEARANCE LETTER REQUIRED			
4	Non-contact training drills and activities	Exercises with no body contact at high intensity. More challenging drills and activities (e.g., passing drills, multi-athlete training and practices).	Resume usual intensity of exercise, co-ordination and activity-related cognitive skills.
5	Return to all non-competitive activities, full-contact practice and physical education activities	Progress to higher-risk activities including typical training activities, full-contact sport practices and physical education class activities. Do not participate in competitive gameplay.	Return to activities that have a risk of falling or body contact, restore confidence and assess functional skills by coaching staff.
6	Return to sport	Unrestricted sport and physical activity	

Tables adapted from: Patricios, Schneider et al., 2023; Reed, Zemek et al., 2023

MEDICAL CLEARANCE LETTER

Date : _____ Athlete's Name : _____

To whom it may concern,

Athletes who are diagnosed with a concussion should be managed according to *the Canadian Guideline on Concussion in Sport, 2nd edition*, including the *Return-to-School* and *Return-to-Sport Strategies* (see page 2 of this letter). Accordingly, the above athlete has been medically cleared to participate in the following activities as tolerated effective the date stated above (please check all that apply):

- ☐ Return-to-Sport Step 4: Non-contact training drills and activities with risk of inadvertent head impact (Exercises with no body contact at high intensity)
- ☐ Return-to-Sport Step 5: Return to all non-competitive activities, full-contact practice and physical education activities
- ☐ Return-to-Sport Step 6: Unrestricted sport and physical activity

What if symptoms recur?
Athletes who have been medically cleared must be able to participate in full-time school, if applicable, as well as high intensity resistance and endurance exercise without symptom recurrence. Any athlete who has been medically cleared and has a recurrence of symptoms, should immediately remove themself from play and inform their coach, teacher or parent/caregiver. Medical clearance is required before progressing to step 4 of the Return-to-Sport Strategy again.

Any athlete who returns to practices or games and sustains a new suspected concussion should be managed according to the *Canadian Guideline on Concussion in Sport*.

Other comments:

_____

_____

Thank-you very much in advance for your understanding.

Yours Sincerely,

Signature/print_____ M.D. / N.P.
(circle appropriate designation)*

We recommend that this document be provided to the athlete without charge.

**In rural, remote or northern regions, the Medical Assessment Letter may be completed by a nurse with pre-arranged access to a medical doctor or nurse practitioner. Forms completed by other licensed healthcare professionals should not otherwise be accepted.*

MEDICAL CLEARANCE LETTER

Return-to-School Strategy

The *Return-to-School Strategy* should be used to help students make a gradual return to school activities. Progression through the steps will look different for each student. It is common for symptoms to worsen **mildly and briefly** with activity. If the student's symptoms worsen more than this, pause and adapt activities as needed.

Step	Activity	Description	Goal of each step
1	Activities of daily living and relative rest (first 24-48 hours)	Typical activities at home (e.g. preparing meals, social interactions, light walking). Minimize screen time.	Gradual reintroduction of typical activities
2	School activities with encouragement to return to school (as tolerated)	Homework, reading or other light cognitive activities at school or home. Take breaks and adapt activities as needed. Gradually resume screen time, as tolerated.	Increase tolerance to cognitive work and connect socially with peers
3	Part-time or full days at school with accommodations	Gradually reintroduce schoolwork. Part-time school days with access to breaks and other accommodations may be required. Gradually reduce accommodations related to the concussion and increase workload.	Increase academic activities
4	Return to school full-time	Return to full days at school and academic activities, without accommodations related to the concussion.	Return to full academic activities

Return-to-Sport Strategy

The *Return-to-Sport Strategy* should be used to help the athlete to make a gradual return to sport activities. The athlete should spend a minimum of 24 hours at each step before progressing to the next. It is common for symptoms to worsen **mildly and briefly** with activity and this is acceptable through steps 1 to 3. If the athlete's symptoms worsen more than this, they should stop the activity and try resuming the next day at the same step. **It is important that athletes return to full-time school activities, if applicable, and provide their coach with a *Medical Clearance Letter* before progressing to step 4.**

Step	Activity	Description	Goal of each step
1	Activities of daily living and relative rest (first 24-48 hours)	Typical activities at home (e.g. preparing meals, social interactions, light walking). Minimize screen time.	Gradual reintroduction of typical activities.
2	2A: Light effort aerobic exercise 2B: Moderate effort aerobic exercise	Walking or stationary cycling at slow to medium pace. May begin light resistance training. Gradually increase intensity of aerobic activities, such as stationary cycling and walking at a brisk pace.	Increase heart rate.
3	Individual sport-specific activities, without risk of inadvertent head impact	Add sport-specific activities (e.g., running, changing direction, individual drills). Perform activities individually and under supervision.	Increase the intensity of aerobic activities and introduce low-risk sport-specific movements.
MEDICAL CLEARANCE LETTER REQUIRED			
4	Non-contact training drills and activities	Exercises with no body contact at high intensity. More challenging drills and activities (e.g., passing drills, multi-athlete training and practices).	Resume usual intensity of exercise, co-ordination and activity-related cognitive skills.
5	Return to all non-competitive activities, full-contact practice and physical education activities	Progress to higher-risk activities including typical training activities, full-contact sport practices and physical education class activities. Do not participate in competitive gameplay.	Return to activities that have a risk of falling or body contact, restore confidence and assess functional skills by coaching staff.
6	Return to sport	Unrestricted sport and physical activity	

Tables adapted from: Patricios, Schneider et al., 2023; Reed, Zemek et al., 2023