# 2025 Interim Training Materials:
# *Heartsaver® Student Workbook* Changes

## Purpose

These instructions will help update the current Heart & Stroke *Heartsaver® Student Workbook* with science from the *guidelines and interim updates* released by Heart & Stroke since the *2020 Guidelines for Cardiopulmonary Resuscitation* (CPR) *and Emergency Cardiovascular Care.*

Instructors should print these materials and provide copies to students when teaching the new 2025 Guidelines courses while using 2020 Guidelines provider materials until our 2025 Guidelines materials become available.

Exams and assessments will continue to follow the 2020 Guidelines.

## Heartsaver® Student Workbook Changes

### 1. Chains of Survival: Adult and Pediatric

#### *2025 Changes*

- A single Chain of Survival is intended to be applicable to adult and pediatric in- and out-of-hospital cardiac arrest. In creating this singular chain, it is acknowledged that, before cardiac arrest, prevention and preparedness can both avoid and optimize resuscitation.
  - The systems of care guidelines follow the unified cardiac arrest Chain of Survival, beginning with prevention and preparedness to resuscitate, proceeding with early identification of cardiac arrest, and then progressing to effective resuscitation through to post–cardiac arrest care, recovery, and survivorship. The unified cardiac arrest Chain of Survival includes the following links:
    - Recognition and Emergency Activation
    - High-Quality CPR
    - Defibrillation
    - Advanced Resuscitation
    - Post–Cardiac Arrest Care
    - Recovery and Survivorship

#### *Apply Here*

- CPR and AED Use for Adults
  - Section: Adult Chain of Survival
- CPR and AED Use for Children
  - Section: Pediatric Chain of Survival

## 2. Ventilations/Breaths

### *2025 Change*

- When ventilating an adult patient in cardiac arrest, it is reasonable to give enough tidal volume to produce visible chest rise. Rescuers should avoid hypoventilation (too few breaths or too little volume) or hyperventilation (too many breaths or too large a volume).

### *Apply Here*

- CPR and AED Use for Adults
  - Section: Perform High-Quality CPR

## 3. Defibrillation Pads

### *2025 Changes*

- When placing pads for defibrillation for an adult in cardiac arrest, it might be reasonable to adjust the position of a bra instead of removing it.
  - Women experience significantly lower rates of public-access defibrillation compared with men.[1] The need to apply pads or paddles directly to the bare chest may be a contributing factor. The option to adjust rather than remove a bra could mitigate factors like a rescuer's discomfort with exposing a woman's chest.
- When applying defibrillation pads to the person's bare chest, place one pad vertically on the person's right upper chest. The top of the pad should be just under the clavicle (collarbone). Place the second pad horizontally on the left lateral ribs. The middle of the pad should be below the axilla (armpit) at the midaxillary line.

### *Apply Here*

- CPR and AED Use for Adults
  - Section: Use an AED

## 4. Foreign-Body Airway Obstruction

### *2025 Changes*

- For adults with severe foreign-body airway obstruction, repeated cycles of 5 back blows (slaps) followed by 5 abdominal thrusts should be performed until the object is expelled or the person becomes unresponsive.
- For children with severe foreign-body airway obstruction, repeated cycles of 5 back blows alternated with 5 abdominal thrusts should be performed until the object is expelled or the child becomes unresponsive. Rescuers should activate the emergency response system.
  - For adults and children, perform 5 back blows by using the heel of your hand to forcefully strike the person's back in between their shoulder blades. If back blows do not relieve choking, perform 5 abdominal thrusts. Make a fist with one hand, grab it with your other hand, and press your fist into the person's abdomen with a quick, forceful upward thrust. Give each new thrust with a separate, distinct movement. Continue alternating 5 back blows followed by 5 abdominal thrusts until the object is dislodged or the person becomes unresponsive.
- For infants with severe foreign-body airway obstruction, repeated cycles of 5 back blows alternating with 5 chest thrusts should be performed until the object is expelled or the infant becomes unresponsive. Rescuers should activate the emergency response system.

– To perform chest thrusts for infants, hold the infant face up, with your forearm resting on your thigh. Keep the infant's head lower than their trunk. Provide 5 quick downward chest thrusts with the heel of one hand in the middle of the chest, over the lower half of the sternum. Deliver chest thrusts at a rate of about 1 per second, each with enough force to dislodge the object. Repeat the sequence of up to 5 back blows and up to 5 chest thrusts until your actions have removed the object or the infant becomes unresponsive.

*Apply Here*

- Choking

## 5. Components of High-Quality CPR

*2025 Changes*

- For infants and children in cardiac arrest, interruptions in CPR should be minimized and pauses in chest compressions should be less than 10 seconds.

*Apply Here*

- CPR and AED Use for Children
  - Section: Putting It All Together: Child High-Quality CPR AED Summary
- CPR for Infants
  - Section: Putting It All Together: Infant High-Quality CPR Summary

## 6. Infant Compressions

### *2025 Changes*

- For infants, rescuers should compress the sternum with the heel of one hand or using the 2-thumb–encircling hands technique. If the rescuer cannot physically encircle the chest, it is recommended to compress the chest with the heel of one hand.
  - For infants, single rescuers (whether lay rescuers or health care professionals) should compress the sternum with 2 thumbs placed just below the nipple line.
  - For infants, if the rescuer is unable to achieve guideline-recommended depths (at least one third the diameter of the chest), it may be reasonable to use the heel of one hand.
  - The 2-finger technique for infant CPR is no longer recommended.

### *Apply Here*

- CPR for Infants
  - Section: Differences in CPR for Infants vs Children and Adults
  - Section: Putting It All Together: Infant High-Quality CPR Summary
- Summary of High-Quality CPR Components

## 7. Toxicology: Opioid-Associated Emergencies

### *2025 Changes*

- For lay and trained rescuers, opioid antagonist (e.g., naloxone) administration may be reasonable for adults and children in cardiac arrest with suspected opioid-associated emergencies, provided that opioid antagonist administration does not interfere with the delivery of standard resuscitation, including high-quality CPR with breaths.

### *Apply Here*

- Opioid-Associated Life-Threatening Emergency
  - Section: How to Help an Adult with an Opioid-Associated Life-Threatening Emergency

## 8. Water Safety

### *2025 Changes*

- In cardiac arrest following drowning, CPR with rescue breaths should be started before AED application.
- AED use is reasonable in cardiac arrest following drowning.
- The initiation of CPR should not be delayed to obtain or apply an AED in cardiac arrest following drowning.
- In cardiac arrest following drowning and after removal from the water, CPR with rescue breaths and chest compressions should be provided to all persons.
- In cardiac arrest following drowning, if the rescuer is unwilling, untrained, or unable to provide rescue breaths, it is reasonable to provide chest compressions only until help arrives.
- In cardiac arrest following drowning, it may be reasonable for trained rescuers to initiate CPR with rescue breaths followed by chest compressions.
- It is reasonable for trained rescuers to provide rescue breaths by the first means available (mouth-to-mouth or pocket mask) for persons in cardiac arrest following drowning to avoid any delay in ventilation.
- Water competency is the ability to anticipate, avoid, and survive common drowning situations. It involves developing water skills, being water smart, and helping others.
- Skills like treading water, floating, swimming, and knowing how to enter and exit the water help to keep us safe around bodies of water.
- The best way to help prevent a water tragedy is to use a combination of interventions and never to swim alone.
- You can be water smart by:
  - Having pool fences at least 1.2 metres tall that have self-closing and self-latching gates
  - Making sure that children take swimming lessons and wear an approved life jacket around open water
  - Closely watching small children around water (stay within arm's length of beginning swimmers)
  - Drowning can occur in just a few inches of water, especially with infants, so make sure you're paying attention when you're supervising children around water

### *Apply Here*

- Drowning

## References


1. Dainty KN, Colquitt B, Bhanji F, et al. Understanding the importance of the lay responder experience in out-of-hospital cardiac arrest: a scientific statement from the American Heart Association. *Circulation.* 2022;145(17):e852-e867. doi:10.1161/cir.0000000000001054